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Nurse Educators' Perceptions of Teaching Strategies for Promoting Student-Centered and Self-Directed Learning in Gaunteng Province, South Africa

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Abstract

Nursing education in South Africa is expected to develop students who are capable of identifying their own learning needs and functioning as independent practitioners, making teaching strategies and learning environments critical in supporting student-centred and self-directed learning. This study explored nurse educators' perceptions of teaching strategies used to promote these approaches within a nursing education context. A qualitative, exploratory, descriptive, and contextual design was employed. Twelve nurse educators responsible for teaching theoretical components of a Regulation 171 nursing programme were purposively selected. Data were collected through individual semi-structured interviews conducted until data saturation was reached. Interviews were audio-recorded, transcribed verbatim, and analysed using Tesch's eight-step thematic analysis approach. Three main themes emerged: commonly used teaching strategies, perceived effects of preferred strategies, and factors influencing the selection and implementation of teaching approaches. Findings indicated a continued reliance on conventional methods such as lectures, alongside the growing use of blended strategies including flipped classrooms and group-based learning. While these approaches were perceived to enhance student engagement, collaboration, and independent learning, their effectiveness was shaped by contextual constraints such as time limitations, infrastructure challenges, and resource availability. The study underscores the importance of adopting context-responsive teaching strategies that support student-centred and self-directed learning. Addressing institutional and infrastructural challenges, while strengthening educators' pedagogical capacity, is essential to optimise teaching effectiveness and improve student learning outcomes in nursing education.

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INTRODUCTION

Nursing education plays a critical role in preparing competent, knowledgeable, and skilled practitioners capable of addressing complex and evolving global health challenges. Within the South African context, the South African Nursing Council (SANC) emphasizes that effective teaching and learning in nursing require the use of diverse pedagogical approaches to support student-centeredness and promote self-directed learning. These educational outcomes are intended to foster holistic development across cognitive, affective, and psychomotor domains of student learning (Froneman et al., 2023).

The Nursing Education and Training Standards further advocate for teaching strategies that position students at the center of the learning process and cultivate autonomy in learning. At institutions such as the Gauteng College of Nursing (GCON), these principles are operationalized through the endorsement of instructional strategies designed to promote student-centered learning and foster self-directedness among nursing students (Gauteng College of Nursing, 2018).

Self-directed learning (SDL) in nursing education has been conceptualized as a process, a personal attribute, a learning style, and an instructional approach (Chen & Fan, 2023). SDL entails learners actively taking initiative to identify their educational needs, establish learning goals, select appropriate strategies, and evaluate learning outcomes, either independently or with guidance (Hwang & Kim, 2023). Darsih (2018) conceptualises student-centred teaching as an approach that incorporates diverse instructional strategies and repositions the teacher from a transmitter of knowledge to a facilitator of learning. The study further suggests that, although it may not be feasible to apply this approach to every aspect of teaching, striving to be a student-centred educator should remain a central goal for all teachers. Similarly, Berg and Lepp (2023) define student-centred learning in nursing education as an approach that values students' voices, empowers them, and acknowledges their diverse experiences and needs. This perspective places strong emphasis on aligning teaching with students' interests and expectations. In addition, it seeks to enhance student autonomy by actively integrating their feedback into the design of course content and instructional strategies, as highlighted by Hung, Lam and Chow (2020). Furthermore, Berger-Estilita, Krista, Gogollari et al. (2025) describe SDL as an instructional approach in which learners take responsibility for determining both the content and the methods of their learning.

Previous literature highlights the multiple benefits of SDL, including enhanced teaching competencies, critical thinking skills, self-efficacy, and leadership development (CLEARY et al., 2020; Kang et al., 2020; Al-Adwan, Nofal, Akram et al., 2022; Avsec & Ferk Savec, 2022). Despite the broad range of teaching methods available to nurse educators, lecture-based instruction remains prevalent at the research site, often in combination with other strategies. While the lecture format, defined as an oral delivery that integrates verbal communication with written content and digital media offers flexibility and accessibility, its effectiveness in promoting student-centeredness and SDL remains in question (Brink & Rensburg, 2019). Consequently, it is important to explore how nurse educators perceive and implement various teaching strategies in practice (Xu, 2016).

This study investigated the perceptions of nurse educators at a selected nursing education institution in Gauteng Province regarding the effectiveness of instructional strategies in fostering student-centered learning and self-directedness. The findings provide insights into the current pedagogical practices, highlight gaps, and inform recommendations for improving teaching effectiveness in nursing education. Therefore, the purpose of this study was to explore and describe nurse educators' perceptions of various instructional strategies used to promote student-centered learning and self-directedness. The study also aimed to offer evidence-based recommendations to support the effective implementation of these strategies in nursing education settings.

