



## Research article

# Nurse Educator's experiences and challenges with online teaching: A qualitative descriptive study

Monirah Abloushi<sup>a,\*</sup>, Aisha Namshan Aldawsari<sup>b</sup>, Reem Alghamdi<sup>a</sup>,  
Badr Alenazy<sup>c</sup>, Hana Alanazi<sup>d</sup>, Hissah Almutairi<sup>e</sup>

<sup>a</sup> King Saud University, College of Nursing, Saudi Arabia

<sup>b</sup> Fatima College of Health Sciences, United Arab Emirates

<sup>c</sup> The Northern Borders Health Cluster, Saudi Arabia

<sup>d</sup> King Saud Medical City, Saudi Arabia

<sup>e</sup> King Faisal Specialist Hospital and Research Center, Saudi Arabia

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## ABSTRACT

**Introduction:** During the Coronavirus disease (COVID-19) pandemic, many educational institutions faced the challenge of providing and implementing online education. Despite this challenge, most adopted online education systems to ensure that the teaching and learning process continued. This study aimed to explore nursing educators' experiences related to adopting online-only teaching during the (COVID-19) pandemic, providing nursing students with the best learning experiences, and preparing faculty members to teach online.

**Method:** This qualitative descriptive study was conducted using semi-structured interviews from June 2020 to September 2020. Using purposive sampling, 12 nursing educators in Saudi Arabia who taught university courses online during COVID-19 were recruited. They were selected based on their teaching experience in undergraduate and postgraduate degree nursing programs.

**Results:** Thematic analysis revealed an overarching theme—faculty challenges—and three sub-themes—emotional, technical, and educational challenges. Secondary sub-themes comprised four challenges that the nursing faculty faced—using online platforms, accessibility, cheating, and dealing with students' clinical practice—which were found to be interconnected and interrelated.

**Discussion:** Most nursing educators had to shift to online distance teaching suddenly; thus, they faced several challenges related to online teaching, e-learning literacy, classroom management, and connectivity as they transitioned to digitalization. To address these issues, this study recommends that university management organize training programs for educators to help them more effectively conduct online classes. These findings will be valuable for universities, policy-makers, designers, and producers to enhance the implementation of their e-learning systems.

## 1. Introduction

During the last decade, technology has played a significant role in the higher education system. Different educational methods, platforms, and applications—such as Microsoft Teams, Google Classroom, Canvas, and Blackboard—have been developed to enable

\* Corresponding author.

E-mail addresses: [malbloushi@ksu.edu.sa](mailto:malbloushi@ksu.edu.sa) (M. Abloushi), [Aisha.aldawsari@fchs.ac.ae](mailto:Aisha.aldawsari@fchs.ac.ae) (A.N. Aldawsari), [areem@ksu.edu.sa](mailto:areem@ksu.edu.sa) (R. Alghamdi), [Balenazy@moh.gov.sa](mailto:Balenazy@moh.gov.sa) (B. Alenazy), [h\\_alenzi@ksmc.med.sa](mailto:h_alenzi@ksmc.med.sa) (H. Alanazi), [hissalmotiri@gmail.com](mailto:hissalmotiri@gmail.com) (H. Almutairi).

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faculty members to teach online; they also provide them with the skills to manage online courses, training, and exams [1]. Mancuso-Murphy [2] defined online teaching as a formal virtual education program in which a student learns, at least in part, through the online delivery of content and instruction. In many countries, including Saudi Arabia, universities, schools, and colleges were closed because of the Coronavirus disease 2019 (COVID-19) pandemic. According to the recommendations made by the WHO, the Government of Saudi Arabia opted to move education online to reduce the spread of the virus [3].

Hence, 52 nursing colleges in Saudi Arabia were severely impacted by the pandemic, having to cancel face-to-face classes and clinical training for students. Nursing educators had to deal with an unprecedented transition from the traditional classroom to an online method of instruction because of this closure, which was found to be incredibly challenging [4]. Nursing educators must exhibit good online teaching abilities to impart the theoretical knowledge of nursing care and ensure that students are engaged during online classes [5]. Additionally, the shift to online learning turned experienced nursing educators who were accustomed to traditional teaching into inexperienced online educators with limited online teaching skills [6]. The teaching quality the nursing students received was also found to be negatively impacted by the physical absence of nursing educators [6]. According to Aljohani [3], the rapid shift to online education left many students without adequate access to technology resources, such as the internet. Furthermore, many educators lacked the skills necessary to adopt online teaching.

