



## The future of midwifery education: Student-centered learning and digital technology

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### ABSTRACT

Midwifery education in the digital era faces challenges and great opportunities to integrate the Student-Centered Learning (SCL) approach with digital technology to improve the quality of learning. This study aims to identify the effect of SCL and digital technology integration on the effectiveness of midwifery education. This study uses a literature review method with a search strategy based on the PICO framework, and article selection from databases such as Scopus, ScienceDirect, and Web of Science. From 17,648 articles collected, inclusion and exclusion criteria were applied until 18 relevant main articles were obtained for in-depth analysis. Based on the results of the literature synthesis, it can be concluded that integrating SCL and digital technology significantly influences the effectiveness of midwifery education. The implication is that midwifery educational institutions must design a curriculum that is adaptive, innovative, and responsive to technological developments and 21st-century learning needs.

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### ABSTRAK

Pendidikan kebidanan di era digital menghadapi tantangan sekaligus peluang besar untuk mengintegrasikan dalam mengembangkan metode pembelajaran yang lebih efektif dan relevan. Salah satu pendekatan yang potensial adalah integrasi Student-Centered Learning (SCL) dengan teknologi digital guna meningkatkan kualitas pembelajaran. Kajian ini bertujuan untuk mengidentifikasi pengaruh integrasi SCL dan teknologi digital terhadap efektivitas pendidikan kebidanan. Penelitian ini menggunakan metode literature review dengan strategi pencarian berdasarkan kerangka PICO, dan seleksi artikel dari basis data seperti Scopus, ScienceDirect, dan Web of Science. Dari 17.648 artikel yang terkumpul, diterapkan kriteria inklusi dan eksklusi hingga diperoleh 18 artikel utama yang relevan untuk dianalisis secara mendalam. Hasil sintesis literatur menunjukkan bahwa integrasi pendekatan SCL dengan teknologi digital memberikan dampak yang signifikan dalam meningkatkan keterlibatan mahasiswa, pemahaman materi, serta kualitas hasil pembelajaran. Temuan ini mengimplikasikan bahwa institusi pendidikan kebidanan perlu menyusun kurikulum yang inovatif, adaptif, dan responsif terhadap perkembangan teknologi serta tuntutan pembelajaran abad ke-21 guna mencetak lulusan yang kompeten dan siap menghadapi tantangan global.

**Kata Kunci:** e-learning; pendidikan kebidanan; SCL; student-centered learning; teknologi digital

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## **INTRODUCTION**

In the ever-evolving digital era, midwifery education is required to adapt by utilizing technology to improve the quality of learning and clinical skills of students. Student-Centred Learning (SCL), which places students at the center of the learning process, is increasingly being integrated with digital technologies to create more interactive and effective learning experiences. Continuity of Care Experiences (CoCE) is a very valuable experience for midwifery students, as they can realistically be directly involved in patient care ([Warton et al., 2025](#)). However, challenges such as high academic demands and difficulties in balancing personal life with education remain significant barriers faced by midwifery students in Australia ([Tierney et al., 2024](#)). Student learning methods that make students the center of learning, or Student-Center Learning (SCL). SCL requires a creative approach in teaching. Lecturers act as facilitators and motivators. Students are required to be active and creative so that learning outcomes are expected to be better, both in the form of hard skills and soft skills. Learning outcomes are changes in behavior that include cognitive, affective, and psychomotor aspects ([Azizah et al., 2022](#)). This aligns with the recognition that traditional learning methods, such as lectures and demonstrations, although still often used, have limitations in increasing student participation and understanding. Therefore, more interactive learning methods such as SCL have proven more effective in improving student learning outcomes ([Kerimbayev et al., 2023](#); [Yahya et al., 2024](#)).

Traditional learning methods such as lectures and demonstrations are still often used in midwifery education. However, these methods have limitations regarding increasing student participation and understanding. Interactive learning methods such as SCL have been proven more effective in improving student learning outcomes ([Maqfirah & Noviana, 2023](#)). SCL also provides excellent opportunities for the integration of digital technologies in learning. Modern technologies like distance learning enable students to learn flexibly and tailor, reinforcing a student-centered approach ([Kerimbayev et al., 2023](#)). These technologies not only facilitate access to learning materials but also enable collaboration between students through online communication tools that enhance their engagement in learning ([Kerimbayev et al., 2023](#)). Meanwhile, the application of gamification in midwifery education shows great potential in increasing student engagement and motivation. Gamification in midwifery education, such as application-based educational games, can improve students' practical skills and knowledge and strengthen learning through a game-based approach ([Fathi Najafi et al., 2025](#)). The use of gamification allows students to learn in a fun yet effective way, motivating them to continue to be active in the learning process and improve their abilities independently.