METHODS

A research design provides the structured framework for addressing a research problem, ensuring the study's methodological coherence and integrity (Polit & Beck, 2021). This study employed a qualitative, exploratory, descriptive, and contextual design to gain in-depth insight into nurse educators' perceptions of instructional strategies that promote student-centeredness and self-directed learning. The study was conducted at a selected nursing education institution (NEI) located in the West Rand region of Gauteng Province, South Africa. This NEI is one of the campuses governed by the Gauteng College of Nursing and offers a three-year undergraduate diploma in nursing under Regulation 171 (R.171). The program admits approximately 100 students annually.

The study population comprised nurse educators responsible for teaching theory to students enrolled in the R.171 diploma program. Educators involved in clinical instruction were excluded. The target campus is one of four NEI campuses operated by the Gauteng College of Nursing, preparing students for registration as Generalist Nurses in accordance with the South African Nursing Council (SANC) Scope of Practice (Bristol et al., 2019). Eligible participants were nurse educators aged 35 to 65 who held either a one-year nursing education diploma or a bachelor's degree and had at least one year of teaching experience. Those not meeting these criteria, or who declined to provide informed consent, were excluded. Participants were selected through purposive, non-probability sampling to ensure rich, relevant data from individuals with firsthand knowledge of the study phenomenon (Vasileiou et al., 2018). Sampling continued until data saturation was achieved, meaning no new themes emerged from subsequent interviews (Bristol et al., 2019).

Data were collected through individual semi-structured interviews conducted between June and August 2023. The interviews were guided by a central open-ended question. Each interview lasted between 30 and 60 minutes and was conducted in a private room within the campus library to ensure confidentiality and minimize distractions. The researcher used an interview guide comprising grand tour questions and probing questions, while allowing flexibility for participants to expand on their experiences. This approach enhanced the dependability of the data collection process by ensuring that all interviews were guided by a consistent set of core questions, while also enabling clarification and deeper exploration of participants' responses. In addition, the structured interview guide strengthened trustworthiness by supporting systematic data generation and facilitating rich, detailed accounts of participants lived experiences. All interviews were audio-recorded verbatim using a digital recorder, and non-verbal cues were captured in field notes to complement and enrich the data (Polit & Beck, 2021).

Given the researcher's prior role as a lecturer at the institution, reflexivity was practiced minimizing bias and prevent undue influence on participants' responses (Olmos-Vega et al., 2023). Participants' identities were anonymized using pseudonyms (e.g., Participant 1, or P1), and a secure reference list was maintained (Bristol et al., 2019). Audio recordings were transcribed verbatim by an independent transcriber and verified by the researcher. Transcriptions were reviewed and approved by participants prior to analysis. Data were analyzed using Tesch's eight-step method, which involved reading transcripts repeatedly, identifying themes and patterns, coding data, and organizing findings into categories (Creswell & Creswell, 2018; Grove et al., 2021). Manual coding was employed to preserve the richness and contextual depth of participants' narratives, with analytical input provided by both the first and second authors (Bristol et al., 2019).

To establish the trustworthiness of the study, the researcher applied Lincoln and Guba's criteria. Credibility was ensured through prolonged engagement with participants and independent verification of data analysis by a qualified researcher (Buthelezi & Shopo, 2023). Transferability was supported by purposively selecting participants with relevant experience in teaching within the R.171 curriculum. Dependability was addressed through detailed

documentation of the research process and justification for methodological decisions (Polit & Beck, 2021). Confirmability was assured by emphasizing participants' perspectives and maintaining transparency in data interpretation (Polit & Beck, 2021).

Ethical approval was obtained from the University of South Africa, College of Human Sciences Research Ethics Committee (CREC Reference #: 64119432_CREC_CHS_2021) issued on the 14th of December 2021. Permission to conduct the study was also granted by the Gauteng Department of Health and the principal of the Gauteng College of Nursing. Participation was voluntary, and participants were fully informed of the study's purpose, risks, and benefits. Written consent was obtained, and participants were assured of their right to withdraw at any point without penalty. Confidentiality and anonymity were maintained by using pseudonyms, and all data were securely stored.

RESULTS

Twelve nurse educators who met the inclusion criteria participated in the study. Participants included ten females and two males, aged between 33 and 58 years, with teaching experience ranging from 5 to 24 years. All participants facilitated theoretical instruction in the diploma in nursing (R.171) program at a campus in Gauteng Province.

Table 1. Participant Demographics

Table 1 presents an overview of the demographic characteristics of the study participants.

No	Participant	Age/Gender	Years of Experience
1	Participant 1	37 / Female	8 years
2	Participant 2	34 / Female	9 years
3	Participant 3	48 / Female	17 years
4	Participant 4	47 / Male	10 years
5	Participant 5	58 / Female	16 years
6	Participant 6	55 / Female	24 years
7	Participant 7	42 / Female	11 years
8	Participant 8	48 / Female	19 years
9	Participant 9	33 / Female	5 years
10	Participant 10	35 / Male	7 years
11	Participant 11	50 / Female	15 years
12	Participant 12	42 / Female	9 years

Table 2. Themes, Categories, and Sub-categories Emerging from Data Analysis

Table 2 outlines the themes, categories, and sub-categories that emerged from the data analysis, reflecting the key patterns and insights identified in the study.