The traditional face-to-face teaching method pre-COVID-19 was the only credible approach in the Saudi education system. Therefore, it has been engraved in the Saudi Arabian culture. However, online teaching gained a lot of trust and popularity, which was accelerated by the sudden shift to online teaching methods during COVID-19. Hence, this shift made it difficult for nursing educators to teach nursing courses, especially the practical and training side of the courses, using online teaching. Difficulties related to the Saudi culture were also expected, including preserving Saudi women's modesty and privacy while using video calls, videotaping, and voice recording for both students and educators. Several studies have been conducted to explore students' experiences with online teaching in Saudi Arabia [7–10]. However, few studies in Saudi Arabia have explored nursing educators' online teaching experiences and perspectives [11,12]. Hence, this qualitative study was conducted with nursing educators in Saudi Arabia to explore their experiences and challenges related to online teaching.

### 1.1. Background

Many studies have reported that online teaching has a variety of benefits, and students from different disciplines have a positive attitude toward it [13–17]. Students prefer online education because it provides them with the convenience and flexibility of attending class from home at any time [18–20]. However, students have also reported significant challenges related to online education, such as unclear online teaching strategies, the lack of standard evaluation methods, engagement, the number of assignments, and traditional class participation and interactions [12,21–23]. According to Marshall and Wolanskyj-Spinner [24], students prefer classroom learning over online education because they have more opportunities to interact with instructors and receive immediate clarifications. Furthermore, regarding online education, some students struggle with a lack of technological infrastructure [25] and psychological issues, such as anxiety, depression, and lack of social interactions [20,25–27].

According to Alahmari and Amirault [28], online teaching requires specific skills and technical requirements. Faculty members must have specific competencies to teach online, such as live streaming, facilitating digital platform discussions, pre-recording teaching discussions, and receiving feedback. The high level of comfort and satisfaction with online teaching was associated with the preparation and training received by faculty members, as well as their access to the tools that could help them engage with students and monitor them [29]. Moreover, the faculty's workload, their lack of technical skills and preparation, had a negative impact on their online teaching experience [30,31]. Wingo et al. [32] conducted a study to explore the challenges of online education faced by 30 faculty members and leaders; they discovered that most participants believed that online teaching was necessary, however, it required the requisite budget, preparation, and infrastructure. Inadequate training and motivation, unstable internet connections, and lack of interest were some of the obstacles that faculty members faced with online teaching [33].

Faculty members were facing many issues with online education, such as skills to use different online platforms, responding to students' emails and questions, and knowing how to deal with technical problems [34–36]. Sinacori [37] discovered that nursing educators faced challenges, such as learning about the different learning management systems; lack of technological support and mentorship for the new mode of teaching; and making a teaching mind shift by using different teaching methods. According to Richter and Schuessler [5], some of the factors that contributed to faculty members' dissatisfaction with online teaching were fear of technology, lack of organizational support, time-consuming process, and non-availability of faculty members to solve any problems that students faced. Until now, as limited studies in Saudi Arabia had explored nursing faculty members' experiences with online education, this study was conducted to explore the experience of online education from the perspective of nursing faculty members in Saudi Arabia and address the challenges that they faced during exclusive online teaching due to COVID-19 pandemic.

## 2. Methods

A qualitative description design was conducted using semi-structure interviews. This design is frequently used in nursing and healthcare research to explore and offer a broad understanding of phenomena because it is straightforward and adaptable [38]. It is often used when a simple explanation of a phenomenon is necessary [39].

### 2.1. Setting/participants

Purposeful sampling was used to recruit nursing educators, who taught online courses during COVID-19. Twelve nursing educators were recruited from different universities in Saudi Arabia. The inclusion criteria consisted of all nursing educators who were involved in teaching online courses; however, nursing educators who were not teaching online courses during COVID-19 due to annual leave, sick leave, and maternity leave were excluded from the study. Data saturation was reached when all the participants were relating similar experiences without any new perspectives or ideas. After interviewing ten of the participants, the researcher discovered that no new themes, concepts, viewpoints, or patterns emerged, and data collection was discontinued after interviewing the twelfth participant.