However, even though digital technology offers many benefits, challenges remain in its implementation. Although a clear assessment of practice was highly valued by students and preceptors, issues such as a lack of continuity in mentoring and a lack of resources in the practice environment often interfered with the process ([Bradshaw et al., 2025](#)). This suggests that although technology facilitates SCL, good management of infrastructure and resources is also needed to ensure its successful implementation. Paradigm change in the learning process, which was initially Teacher Centered Learning (TCL), becomes Student Centered Learning (SCL) as stated in the Peraturan Menteri Riset, Teknologi dan Pendidikan Tinggi

Republik Indonesia Nomor 44 Tahun 2015 Tentang Standar Nasional Pendidikan Tinggi Pasal 14. Implementation of the learning process as stated in Pasal 11 about Standar Proses Pembelajaran (Susanti et al., 2019). SCL and digital technology in midwifery education still face several challenges that create a gap between potential and effective implementation. A STIKes Budi Luhur Cimahi study applied virtual patient simulation to communication and counseling courses. The results showed an increase in students' communication and counseling skills. However, applying this method has not covered all aspects of midwifery learning, and not all students are actively involved (Ismaya & Maryati, 2020; Kleib et al., 2023).

Research at the Midwifery Study Program, Faculty of Medicine, Undiksha evaluated e-learning-based theoretical learning. The results showed that e-learning-based learning had gone well (Ladjar & Susanti, 2024). This gap shows that although there have been efforts to integrate SCL and digital technology in midwifery education, the implementation has not been optimal. Some institutions still rely on traditional learning methods, and the use of digital technology is still limited. Therefore, a comprehensive strategy is needed to improve the implementation of SCL and digital technology in midwifery education. The null hypothesis of integration between SCL and digital technology does not significantly affect the effectiveness of midwifery education, and the alternative hypothesis is that the integration between SCL and digital technology significantly influences the effectiveness of midwifery education. This study aims to identify the influence of integrating SCL and digital technology on the effectiveness of midwifery education.

## LITERATURE REVIEW

Integrating Student-Centered Learning (SCL) and digital technology in midwifery education has garnered increasing attention due to its potential to enhance learning outcomes. This section explores existing research on the subject, identifying the benefits and challenges of incorporating these elements into midwifery curricula.

### Student-Centered Learning (SCL) in Midwifery Education

SCL is a teaching approach that shifts the focus of education from the teacher to the student, encouraging active participation and engagement. This model has proven to improve cognitive, affective, and psychomotor outcomes in midwifery education by making students the central figures in their learning process (Azizah et al., 2022). A shift from traditional TCL to SCL is in line with the 2015 Peraturan Menteri Riset, Teknologi, dan Pendidikan Tinggi Republik Indonesia, which mandates the implementation of SCL in higher education (Susanti et al., 2019). Studies indicate that SCL helps develop essential competencies in midwifery students, such as critical thinking, communication, and problem-solving, which are crucial for their professional roles (Maqfirah & Noviana, 2023).

### Digital Technology in Education

Integrating digital technology into education has transformed traditional pedagogical practices (Nurchalia et al., 2023). The successful application of educational technology is

highly dependent on teachers' ability (Argyanti et al., 2023). In midwifery education, e-learning, virtual simulations, and mobile applications have become valuable tools for enhancing learning experiences. The application of learning theories like the Technology Acceptance Model and Self-Efficacy Theory in designing digital learning interventions has been highlighted in recent research (O'Connor et al., 2023). These theories guide the development of digital platforms that support SCL by fostering independent learning and promoting engagement. Moreover, studies have shown that digital technologies, including interactive applications and virtual reality (VR), offer flexible learning opportunities that complement in-person instruction. For instance, an Interactive Digital Learning Environment (IDLE) was developed, significantly improving student engagement and learning outcomes (Sani et al., 2025). This approach allows midwifery students to engage with the material more immersively and contextually, enhancing their understanding and skill development (Szara & Klukow, 2023).