Theme	Category	Sub-category
1. Commonly used teaching strategies	1.1 Instructional/conventional teaching strategies	1.1.1 Lecture method (e.g., PowerPoint, Q&A sessions) 1.1.2 Group discussions (e.g., collaborative student tasks)
	1.2 Blended teaching strategies	1.2.1 Jigsaw method (e.g., student dialogue exchanges) 1.2.2 Flipped classes (e.g., use of online platforms like Google Workspace)

2. Effects of preferred teaching strategies	2.1 Perceived positive effects of instructional strategies	2.1.1 Promotes teamwork and collaboration 2.1.2 Clarifies content and aids retention
	2.2 Perceived negative effects of instructional strategies	2.2.1 Slow learners may fall behind 2.2.2 Loss of student interest and focus
	2.3 Perceived positive effects of blended strategies	2.3.1 Prepares students for 21st-century learning 2.3.2 Encourages autonomy and learning responsibility
	2.4 Perceived negative effects of blended strategies	2.4.1 Requires more preparation time 2.4.2 Technical challenges (e.g., power outages, poor connectivity)
3. Factors influencing strategy selection	3.1 Environmental factors	3.1.1 Infrastructure limitations (e.g., classroom layout) 3.1.2 Financial/resource constraints
	3.2 Individual factors	3.2.1 Educator abilities and teaching preferences 3.2.2 Educator motivation and attitudes
	3.3 Student-related factors	3.3.1 Student demographics and learning characteristics 3.3.2 Class size

Presentation of results

This section presents the themes, categories, and sub-categories that emerged from the data, supported by illustrative quotations from the participants.

Theme 1: Commonly used teaching strategies

This theme reflects the teaching strategies frequently used by nurse educators in undergraduate nursing education. Two categories emerged: instructional/conventional teaching strategies and blended teaching strategies.

Category 1.1: Instructional/conventional teaching strategies

The majority of participants indicated that traditional methods such as lectures and group discussions remain the dominant teaching approaches.

Sub-category 1.1.1: Lecture method

Participants reported using the lecture method due to its efficiency in covering extensive content within limited timeframes.

> *"Most of the time we are using the lecture method due to the fact that we've got a program that is so packed and sometimes we use group discussions." (Participant 1, 37-year-old female)*

Some participants also highlighted barriers associated with this method, including student access to learning materials.

> *"The lecture method… some of the barriers [are] when students do not have learning material, like textbooks, or if maybe there is a delay… in obtaining the prescribed textbooks." (Participant 3, 48-year-old female)*

Sub-category 1.1.2: Group discussions

Group discussions were perceived as beneficial for fostering teamwork and enhancing engagement.

> *"With a group discussion… it enhances the students to work as a team… there can also be a lot of information that will come from different directions of life, and all the*

students will benefit." (Participant 6, 55-year-old female)

"Group discussions… give an opportunity to reflect on what you have learnt already… and if there is something unclear, the facilitator can help clarify." (Participant 10, 35-year-old male)

Category 1.2: Blended teaching strategies

Blended strategies incorporate both face-to-face and digital learning methods. Participants recognized their potential to improve student outcomes and promote engagement.

Sub-category 1.2.1: Audio-visual presentations

Participants used videos to enhance theoretical understanding.

"With social sciences, audio-visuals can be very effective because students watch and relate the theory to what is happening in our communities." (Participant 11, 50-year-old female)

Sub-category 1.2.2: Jigsaw method

This strategy was seen as promoting peer teaching and dialogue but was constrained by time limitations.

"The jigsaw strategy… teaching becomes a dialogue between the communities." (Participant 10, 35-year-old male)

"It's difficult to use jigsaw… you need time to group students, rotate them, and allow sharing. It's not feasible within a one-and-a-half-hour session." (Participant 1, 37-year-old female)

Sub-category 1.2.3: Flipped classrooms

Flipped learning was praised for fostering self-directed learning and digital literacy.

"The flipped classroom… moves away from the traditional setting. It's effective because it encourages learners to search for information using technology." (Participant 4, 47-year-old male)

Theme 2: Perceived effects of preferred teaching strategies

This theme captures the nurse educators' perceptions of how various teaching strategies affect learning outcomes.

Category 2.1: Effects of instructional strategies

Teaching strategies like lectures and group discussions were identified as approaches to enhance student-centered learning and foster self-directedness.

Sub-category 2.1.1: Promote teamwork and collaboration

Group discussions were particularly valued for encouraging collaborative learning.