### 2.2. Data collection

The data collection process occurred over four months, from June to September 2020. The primary researcher sent emails to nursing educators to invite them to participate in the study. The email included an information sheet about the study, a description of participants' rights, and the researchers' contact information. Recipients who were interested in participating were asked to contact the primary researcher and schedule an interview. Thereafter, interested participants were contacted by phone or email.

Owing to the COVID-19 outbreak, we used Zoom to interview the participants and arranged an interview time based on their preferences. Zoom was used because of limited accessibility created by the social distancing rules that were implemented during the pandemic. Immediately before their specified interview time, each participant received a unique meeting ID and password that activated the waiting room feature. This feature allowed the meeting host to control when a participant joined the meeting. Zoom meeting attendees can be admitted either one by one or all at once.

Only one participant was interviewed per session, and the duration of each session was 45–60 min. The primary researcher conducted all the interviews. During the interviews, the participants were allowed to choose their preferred language, and the interview was recorded using Zoom's built-in recording system. Each participant received a link to the information sheet and a consent form that was signed before participating. They were also asked to complete an electronic demographic questionnaire prior to the interview. All respondents participated willingly without any incentives, and no one dropped out of the study.

### 2.3. Ethical considerations

Ethical approval was obtained from the Institutional Research Board (KSU-HE-20-216). All the participants were required to submit their online consent form before the interview. At the beginning of each interview, the researchers explained to the participants the study's aim, their rights to withdraw or refuse to participate, and informed them that their participation was completely voluntary.

To maintain confidentiality, participants were not required to disclose any identifying personal information. They were informed that the interviews were being recorded, and each participant received a unique private meeting code and password. Participants were provided access to their meeting links only prior to their scheduled time. We used the waiting room feature to ensure that only participants were granted permission to attend the meeting. No one else was allowed to join the meeting after the participants entered. All sharing functions were disabled. Neither the name nor any other personal information was requested from the participants during the interview. A password protected file was used for each of the recorded interviews and allocated a random number. Additionally, pseudonyms were used to anonymize the participant's quotes (Section 4).

### 2.4. Rigor and trustworthiness

Four criteria—credibility, transferability, confirmability, and dependability—were ensured for enhancing rigor of this qualitative study [40]. To achieve credibility, the researchers tried to build rapport and develop a relationship of trust by introducing themselves to the participants, explaining the study's aim and providing information about it. Informal member verification was done while data were collected. The researcher summarized and verified what participants reported, which facilitated the participants' ability to confirm, amend, or add more information. During the interviews, participants were allowed to ask questions and seek clarifications. A peer review strategy was used to ensure credibility in the data collection, analysis, and interpretation processes. To ensure richness and in-depth understanding, data were reviewed by three experts (MA, AA, RA) achieving investigator triangulation. To attain confirmability, the researchers verified the accuracy of each of the transcribed interview research findings and emerging themes, and the participants' quotes were included verbatim to support the findings. Hence, field notes were made during the interviews, which was used to help the researcher track participants' feelings, words, and thoughts. To maintain dependability, the gathered findings were reviewed and verified by MA, AA and RA to ensure the translations were consistent with the original interview transcripts. To achieve transferability, audit trails were used when the researchers provided detailed descriptions of the data collection and analysis process so that the study findings would be transferrable to other contexts.

### 2.5. Data analysis

Data were analyzed using the thematic analysis steps identified by Braun and Clarke [41,42]. Three researchers were responsible for listening to and transcribing the interviews to become more familiar with the data. They listened to each of the recorded interviews several times to compose a clear, complete, and accurate transcript. Next, three other researchers with experience in qualitative data

analysis reviewed the interview transcripts multiple times. They compared and discussed the analyses of the themes that were found, and finally decided which developed theme would best represent the data. Thereafter, the three researchers organized the data, chose the initial codes, and added comments. To identify patterns and relationships among the codes, they independently reviewed the data using tables and Nvivo. The developed themes created by the codes were then used to collect connected and recurrent thoughts, thereby identifying the final themes. Hence, the data were formalized utilizing these themes after the data were aggregated, consistency was demonstrated, and the final themes were exhibited.

## 2.6. Findings

The 12 Saudi nursing educators recruited for this study worked in a different university in Saudi Arabia; their characteristics are presented in [Table 1](#). We identified an overarching theme, three sub-themes, and four secondary sub-themes ([Fig. 1](#)). The participating nursing educators faced three main types of challenges—emotional, technical, and educational—that were connected and interrelated. To protect the participants' identities, all names included in [Table 1](#) and the quotes in [Section 4](#) are pseudonyms.