### **Challenges in Implementation**

Despite the potential benefits, integrating SCL and digital technology into midwifery education faces several challenges. One significant barrier is the limited infrastructure in many institutions, particularly in developing countries. Although students and lecturers in Nigeria expressed positive perceptions of the SCL model, infrastructure constraints hindered its full implementation (Doka et al., 2021). Furthermore, there is a gap in student participation in digital learning environments. While virtual patient simulations improved students' communication and counseling skills, not all students were actively engaged in the learning process (Ismaya & Maryati, 2020). This indicates that the effectiveness of SCL and digital technology integration depends not only on the availability of tools but also on the active involvement of students in these learning activities.

### **Future Directions**

The future of midwifery education lies in successfully integrating SCL and digital technologies. As research continues to evolve, the need for adaptive, innovative, and responsive curriculum becomes even more apparent. Midwifery education institutions must enhance faculty capabilities in designing technology-based learning experiences and ensuring access to adequate digital infrastructure (Arundell et al., 2024). Incorporating experiential learning through virtual and real clinical practices will further contribute to students' professional identity and preparedness for the workforce (Tierney et al., 2023). In conclusion, while integrating SCL and digital technology offers significant promise, its success depends on overcoming existing challenges, such as infrastructure limitations and student engagement. As these barriers are addressed, midwifery education will likely become more flexible, personalized, and aligned with the needs of 21st-century learners.

## **METHODS**

This research will use the literature review method to examine and analyze relevant studies on implementing SCL and digital technology in midwifery education. It will collect, screen,

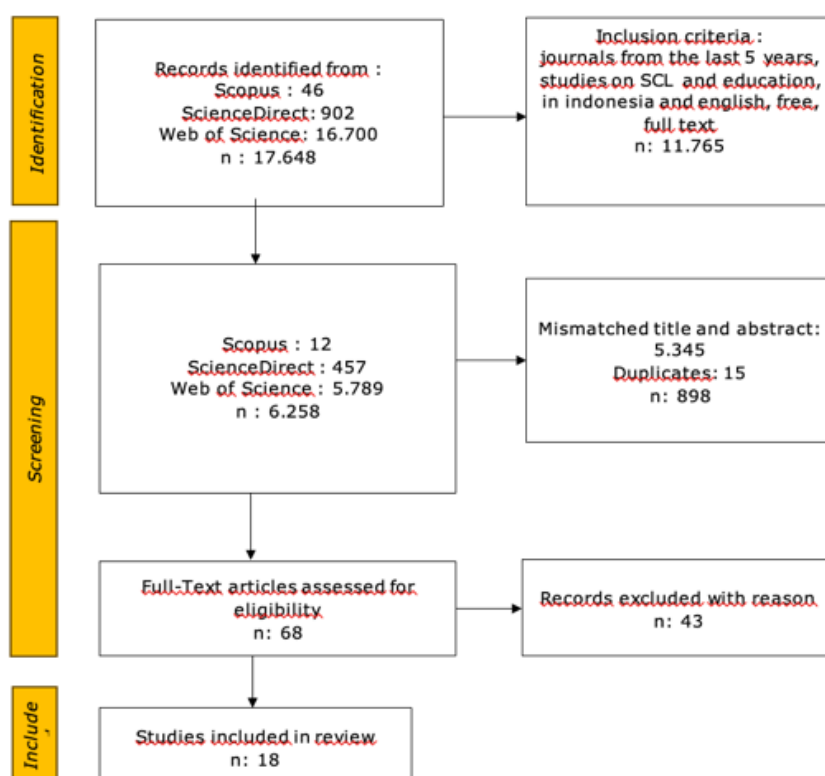
and analyze previous studies that discuss the application of SCL and digital technology in education, especially in midwifery.

**Table 1.** PICO Analysis

Population	Intervention	Comparison	Outcome
Midwifery Student	Student-Centered Integration Learning (SCL) and Digital Technology	Conventional learning methods, in the form of lectures and direct demonstrations, and without digital technology	Improving the understanding of theory and clinical skills of midwifery students, as well as increasing the effectiveness of learning.