"It enhances students to work as a team… there is diversity and information from different perspectives." (Participant 6, 55-year-old female)

Sub-category 2.1.2: Provide opportunities for clarity and information retention

Lecture-based interactions allowed immediate feedback and clarification.

"With a co-lecture, I can interact with students… they ask questions, I clarify… it becomes active, not just delivering." (Participant 2, 34-year-old female)

Category 2.2: Negative effects of instructional strategies

Some participants highlighted the perceived adverse impacts of certain instructional strategies on teaching and learning, leading to the emergence of two sub-categories within this theme.

Sub-category 2.2.1: Slow learners may be left behind

The pace of lectures sometimes disadvantaged slower learners.

"If the content is presented too fast… some students are not able to follow, and time constraints prevent questions." (Participant 11, 50-year-old female)

Sub-category 2.2.2: Loss of focus and interest

Participants noted that some students disengage during lectures or group discussions.

"Students might deter from the content and are not able to redirect each other… they've

wasted time." (Participant 2, 37-year-old female)

"With the lecture method, students are not attentive… they might be busy doing other things in class." (Participant 6, 55-year-old female)

Category 2.3: Effects of blended strategies

Participants expressed both positive and negative views regarding the impact of blended teaching strategies on teaching and learning. Presented below are the perceived positive effects, illustrated with examples and supported by direct quotations.

Sub-category 2.3.1: Preparation for 21st-century learning

Blended strategies were viewed as modern and aligned with students' technological preferences.

"Gen Zs are moving into the 4th Industrial Revolution… they prefer electronic books, laptops, iPads." (Participant 4, 47-year-old male)

Sub-category 2.3.2: Promotes independent learning

Students benefited from flexibility in learning environments.

"Flipped class… allows students to use non-traditional settings—home, residence—wherever they prefer." (Participant 4, 47-year-old male)

"Our students live the digital lifestyle… if we meet that standard, they can perform much better." (Participant 5, 58-year-old female)

Category 2.4: Negative effects of blended strategies

Some participants pointed out the negative aspects of blended teaching strategies on teaching and learning, such as the need for trial and adaptation, extended preparation time, and difficulties associated with technical issues.

Sub-category 2.4.1: Time constraints

Strategies like jigsaw and think-pair-share were hindered by the time needed for setup and execution.

"With jigsaw… grouping and sharing takes time… not practical in a 90-minute lesson." (Participant 1, 37-year-old female)

"Think-Pair-Share… works, but it's content related and time-consuming if students don't have prior knowledge." (Participant 9, 33-year-old female)

Sub-category 2.4.2: Technical challenges

Load shedding and internet issues disrupted the implementation of digital strategies.

"Load shedding… prevents students from preparing with digital content. It affects platforms like WhatsApp." (Participant 3, 48-year-old female)

"When there's no power… internet is down. It disrupts planned learning activities." (Participant 4, 47-year-old male)

DISCUSSION

Findings of this study revealed that educators primarily employed conventional methods such as lectures and group discussions, as well as blended strategies including flipped classrooms, jigsaw techniques, and audiovisual media. The choice of teaching strategy was influenced by several contextual and pedagogical factors, including the complexity of course content, class size, available resources, and educators' personal preferences. These findings align with previous literature emphasizing that the selection of instructional strategies significantly influences student engagement, autonomy, and knowledge acquisition (Gassas, 2021; Vizeshfar & Torabizadeh, 2018). Notably, environmental and infrastructural constraints were frequently identified as impediments to effective teaching, consistent with findings from other South African research that highlighted challenges such as overcrowded classrooms, limited internet access, and inadequate physical teaching spaces (Mthimunye & Daniels, 2019; Martinsen, Aiyub, Baharuddin et al., 2025; Gontse, Kovane, Mokgaola et al., 2025; Aristovnik Keržič, Ravšelj et al., 2020; Goso, Khosa, Mgilane et al., 2026). Similarly, Froneman et al. (2023) underscored how large class sizes negatively affect both the quality of nursing education and the

instructional methods that educators are able to employ (Froneman et al., 2023).

Despite these challenges, the use of blended and active learning strategies was perceived to enhance student engagement, knowledge retention, and the development of 21st-century competencies, such as critical thinking and digital literacy. These perceptions are corroborated by international studies. For example, in South Korea, nurse educators reported that flipped classrooms facilitated active learning, even amid spatial limitations (Choi et al., 2021). In Oman, implementation of flipped classrooms led to improved academic performance and student satisfaction (Joseph et al., 2021). A study Grønlien et al. (2021) reported that blended learning can enhance students' understanding of course expectations and improve overall learner satisfaction. However, when situated within the broader body of literature, these positive outcomes are not consistently observed across different contexts. Studies by Serrano, Dea-Ayuela, González-Burgos et al. (2019), Leidl, Ritchie and Moslemi (2020), and Mushtaq and Iqbal (2024) similarly indicate that although blended learning may promote flexibility and engagement, its effectiveness is strongly shaped by pedagogical design, instructional quality, and the availability of student support systems. In comparison with the Norwegian findings, this body of evidence suggests that improved satisfaction and clarity are not inherent characteristics of blended learning, but rather outcomes of carefully structured and well-supported implementation (Thommadurage, Pham, Mirriah et al., 2026). Without such intentional design and support, blended learning may therefore fail to consistently produce positive educational experiences (Alexander, White, Varo et al., 2024; Boelens, De Wever & Voet 2017; Liu, Peng, Zhang et al., 2016).