## 2.7. Emotional challenges

As a result of the sudden switch to online learning required during COVID-19, nursing educators were confronted with a range of emotions, describing being on an “emotional rollercoaster” as they attempted to adjust to the sudden transition. They all expressed that they had been unprepared and lacked the fundamental skills needed to teach students online. They also spoke of their initial experiences of uncertainty, as they were experiencing the unknown regarding the pandemic and, simultaneously, were concerned about their students' success and their learning journey. The educators felt that they were responsible and were somehow forced to deal with the unprecedented circumstances, even though they had no idea what they would encounter.

“It was horrible; it was difficult for me and time consuming. I had to call my friend many times, to walk me through the system, to be able to teach online. I had no idea what was coming.” (Noura)

When the universities announced that teaching and learning would be conducted online, many educators were excited to begin this experience and wanted to try different teaching methods. However, they found themselves stumbling through the transition because of unexpected obstacles.

“At the beginning I was somewhat excited, but my experience has been difficult because besides my teaching load, I had to learn how to use technology for which I was not trained. Coronavirus has changed the whole online culture.” (Abdul)

One educator was concerned about how he could interact with the students and whether they were paying attention in class. He thought that online education was important but difficult to use:

“Although during COVID-19, online education was necessary, it was not easy at the beginning ... I was worried about how I would communicate with the students; how would I know from an online form that they were listening to me?” (Faisal)

These worrisome feelings and difficulties arose as the transition first began, but, as they continued teaching online, the educators began to feel more comfortable and started to enjoy teaching. The educators experienced excitement as soon as they felt that the students were learning. However, they also had to navigate a steep learning curve and spent many hours learning how to use new online teaching platforms, such as Blackboard and Zoom.

“... I got used to online learning; I felt okay as soon as I learnt how to use Blackboard and communicate very well with the students, but this took a lot of time.” (Ibrahim)

However, with all the time spent learning, one educator felt that his feelings of fear and worry were gradually replaced by feelings of happiness and excitement:

**Table 1**  
Sociodemographic characteristics of participants.

Pseudonymous name	Gender	Age	Education Level	Years of Experience	Preparation to teach online
Abdul	Man	30–39	PhD	0–5	Yes
Noura	Woman	40–49	Master's	11–15	No
Faisal	Man	30–39	PhD	6–10	Yes
Maryam	Woman	30–39	Master's	11–15	Yes
Ibrahim	Man	30–39	PhD	6–10	Yes
Mohammed	Man	40–49	PhD	0–5	No
Faris	Man	40–49	PhD	0–5	No
Ali	Man	50–65	Master's	11–15	Yes
Hani	Man	50–65	Master's	11–15	Yes
Layla	Woman	40–49	PhD	16+	Yes
Aisha	Woman	20–29	Master's	0–5	No
Sara	Woman	20–29	Master's	0–5	Yes