Source: Research, 2025

**Table 1** shows that the literature search strategy was based on the Population, Intervention, Comparison, Outcome (PICO) framework. The data correction process begins by searching for relevant scientific papers in various databases, such as Scopus, ScienceDirect, and Web of Science. Search done with relevant keywords following the framework PICO with boolean operators with keywords "Student Centered Learning" OR "SCL" OR "Digital Technology" OR "Digital Technology" AND "Midwifery Education" OR "Midwifery Student" OR "Midwifery College". Articles are selected based on predetermined inclusion and exclusion criteria. Articles that meet the inclusion criteria can be used as references, while those that do not are excluded from the study.



**Figure 1.** PRISMA Flow Diagram for Study Selection

Source: Research, 2025

The instrument in this study is a literature review using criteria for inclusion and exclusion in the journal selection process. **Figure 1** shows the data analysis procedure in the literature study for the literature review, which involves several systematic steps. First, the researcher identifies the sources by setting inclusion and exclusion criteria, then conducts a literature search in academic databases. After collection, the data is organized by categorizing the literature by theme and creating a table to record important information from each source. Next, thematic analysis is conducted by identifying and grouping themes that emerge from the literature, followed by narrative synthesis that structures the analysis results in a structured and coherent manner, comparing views from various studies. Evaluation of the quality of the sources is carried out to ensure credibility, and conclusions and recommendations for future research are drawn. The analysis results are then presented in an appropriate format with relevant references to provide meaningful contributions to the research field being studied.

## RESULTS AND DISCUSSION

The table below presents a journal matrix that summarizes the main aspects of the reviewed articles, including the authors' names, year, country, objective, method, and results.

**Table 2.** Matrix Journal

Author, Year, Country	Objective	Method	Results
(Doka et al., 2021), Nigeria	Assessing lecturers' and students' perceptions of the student-centered learning (SCL) approach in midwifery and nursing colleges.	Quantitative descriptive with a cross-sectional approach; 117 students and 24 lecturers; using the SCL questionnaire and SPSS analysis.	Positive perceptions of SCL despite barriers such as limited infrastructure and guidelines; increased training and support are recommended.
(O'Connor et al., 2023), England-Canada- Hong Kong	Identifying theories for designing and implementing e-learning in nursing and midwifery education.	A systematic review of 34 studies has been conducted, including frequently used theories such as the Technology Acceptance Model and the Self-Efficacy Theory.	Various theories are applied in the development of e-learning; a more in-depth evaluation of the effectiveness of its implementation is needed.
(Sani et al., 2025), Nigeria	Developing and implementing interactive digital learning environments (IDLE) to enhance student engagement.	ADDIE instructional design model, mixed-methods approach, student perceptions, and learning outcomes analysis.	IDLE improves student engagement and learning outcomes; recommended to expand use to other educational institutions.
(Arundell et al., 2024), Australia	Exploring midwifery students' experiences in developing professional identity through observation of clinical midwives.	The qualitative approach was used with interviews and thematic analysis; participants were postgraduate midwifery students.	Professional identity is formed through positive role models supporting women-based care and student success.



Author, Year, Country	Objective	Method	Results
(Szara & Klukow, 2023), Poland	Analyzing the literature on applying new technologies in nursing and midwifery education.	Critical literature review of PubMed, CINAHL, and Web of Science uses relevant keywords.	Technologies such as simulations, e- learning, social media, and mobile applications support students' independent and interactive learning.
(Tierney et al., 2023), Australia	Identifying learning intentions from Continuity experiences of Care Experience (CoCE) in midwifery education.	A descriptive qualitative study with two focus groups of midwifery education expert panels.	Three main themes: advocacy for women, accountability in service delivery, and independence of practice; practice-based learning was considered important.
(Kuipers & Verschuren, 2023), England-Dutch	Describes the participation of midwifery students as researchers in qualitative research projects.	A descriptive qualitative study was conducted based on real-life experiences; six students participated as co-researchers.	Active student participation enhances research understanding and learning motivation; a student-led approach is recommended, as research is more widely applied.
(Tickle et al., 2023), Australia	Evaluating the impact of feedback from women on midwifery students' learning and clinical practice.	An exploratory qualitative study with thematic analysis of student reflections from e-portfolios.	Women's feedback increases self-confidence, understanding of midwifery philosophy, and work motivation in the continuity model of care.
(Berg & Lepp, 2023), Sweden-Norway	Reviewing the literature to understand the meaning and application of student-centered learning in nursing education.	An integrative review of 25 articles from international databases using the Whittemore and Knafl framework.	SCL enhances theoretical and practical learning, critical thinking skills, and student independence.
(Ouellet et al., 2024), Canada	Describes students' learning experiences in supporting physiological birth during continuity of care.	Interpretive design description; data was collected through audio diaries and group discussions from students and preceptors	CoCE experience supports students' professional identity transformation and mastery of physiological birth competencies.
(Azizah et al., 2022), Indonesia	Applying the Problem-Based learning model Learning (PBL) model on interpersonal communication competencies of midwifery students.	Observational method on 15 semester III students, using ICCS and PBL learning stages.	PBL increases self-confidence and interpersonal communication competence by 86.67% in the good category.