In contrast, systematic evidence indicates that blended learning does not consistently outperform traditional approaches, particularly in the development of clinical skills, where direct, face-to-face engagement remains essential (McCutcheon, Lohan, Traynor et al., 2015). This finding contrasts with studies reporting improved engagement and satisfaction, reinforcing the view that while blended learning may be effective for theoretical knowledge acquisition, it is less reliable for cultivating practical and clinical competencies. These contrasting findings have important implications for nursing education. They highlight the need for programmes to avoid replacing traditional clinical teaching with blended learning entirely and instead adopt a complementary approach that integrates both modalities in a deliberate and pedagogically coherent manner to optimise learning outcomes.

Furthermore, global literature emphasises that disparities in digital access, infrastructure, and technological readiness significantly influence the effectiveness of blended learning, particularly in resource-constrained settings (O'Hagan, 2020; Mukhithi, Phahlane & Malungana, 2025). In such contexts, nursing programmes often face significant challenges in implementing technology-enhanced learning, which may compromise their ability to achieve intended educational objectives (Mudiyanselage, Kisokanth & Warnakulasuriya, 2022). This contrasts with findings from well-resourced environments, where stronger institutional support and reliable technological infrastructure enable more effective implementation, reinforcing the central role of context in shaping outcomes. Although blended learning may require initial investment in infrastructure and instructional redesign, evidence suggests that, over time, it can enhance nursing students' professional competence and learning satisfaction while improving the efficient use of educational resources (Du, Zhao, Xu et al., 2022). However, its effectiveness in continuing education contexts remains uncertain, particularly regarding the transfer of learning into clinical practice and its subsequent impact on patient outcomes (Rouleau, Gagnon, Côté et al., 2019).

Taken together, the evidence suggests that while blended learning holds potential to support student-centred and self-directed learning, its effectiveness is highly context dependent. The implications for nursing education are therefore significant: institutions must adopt context-

responsive implementation strategies that include investment in digital infrastructure, strengthening educators' pedagogical and technological capacity, and supporting students' digital literacy. Importantly, blended learning should be deliberately integrated with face-to-face clinical teaching rather than used as a replacement. Without addressing these structural and pedagogical requirements, its implementation risks reinforcing rather than reducing existing educational inequities.

Strengths and Limitations

A key strength of this study lies in its capacity to create a reflective space for nurse educators to critically engage with their pedagogical practices. This reflective dimension is particularly significant in nursing education, where teaching effectiveness is closely linked to the development of clinical competence and students' preparedness for professional practice. By eliciting educators lived experiences, the study moves beyond surface-level descriptions of teaching strategies to reveal underlying enablers and constraints that shape pedagogical decision-making in real educational contexts.

In addition, the inclusion of diverse educator perspectives enhances the contextual richness of the findings, offering a nuanced understanding of teaching and learning dynamics within a South African nursing education environment. This depth of insight situates pedagogical practices within their institutional, resource, and socio-cultural realities, thereby providing a meaningful evidence base to support reflective practice, stimulate professional dialogue, and inform incremental improvements in teaching approaches that are responsive to local educational needs.

However, the study is limited by its single campus setting in Gauteng Province and its qualitative design, which restricts the transferability of findings to other institutional or geographical contexts. While qualitative methodology enables rich, in-depth exploration of experiences, the context-specific nature of the data means that the findings reflect the realities of one setting rather than broader systemic patterns in nursing education.

Furthermore, the reliance on a single site limits the extent to which variations in institutional resources, organizational culture, and pedagogical practices across different campuses or provinces could be captured. As such, the findings should be interpreted as exploratory and context-bound rather than broadly generalizable. Nevertheless, they provide valuable foundational insights that can inform further research in similar educational settings and contribute to a deeper understanding of teaching and learning in nursing education.

SUGGESTIONS

To strengthen nursing education practice, institutions should prioritize targeted improvements in teaching and learning infrastructure. This includes ensuring reliable internet connectivity, well-equipped teaching venues, and equitable access to up-to-date learning resources. Such infrastructural enhancements are essential for supporting effective pedagogical delivery and enabling meaningful student engagement, particularly in contexts where blended and technology-supported learning approaches are increasingly used.