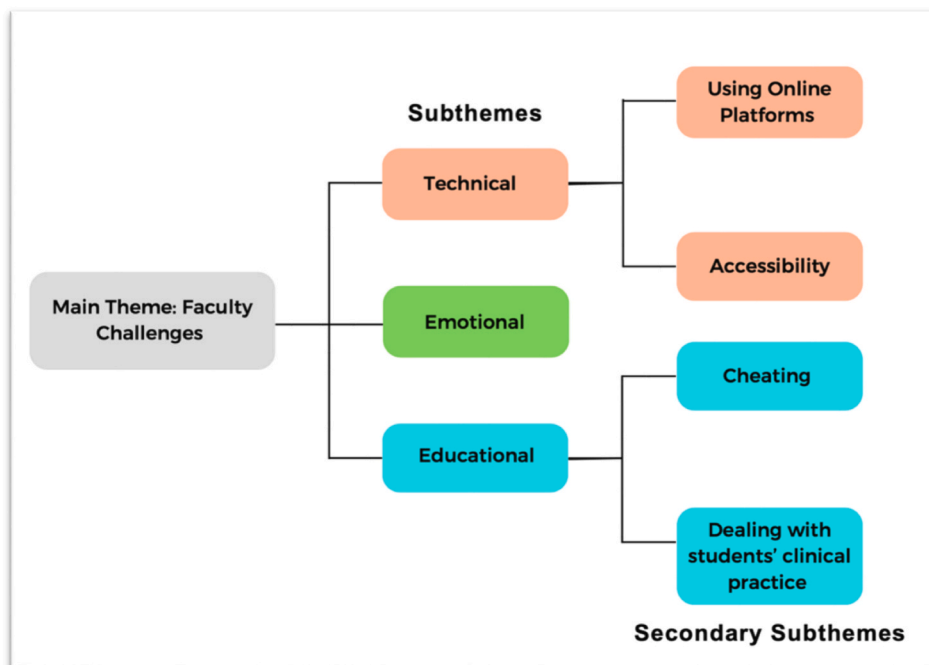


Fig. 1. Main theme, sub-themes, and secondary sub-themes of the findings.

“... when students started to comment positively about my teaching and their learning, it gave me feelings of happiness and satisfaction ... I would say that, at the end, I started to have an exciting experience.” (Abdul)

Other educators felt that as they became used to online learning, they felt more excited and enthusiastic, wanting to teach more and experience the ride once again, even with all of the accompanying emotions.

“Whenever I remember the first time I had to teach online I feel nervous; it was difficult, but now I feel confident and happy ... if I have the chance to teach again using the online form, I will do it ... I feel I can give more, regardless of the challenges that I might face; after all, I can say, in general, that I love giving lectures online.” (Mohammed)

The overall impression appeared to be that feelings of success and comfort arose when the educators felt their students were learning and satisfied with their learning journey:

“Now, I can say my experience is beautiful; my only fear is about students being able to attend without difficulties ...” (Noura)

## 2.8. Technical challenges

From the educators’ perspectives, the quality of their experiences with online education was affected by various factors, such as using online platforms and accessibility.

### 2.8.1. Using online platforms

Using learning platforms such as Blackboard, Zoom, and Google Classroom were essential to provide structure, and a platform for discussion and communication, used by most of the participating educators since switching to online learning. However, regarding the Blackboard system, they also frequently used phrases such as “freezes a lot,” “waste of time,” “problematic,” and “tough experience” as they shared their frustrations that arose due to their lack of understanding about how Blackboard functions.

“It has been a difficult experience just learning how to use Blackboard, not only for us, but also for the students, who did not know how to access the lectures. It was a new experience for both of us ... we were struggling.” (Faris)

“It is important to teach us and the students how to use Blackboard ... we need training courses. We also need to learn what we should do if we face a specific problem. Moreover, a lot of students had no idea how to use Blackboard ... they did not know how to find their homework.” (Maryam)

A few educators got creative and tried other online platforms, such as Google Classroom, that they believed to be less of a hassle

compared to Blackboard, but they continued to experience issues.

“After we had graded the students’ assignments, they deleted the grades as well as the documents and said they did it by mistake; so, we had to redo the whole process.” (Aisha)

Another participant also thought that students and educators had a hard time using the available online education platforms:

“Imagine a program, which is similar to a garden, where you can plant as many trees as you want, and students can come and pick what they need. Everything is there—and will be there for them. We need that kind of a program.” (Hani)

### 2.8.2. Accessibility

Many educators were told by the students that they did not have access to exams. Although everybody assumes that students have access to a device, not all of them can afford to have a computer device or reliable internet connection.

“... just imagine, we had students who could not access the exams, and sometimes it happened either because they had no internet connection, or they did not have computers, laptops, or smart iPhones. Some of them used old iPhones or mobiles and did not have proper internet connectivity.” (Ibrahim)

Even if students did have a device, reliable internet access was not equally available among students. Some of them would have better connections than others:

“Students faced a lot of challenges, especially owing to internet connections ... for example, in the middle of exams, the Blackboard gets disconnected, and then, [the educator] has to make adjustments for students.” (Layla)

Aisha highlighted the premise relating to all students having internet access at home; however, the reality was different:

“The whole online experience was unfair to students; some of them lived in areas where internet coverage was not an option.”

The assumption that students have sufficient computer proficiency and equal access to platforms is another barrier to online education, according to Ali:

“In general, if you want to teach students using online materials, they must learn how to use a system and the computer ... it is our responsibility to make online learning accessible for all students.”

## 2.9. Educational challenges

### 2.9.1. Cheating

Participating educators shared frustrating moments where they observed a huge rise in students cheating, which was made worse by their inability to prove cheating.