Author, Year, Country	Objective	Method	Results
(Azizah et al., 2020), Indonesia	Analyzing the learning of family planning courses using the SCL approach.	Qualitative descriptive research with interviews, observations, and documentation studies on lecturers and students.	The SCL method combines PBL, cooperative learning, role play, increasing interactivity, and learning outcomes.
(Ahmar et al., 2020), Indonesia	Reviewing the effectiveness of the PBL model in midwifery education to improve learning outcomes and competencies.	Literature review of 14 articles from PubMed, ScienceDirect, Wiley, 2017–2020.	PBL is effective, flexible, and encourages active learning; various implementation techniques include virtual and hybrid.
(Fauziah, 2020), Indonesia	Explaining the application of web-based learning as a form of e- learning in midwifery education.	Narrative study of the role of technology and the paradigm shift from teacher-centered to student-centered.	Web-based learning strengthens learning independence, flexible access, and increased learner interaction.
(Sheehy et al., 2025), Australia	Exploring midwifery students' experiences of perinatal death and their learning needs.	Descriptive qualitative study through 4 focus groups with thematic analysis.	Students feel unprepared academically and emotionally; there is a need for specific training on perinatal death.
(Apartsakun et al., 2025), Thailand	Developing and testing the effectiveness of a childbirth learning aid for nursing students.	Two-stage R&D study: prototype development and effectiveness evaluation with 50 students.	The aids are more effective than traditional simulators in improving skills, confidence, and learning satisfaction.
(Odamo-Amoabeng et al., 2025), England	Reviewing the experiences and well-being of students and educators in using VR in nursing and midwifery education.	Qualitative systematic review of 45 studies from 14 countries with thematic synthesis.	VR enhances skills, realism, and professional value, but technical challenges and health impacts need attention.
(Wallace & Harvey, 2024), Australia	Exploring whether virtual international study experiences can result in transformational learning.	Qualitative study with thematic analysis of reflective journals of 10 midwifery students.	Transformational learning emerges through increased cultural sensitivity, social awareness, and global professional identity.

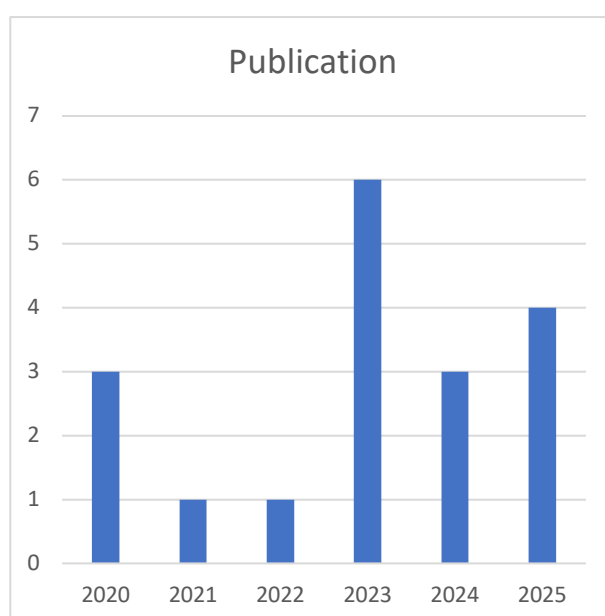
Source: Research 2025

**Table 2** emphasizes that implementing SCL in midwifery education significantly improves student learning quality in cognitive, affective, and psychomotor skills. Despite infrastructure constraints, the positive perception of lecturers and students in Nigeria towards the SCL model was highlighted (Doka et al., 2021). It was concluded that SCL enhances theoretical and practical learning and encourages nursing and midwifery students' independence and critical thinking skills (Berg & Lepp, 2023). Integrating digital technology in learning is also