In addition, structured faculty development programmes should be implemented to enhance nurse educators' pedagogical competencies. These programmes should focus on strengthening skills in student-centred learning, blended teaching strategies, and reflective teaching practices that are adaptable to varying classroom and clinical contexts. Supporting educators in this way is critical for improving teaching effectiveness and ensuring alignment with contemporary nursing education demands. From a research perspective, future studies should broaden the evidence base by including multiple institutions across different provinces and employing mixed methods designs. This would allow for greater methodological triangulation and a more comprehensive understanding of teaching and learning dynamics in nursing education. Furthermore, studies that specifically explore student perspectives, alongside comparative analyses of educator and student experiences, would offer deeper insight into how

teaching strategies are experienced and interpreted by different stakeholders. Such evidence would be valuable in informing more robust, inclusive, and contextually responsive pedagogical reforms in nursing education.

CONCLUSION

This study highlights the importance of understanding the prevalent teaching strategies and the factors that influence their selection and implementation to promote student-centeredness and self-directed learning among nurse educators in Gauteng Province. By identifying these influencing factors, educators can optimize the application of effective teaching strategies, thereby enhancing the quality of nursing education and improving student learning outcomes. Moreover, the findings emphasize the need for continuous professional development to enable nurse educators to effectively implement blended and innovative teaching strategies. Keeping abreast of emerging pedagogical approaches and educational technologies will ultimately benefit future generations of nurses.

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CONFLICT OF INTERESTS

The authors declare no conflict of interest.

AUTHORS' CONTRIBUTIONS

The first author PMLS conducted the study as part of a Master's degree project and drafted the manuscript. The second author KLM supervised the study, finalized the manuscript, and submitted it for publication.

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REFERENCE

Alexander, E. S., White, A. A., Varol, A., Appel, K., & Lieneck, C. (2024). Team-and problem-based learning in health services: a systematic literature review of recent initiatives in the United States. Education sciences, 14(5), 515. https://doi.org/10.3390/educsci14050515

Al-Adwan, A. S., Nofal, M., Akram, H., Albelbisi, N. A., & Al-Okaily, M. (2022). Towards a Sustainable Adoption of E-Learning Systems: The Role of Self-Directed Learning. Journal of Information Technology Education: Research, 21. https://doi.org/10.28945/4980

Aristovnik A., Keržič D., Ravšelj D., Tomaževič N., and Umek L., Impacts of the COVID-19 Pandemic on Life of Higher Education Students: A Global Perspective, Sustainability. (2020) 12, no. 20, https://doi.org/10.3390/su12208438.

Avsec, S., & Ferk Savec, V. (2022). Mapping the relationships between self-directed learning and design thinking in pre-service science and technology teachers. Sustainability, 14(14), 8626. https://doi.org/10.3390/su14148626

Berg, E., & Lepp, M. (2023). The meaning and application of student-centered learning in nursing education: An integrative review of the literature. Nurse education in practice, 69, 103622. https://doi.org/10.1016/j.nepr.2023.103622

Berger-Estilita, J., Krista, L., Gogollari, A., Schmitz, F., Elfering, A., & Guttormsen, S. (2025). Self-directed learning in health professions: A mixed-methods systematic review of the literature. PLoS One, 20(5), e0320530. https://doi.org/10.1371/journal.pone.0320530

Boelens, R., De Wever, B., & Voet, M. (2017). Four key challenges to the design of blended learning: A systematic literature review. Educational research review, 22, 1-18. https://doi.org/10.1016/j.edurev.2017.06.001

Brink, H., & Rensburg, G. van. (2019). Fundamentals of Research Methodology for Healthcare Professionals. In *Teaching and Learning in Nursing* (4th ed., Number 2). Juta & Company (Pty) Ltd. https://library.riverhigherinstitute.edu.na/index.php?p=show_detail&id=25&keywords=

Bristol, T., Hagler, D., McMillian-Bohler, J., Wermers, R., Hatch, D., & Oermann, M. H. (2019). Nurse Educators' use of Lecture and Active Learning. *Teaching and Learning in Nursing*, *14*(2), 94–96. https://doi.org/10.1016/j.teln.2018.12.003

Buthelezi, N. D., & Shopo, K. D. (2023). Challenges experienced by nurse educators developing postgraduate nursing diploma curriculum programmes, Gauteng. *Curationis*, *46*(1), a2271. https://doi.org/10.4102/curationis.v46i1.2447

Chen, S., & Fan, J. (2023). Validation of the psychometric properties of the Self-Directed Learning Readiness Scale. *Nursing Open*, *10*(3), 1639–1646. https://doi.org/10.1002/nop2.1418

Choi, J., Lee, S. E., Bae, J., Kang, S., Choi, S., Tate, J. A., & Yang, Y. L. (2021). Undergraduate nursing students' experience of learning respiratory system assessment using flipped classroom: A mixed methods study. *Nurse Education Today*, *98*, 104664. https://doi.org/10.1016/j.nedt.2020.104664