“... students chose to cheat, regardless of my continuous advice not to do so. Even when I use open questions, I still see similar answers at the same time from different students.” (Ali)

Faisal agreed with Ali, stating that he also detected many similar answers but did not know of any technique or method for figuring out whether students were cheating during the online exams.

“... throughout teaching online, I have seen similar answers from different students, but it is hard to provide evidence.”

Another educator mentioned that students submitted assignments that did not accurately reflect their level of knowledge, and, in one instance, the educator caught students using Google to answer questions.

“Students’ answers do not reflect their understanding of the course materials; they just copy and paste from Google; it is very difficult for me to control this issue.” (Sara)

“Online teaching does not work, unless there is some sort of control over students’ cheating ... I do not want to do this online teaching anymore.” (Faris)

It is apparent that it was very easy for students to cheat because they were given 24 h to do the exam, as a lot of them continued to have technical issues.

“I was advised by the dean to allow students to complete the exam within 24 hours. This will allow students to check their answers and ask each other to provide the right word/answer. This is insane.” (Abdul)

### 2.10. Thus, one educator suggested that

“... exams should be given on campus, face-to-face, at least to differentiate between students’ levels. You have no control over this issue.” (Mohammed)

### 2.10.1. Dealing with students' clinical practice

Participating educators were challenged with having to virtually teach clinical nursing skills to students virtually.

"The online teaching is perfect for any course, other than a clinical course. It is impossible for students to become skilled through virtual clinical courses. We, as faculty members, were super tired, and students themselves, were tired, too ... there is no way to teach assessment skills by presenting videos, no matter how much one tries. This method will not work. I have been in constant worry and always question the caliber of nurses who are graduating." (Layla)

"It would be unfair to teach students clinical courses online. I thought many times about taking students to the lab, but I could not breach our school policy ... it has been so difficult. With all of this, teaching students' clinical skills online has failed." (Faisal)

"After trying our best to teach students clinical nursing via an online platform, the administration suggested that we shift our efforts to using case scenarios, wherein students were given activities to solve these scenarios. I think this did not work. Students have definitely repeated those clinical courses." (Ali)

## 3. Discussion

This study explored the experiences of nursing educators who underwent online education during COVID-19. The findings revealed an overarching theme, three sub-themes, and four secondary sub-themes. These challenges were interconnected and intertwined. Indeed, emotional challenges felt by the nursing educators were aggravated by the technical and educational challenges of online education. Several issues faced by participating nursing educators included emotional, technical, and educational concerns.

### 3.1. Emotional challenges

The online education that initially took place during COVID-19 was not planned but was promptly adopted owing to the emergency nature of the circumstances. It is recognized that emergency online education differs from planned online learning [43]. Prior to COVID-19, online learning had been a part of nursing education for many years [44,45]. However, the nursing educators who were a part of the planned online learning had all the support, preparation, and teaching experience to thrive and survive, unlike those teaching during COVID-19. Moreover, the nursing courses were usually conducted using traditional classrooms in all universities of Saudi Arabia. Therefore, the circumstances led to a unique and sudden shift in the Saudi universities' programs.

In the United States, these unprecedented circumstances inspired some educators to thrive and make a difference, even when they felt they lacked control over the transition to virtual learning [46]. However, participating nursing educators who taught online during COVID-19 experienced a lack of support. They were provided with minimal guidance and no tools to work under the new conditions. They felt lost and uncertain about the future of their students. The participating educators in this study were concerned about the quality of online education. This finding is consistent with previous studies that revealed that nursing educators were challenged by the lack of training and skills needed to use the different platforms, and they had inadequate resources and preparation [47–49]. The students' welfare and success were their main concerns. For this reason, those educators tried different new ways to make online teaching work. They searched for the best way to deliver online education and supported each other in navigating this new teaching environment.

### 3.2. Technical challenges

Although the Blackboard system was available for quite a long time in Saudi universities, it was not used for online teaching, especially for applied health sciences like nursing; however, it was used for announcements, assignments, and homework activities. Therefore, this study revealed that when educators felt prepared and had the skills to teach online, they felt enabled to excel and enjoy the process of online teaching. In South Africa, some nursing lecturers pre-recorded videos that was incorporated in online teaching [50]. However, this was not easy for some female Saudi nursing educators, as they sought to preserve their modesty by not recording their faces, hands, or voices.