a primary focus of most research. Interactive Digital Learning Environment (IDLE), which has been proven to improve engagement and learning outcomes of midwifery students in Nigeria, was developed as part of this initiative (Sani et al., 2025). In addition, theory-based e-learning approaches such as the Technology Acceptance Model and Self-Efficacy Theory are also widely used (O'Connor et al., 2023). The application of simulation technology, social media, and mobile applications strengthens independent and interactive learning (Szara & Klukow, 2023). Overall, the findings from these journals suggest that integrating SCL approaches and digital technologies has great potential in shaping future midwifery education that is responsive, personalized, and contextual, in line with global demands and the needs of 21st-century students.

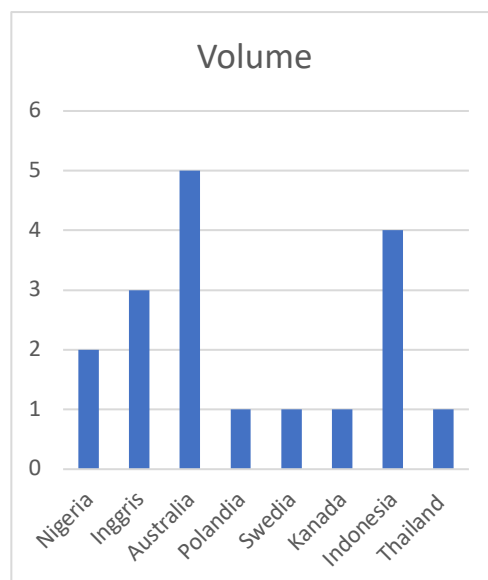
### Characteristics of Articles Based on Publication



**Figure 2.** Percentage Diagram Publication  
*Source: Research 2025*

From **Figure 2**, it can be seen that 2023 will be the peak of publication contributions with a total of six (6) journals. This reflects the increasing attention and intensity of research on innovation in midwifery education, especially in the post-COVID-19 pandemic phase, which drives the acceleration of digital transformation in education. 2025, followed by four (4) publications, indicating that the research trend in integrating SCL and digital technology continues to develop and become a relevant research agenda. The years 2020 and 2024 each recorded three (3) publications, indicating that early adoption and continued academic interest in this topic have been built in the last five (5) years. In contrast, in 2021 and 2022, there was only one (1) publication each. The distribution of publications shows a surge in academic interest in integrating SCL and educational technology, especially in recent years. This finding strengthens the argument that this integration is a strategic and dynamic area in developing an innovative, adaptive, and relevant midwifery curriculum for 21st-century learning needs.

## Characteristics of Articles by Country



**Figure 3.** Pie Chart Presentation Number of Articles by Country  
*Source: Research 2020-2025*

**Figure 3** shows that from 2020 to 2025, Australia dominated the number of publications with a total of 5 journals, which shows that this country is at the center of attention in the development of innovation in midwifery education, especially in the integration of the SCL and the use of digital technology. This reflects Australia's commitment to building a midwifery education system that is adaptive to technological developments and SCL needs. Indonesia is in second place with four journals, indicating that attention to updating midwifery learning methods is also increasing nationally. Indonesia's findings focus heavily on applying the Problem-Based Learning (PBL), online learning, and integration of local context in educational technology. The UK followed with three (3) journals, followed by Nigeria two (2) journals, and one (1) journal each came from Poland, Sweden, Canada, and Thailand. This number indicates that the issue of SCL and educational technology in midwifery has become a global concern, although there are varying levels of research intensity in each country. Overall, this graph shows that developing midwifery education through SCL and digital technology-based learning approach is a local trend and part of the global education agenda. The involvement of various countries in this study strengthens the urgency to build a collaborative, innovative, and contextual midwifery education system according to the needs of the times.