CLEARY, M., KORNHABER, R., THAPA, D. K., WEST, S., & VISENTIN, D. (2020). A Systematic Review of Behavioral Outcomes for Leadership Interventions Among Health Professionals. *Journal of Nursing Research*, *28*(5), e118. https://doi.org/10.1097/JNR.0000000000000397

Creswell, J. W., & Creswell, J. D. (2018). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches: Fifth Edition*. SAGE Publication. https://repository.gctu.edu.gh/files/original/56306612e36527ab7cbe1504d259b344.pdf

Darsih, E. (2018). Learner-centered teaching: What makes it effective. Indonesian EFL Journal, 4(1), 33-42. https://doi.org/10.25134/ieflj.v4i1.796

Du, L., Zhao, L., Xu, T., Wang, Y., Zu, W., Huang, X., Nie, W., & Wang, L. (2022). Blended learning vs traditional teaching: The potential of a novel teaching strategy in nursing education-a systematic review and meta-analysis. *Nurse education in practice*, *63*, 103354. https://doi.org/10.1016/j.nepr.2022.103354

Froneman, K., du Plessis, E., & van Graan, A. C. (2023). Perceptions of nurse educators and nursing students on the model for facilitating 'presence' in large class settings through reflective practices: a contextual inquiry. *BMC Nursing*, *22*(1), 182. https://doi.org/10.1186/s12912-023-01341-6

Gassas, R. (2021). Sources of the knowledge-practice gap in nursing: Lessons from an integrative review. *Nurse Education Today*, *106*, 105095. https://doi.org/10.1016/j.nedt.2021.105095

Gauteng College of Nursing. (2018). *Teaching and learning policy*. Government Printer. https://www.gov.za/sites/default/files/gcis_document/201904/42380gon544.pdf

Gontse K. S., Kovane G. P., Mokgaola I. O., and Moloko-Phiri S., Experiences of Nurse Educators Regarding Teaching and Learning During the COVID-19 Pandemic, Health SA. (2025) 30, https://doi.org/10.4102/hsag.v30i0.2882 .

Goso, N. T., Khosa, N. V., Mgilane, M. S., Makola, T. V., & Sithole, N. (2026). Exploring Nursing Students' Experiences of the COVID-19 Period at a Public Nursing College in the Eastern Cape Province of South Africa. *International Journal of Environmental Research and Public Health*, *23*(3), 395. https://doi.org/10.3390/ijerph23030395

Grønlien, H. K., Christoffersen, T. E., Ringstad, Ø., Andreassen, M., & Lugo, R. G. (2021). A blended learning teaching strategy

strengthens the nursing students' performance and self-reported learning outcome achievement in an anatomy, physiology and biochemistry course – A quasi-experimental study. *Nurse Education in Practice*, *52*, 103046. https://doi.org/10.1016/j.nepr.2021.103046

Grove, S. K., Burns, N., & Gray, J. (2021). *The practice of nursing research: Appraisal, synthesis, and generation of evidence* (9th ed.). Elsevier Health Sciences. https://shop.elsevier.com/books/burns-and-groves-the-practice-of-nursing-research/gray/978-0-323-67317-4

Hung, M. S., Lam, S. K., & Chow, M. C. (2020). Nursing students' experiences and perceptions of learner-centred education in a disaster nursing course: A qualitative study. Nurse education in Practice, 47, 102829. https://doi.org/10.1016/j.nepr.2020.102829

Hwang, E. H., & Kim, K. H. (2023). Relationship between optimism, emotional intelligence, and academic resilience of nursing students: the mediating effect of self-directed learning competency. *Frontiers in Public Health*, *11*, 1182689. https://doi.org/10.3389/fpubh.2023.1182689

Joseph, M. A., Roach, E. J., Natarajan, J., Karkada, S., & Cayaban, A. R. R. (2021). Flipped classroom improves Omani nursing students performance and satisfaction in anatomy and physiology. *BMC Nursing*, *20*(1), 1. https://doi.org/10.1186/s12912-020-00515-w

Kang, S. J., Hong, C. M., & Lee, H. (2020). The Impact of Virtual Simulation on Critical Thinking and Self-Directed Learning Ability of Nursing Students. *Clinical Simulation in Nursing*, *49*, 66–72. https://doi.org/10.1016/j.ecns.2020.05.008

Leidl, D. M., Ritchie, L., & Moslemi, N. (2020). Blended learning in undergraduate nursing education–A scoping review. *Nurse education today*, *86*, 104318. https://doi.org/10.1016/j.nedt.2019.104318