Advantages of online education include flexibility, easy administration, accessibility, and require fewer resources and less time [51]. However, in the current study, nursing educators found it difficult to navigate and apply nursing skills through Blackboard. Some participants reported that, over time, they became more experienced with the technology and different online platforms, and they tended to enjoy the process. This finding aligns with the results of Howe et al. [31], who reported that satisfaction with online learning was significantly higher among nursing faculties who taught 20 or more courses online and became more knowledgeable about teaching online. In addition, satisfaction was higher for faculty members who received mentoring and technical support. As reported in previous studies, educators require experience to teach online, and their skills may develop over time through trial and error, which may increase their levels of frustration. Training in various online educational and technical strategies/aspects are important elements to enhance educators' satisfaction [52–54]. However, in the current study, faculty members experienced the lack of technological support, highlighting the importance of preparing and designing culturally appropriate platforms to ensure the sustainability of online teaching in Saudi Arabia.

### 3.3. Educational challenges

When nursing schools shifted their students to online platforms, the participating nursing educators became more concerned about the quality of students' learning, especially their hands-on-experience. At the beginning of the lockdown, they used videos to explain some nursing skills; then, at some point they had to stop teaching students nursing skills online, as the students were not comprehending the material, and failed to continue.

Although one of the most important aspects of online teaching is the use of videos, graphics, and other online cognitive tools to prepare student nurses for practice [55], most of the nursing skills videos were not relevant to the Saudi context. The lack of applicable video content also might be related to the fact that, during the pandemic, the switch to distance education happened suddenly, whereas in pre-COVID times, faculties had time to prepare for such a transition and were, perhaps, fully equipped. This finding aligns with Bdair [12], who reported that the faculty felt that teaching nursing skills virtually was inappropriate, and students believed that learning hands-on skills virtually would not only hurt their academic integrity but also create a huge gap between theory and clinical practice. In turn, this might create a huge gap between the student nurses' expectations of the profession and reality, thereby causing ethical dilemmas for novice nurses [56].

Students are able to express their concerns through various non-verbal gestures of communication while using online education, thus enabling the nursing educator to determine whether the student understands or not [57]. However, the concept of online teaching in the Saudi Arabian context during COVID-19 was unique because of the culture regarding female nursing educators and students. For instance, not using the camera and recording voices or videos is problematic for both sides, even if the nursing educators and the students are all women. Saudi women usually wear coverings over their heads, faces, and bodies [58]. Therefore, it is difficult to effectively use or interpret non-verbal cues such as eye contact and facial expression. This limitation hinders direct communication and increases the challenges experienced by nursing educators in Saudi Arabia. However, these circumstances are not applicable to male educators and students.

Although this study reports that nursing students' learning was negatively affected by switching to learning basic nursing skills online, a few studies have indicated that students' knowledge improved, regardless of whether the learning had been conducted virtually or in person pre-COVID-19 [59]. Another study conducted in Spain by Arrogante et al. [60], found that the virtual OSCE was as successful as the in-person OSCE. He et al. [61] published a systematic review that suggested that distance education was not significantly different from traditional education for health science-related students, including nursing students. In fact, they concluded that nursing students reported higher satisfaction with distance education.

Another issue shared by nursing educators was that the students had unequal access to internet devices. The availability of technology widely varied in developing and developed countries [62,63], which could put some students at various positions, and not all students would have an equal chance at education. It is unethical to suggest otherwise. This is a worldwide issue that arose during COVID-19, and this study reveals an important aspect about equality and social justice among the nursing students. There was an important common issue about having unequal access to online learning, despite this study being conducted in Saudi Arabia. Several educators took for granted, that all students had a computer device and an internet connection, however, this was not the case for students in Saudi Arabia, which is considered a developed country. Other studies have also highlighted this issue among faculties [12, 64,65]. Accessibility can be established through equal access to online education materials using different online methods ensuring students justice.

Cheating among students was another serious issue of concern for the participating educators in this study. The participating educators shared frustrating moments wherein they observed a huge rise in students' cheating. They believed that there was no way to control this behavior and the universities should do something to address this issue. Elsalem et al. [66] reported that more than half of students cheated during exams; moreover, the ability to cheat during the exam was connected to the students' preference for online exams. The literature on cheating is insufficient, and the phenomenon needs to be studied, as it is not yet clear if cheating is more prevalent in online or face-to-face exams. A few studies have reported no difference in the ease of cheating between online and traditional exams [67–69]. However, academic integrity has been violated by students during COVID-19 [12]. Therefore, it is crucial to develop online systems for exams and adopt strong strategies to limit and prevent the student from cheating.