Liu, Q., Peng, W., Zhang, F., Hu, R., Li, Y., & Yan, W. (2016). The effectiveness of blended learning in health professions: systematic review and meta-analysis. Journal of medical Internet research, 18(1), e2. https://doi.org/10.2196/jmir.4807

Martinsen, R., Aiyub, A., Baharuddin, D., Gressia, R. G. G., Burenlind, D., & Helgesen, A. K. (2025). Navigating Educational Challenges: Unravelling Educators' Experiences of Online Teaching in Nursing Education—A Qualitative Study. In Nursing Forum (Vol. 2025, No. 1, p. 3322929). Wiley. https://doi.org/10.1155/nuf/3322929

McCutcheon, K., Lohan, M., Traynor, M., & Martin, D. (2015). A systematic review evaluating the impact of online or blended learning vs. face-to-face learning of clinical skills in undergraduate nurse education. *Journal of advanced nursing*, *71*(2), 255-270. https://doi.org/10.1111/jan.12509

Mthimunye, K. D., & Daniels, F. M. (2019). Nurse educators' challenges and corresponding measures to improve the academic performance, success and retention of undergraduate nursing students at a university in the Western Cape, South Africa. *Independent Journal of Teaching and Learning*, *14*(1), 53–67. https://www.scielo.org.za/scielo.php?script=sci_arttext&pid=S2519-56702019000100006

Mudiyanselage, P. S. I., Kisokanth, G., & Warnakulasuriya, S. S. P. (2022). Blended learning approaches in nursing education during the COVID-19 pandemic: A review. *Education in Medicine Journal*, *14*(2), 103-109. https://doi.org/10.21315/eimj2022.14.2.8

Mukhithi, A., Phahlane, M., & Malungana, L. (2025, October). Diffusing student performance in using blended learning models in higher learning. In *Frontiers in Education* (Vol. 10, p. 1655941). Frontiers

Media SA. https://doi.org/10.3389/feduc.2025.1655941

Mushtaq, D., & Iqbal, Z. (2024). Hybrid pedagogies: Assessing the effectiveness of blended and flipped learning in digital learning environments. *International Journal of Emerging Knowledge Studies*, *3*(09), 662-669. https://doi.org/10.70333/ijeks-03-09-034

Namulondo, S. (2020). *Nurse educators' readiness to use blended learning in public nursing education institutions in Gauteng Province, South Africa* (Master's thesis, University of Pretoria (South Africa)).

Olmos-Vega, F. M., Stalmeijer, R. E., Varpio, L., & Kahlke, R. (2023). A practical guide to reflexivity in qualitative research: AMEE Guide No. 149. *Medical Teacher*, *45*(3), 241–251. https://doi.org/10.1080/0142159X.2022.2057287

O'Hagan, C. (2020). Startling Digital Divides in Distance Learning Emerge. UNESCO. https://en.unesco.org/news/startling-digital-divides-distance-learning-emerge

Polit, D. F., & Beck, C. T. (2021). *Nursing research: Generating and assessing evidence for nursing practice* (11th ed.). Lippincott, Williams & Wilkins. https://catalog.nlm.nih.gov/discovery/fulldisplay/alma9918901242206676/01NLM_INST:01NLM_INST

Rouleau, G., Gagnon, M. P., Côté, J., Payne-Gagnon, J., Hudson, E., Dubois, C. A., & Bouix-Picasso, J. (2019). Effects of e-learning in a continuing education context on nursing care: systematic review of systematic qualitative, quantitative, and mixed-studies reviews. *Journal of medical Internet research*, *21*(10), e15118. https://doi.org/10.2196/15118

Serrano, D. R., Dea-Ayuela, M. A., Gonzalez-Burgos, E., Serrano-Gil, A., & Lalatsa, A. (2019). Technology-enhanced learning in higher education: How to enhance student engagement through blended learning. *European journal of education*, *54*(2), 273-286. https://doi.org/10.1111/ejed.12330

Thommadurage, W., Pham, P. T. M., Mirriahi, N., Joksimovic, S., & Laat, M. D. (2026). Barriers to social learning in online higher education: A systematic review to improve learning design. Review of Education, 14(1), e70144. https://doi.org/10.1002/rev3.70144

Vasileiou, K., Barnett, J., Thorpe, S., & Young, T. (2018). Characterising and justifying sample size sufficiency in interview-based studies: systematic analysis of qualitative health research over a 15-year period. *BMC Medical Research Methodology*, *18*(1), 148. https://doi.org/10.1186/s12874-018-0594-7

Vizeshfar, F., & Torabizadeh, C. (2018). The effect of teaching based on dominant learning style on nursing students' academic achievement. *Nurse Education in Practice*, *28*, 103–108. https://doi.org/10.1016/j.nepr.2017.10.013

Xu, J. (2016). Toolbox of teaching strategies in nurse education. *Chinese Nursing Research*, *3*(2), 54–57. https://doi.org/10.1016/j.cnre.2016.06.002