### 3.4. Implications of the study

To overcome these challenges, nursing educators should have a good understanding of online teaching for encouraging student nurses' effective learning, and improving the teaching environment, leading to increased effective learning and students' satisfaction. This study provides guidance for teachers who need to teach in challenging environments, while using digital tools. It can serve as a reference for improving the implementation of online systems for both educators and students. Online teaching strategies should be incorporated with traditional course teaching as blended teaching strategies.

To maintain the quality of education, it is suggested that nursing education administrators should encourage faculty members to participate in training and development programs that incorporate online education. Likewise, nursing education administrators should provide adequate support and time for faculty members to develop their digital teaching and learning skills. It is also recommended that institutions of higher education cooperate at national and regional levels through educational online conferences and resource sharing; they must also invest in online education and strengthen their emergency and disaster intervention plans. The experiences of nursing educators during the COVID-19 pandemic demonstrate the need to plan for online teaching. Such planning should include providing adequate training for nursing educators and developing an environment that will support the delivery of all educational aspects of the course. Ongoing support using accessible channels is essential for the success of online nursing education,



and innovative ways to deliver online clinical content must be identified.

To understand how faculty development can improve teaching performance, it is necessary to collect process-evaluation data. Further research should investigate the long-term sustainability and effectiveness of these innovations, beyond the pandemic. It is crucial to rigorously and systematically assess the impact of faculty development on an institution or organization. Nursing faculties must provide education that ensures the next generation of highly skilled nursing professionals can cope with the challenges that were posed by COVID-19. However, this task can be overwhelming for faculty members who are already under stress. Therefore, the quality of care of these students who received online education and their impact on the stakeholders must be investigated.

### 3.5. Limitations

In this study, the lead researchers discussed the findings and interpretations with the research team to reduce the risk of bias. The interviews were conducted in Arabic or English so that participants could express themselves easily; however, transcribing, translating, and comparing audio files was a challenging and time-consuming task. Additionally, this study only used Zoom platform for its familiarity, and other platforms, such as WhatsApp and Skype, were censored in Saudi Arabia. Moreover, we focused only on the experiences of nursing educators, however, including the experiences of both students and educators would provide a more comprehensive analysis and enhance the credibility of the research. Therefore, further studies on nursing student experiences and their clinical practice through COVID-19 needs to be taken into consideration.

Additionally, as this study's sample was limited to a few universities, it would be beneficial for future researchers to expand its scope by collecting data from a larger number of universities, including public and private institutions. Finally, owing to the pandemic, we had to conduct interviews via Zoom, which limited the opportunities for in-person interactions and personal connections.

## 4. Conclusions

This study addressed the challenges and factors that affected online teaching during COVID-19. It also examined the challenges of digitalization that have not been previously explored in Saudi Arabia. The findings, which are based on empirical evidence, identify the challenges online classes pose for nursing educators in online classes. Most educators adopted a student-centered approach during the pandemic; however, they faced challenges related to electronic and distance teaching, learning literacy, classroom management, and connectivity during the transition to digitalization. Thus, this study recommends that university administrators organize training programs for educators to help them conduct more effective and culturally appropriate online classes. These results can be used by policymakers to improve the implementation of online systems. Finally, this research provides insights into the current learning system.

### Data availability

Data will be made available on request.

### Ethical considerations

The King Saud University Institutional Research Board approved this study (KSU-HE-20-216).

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### CRediT authorship contribution statement

**Monirah Albloushi:** Writing – review & editing, Writing – original draft, Visualization, Validation, Supervision, Resources, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization. **Aisha Namshan Aldawsari:** Writing – review & editing, Writing – original draft, Validation, Software, Methodology, Formal analysis, Data curation, Conceptualization. **Reem Alghamdi:** Writing – review & editing, Writing – original draft, Visualization, Validation, Methodology, Formal analysis, Conceptualization. **Badr Alenazy:** Writing – review & editing, Writing – original draft, Methodology, Data curation, Conceptualization. **Hana Alanazi:** Writing – review & editing, Writing – original draft, Formal analysis, Data curation. **Hissah Almotairi:** Writing – review & editing, Writing – original draft, Formal analysis, Data curation.

### Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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## Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.heliyon.2024.e29533>.

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