## Discussion

Findings from various studies show strong consistency in supporting the effectiveness of SCL and digital technology integration. Both students and lecturers in Nigeria responded positively to the implementation of SCL (Doka et al., 2021). Despite infrastructure limitations, this approach can increase active participation and student understanding of the material. The importance of utilizing learning theories such as the Technology Acceptance Model and Self-Efficacy Theory in designing e-learning interventions has been emphasized (O'Connor et al., 2023). This study shows that these theories provide a strong basis for designing e-learning that supports SCL principles. Meanwhile, an Interactive Digital Learning

Environment (IDLE), a platform proven to increase midwifery students' engagement and learning outcomes, was successfully developed (Sani et al., 2025). This success shows that integrating contextually designed technology with the SCL approach can produce significant learning outcomes.

Furthermore, direct clinical experience packaged in a continuity model of care encourages the formation of students' professional identity (Arundell et al., 2024). These findings underline that experiential practice, as a concrete form of SCL, strengthens students' understanding and readiness to face the challenges of midwifery practice. The role of digital technology has also been a significant focus in several studies. Using digital media such as simulations, mobile applications, and social media provides flexibility and encourages independent learning (Szara & Klukow, 2023). On a more advanced scale, Virtual Reality (VR) in midwifery education provides an immersive learning experience, significantly improving technical skills and conceptual understanding (Odame-Amoabeng et al., 2025). Interestingly, midwifery students felt they were not fully prepared to deal with perinatal death cases (Sheehy et al., 2025). However, the results of this study also emphasize the importance of using contextual and experiential learning approaches that can be facilitated through digital technology and SCL. A new perspective is provided through virtual-based international studies (Wallace & Harvey, 2024).

Learning experiences in this global context encourage transformational learning, which is reflected in increased social awareness, empathy, and cross-cultural understanding. Implementing SCL impacts cognitive learning outcomes and helps shape students into independent and reflective individuals (Berg & Lepp, 2023). In line with that, involving students in research activities increases their understanding of scientific methodology and strengthens their interest in learning (Kuipers & Verschuren, 2023). The effectiveness of using simulation-based aids in midwifery education has been demonstrated in previous studies (Ahmar et al., 2020; Apartsakun et al., 2025). This tool not only improves technical skills but also provides higher learning satisfaction for students. In addition, other studies reinforce the urgency of integrating the SCL and digital technologies in shaping the future of midwifery education. The importance of practice-based learning through Continuity of Care Experience, which fosters advocacy, accountability, and student independence in midwifery services, has been highlighted (Tierney et al., 2023). This emphasizes that ongoing clinical experience is an effective medium in forming a holistic professional identity. In line with that, direct feedback from women as practice clients strengthened students' self-confidence and formed a deep understanding of midwifery philosophy based on empathy and human relations (Tickle et al., 2023).

On the other hand, applying the SCL method through a combination of problem-based learning, cooperative learning, and role play significantly increases students' active participation, class interactivity, and applicative understanding of midwifery materials (Azizah et al., 2020). These findings collectively emphasize that developing a midwifery curriculum based on SCL and supported by digital technology needs to be directed at strengthening contextual, participatory, and reflective learning experiences following the challenges of 21st-century education. The interesting findings from all the journals are that student-centered midwifery learning supported by digital technology can present a more active, flexible, reflective, and contextual learning approach. Students are not only recipients of information, but also the main actors in the learning process, both individually and

collaboratively, inside and outside the classroom, including in virtual and real clinical practice. Based on the overall empirical evidence obtained from 18 journals, it can be concluded that the alternative hypothesis is accepted and the null hypothesis is rejected. Integration between SCL and digital technology has been shown to influence the effectiveness of midwifery education significantly. These findings support the development of a midwifery curriculum that is more innovative, effective, and relevant to the needs of the times.

## **CONCLUSION**

Based on the results of this literature review, it can be concluded that integrating Student-Centered Learning (SCL) with digital technology significantly influences the effectiveness of midwifery education. Integrating active learning methods and digital media can create a more relevant, contextual, and participatory learning experience. Students are not only required to understand the theory, but are also facilitated in building practical competencies, critical thinking, and strengthening professional identity through adaptive and innovative learning approaches. Based on these findings, it is recommended that midwifery education institutions transform their curriculum by systematically integrating SCL principles and digital technology into the learning process. Developing the capacity of educators in designing technology-based learning, increasing access to digital infrastructure, and actively involving students in the learning design and evaluation process are strategic steps that need to be pursued. In addition, further research is needed with a longitudinal approach to assess the long-term impact of this integration on the competence and performance of graduates in midwifery practice.

## **AUTHOR'S NOTE**

The authors confirm that there are no conflicts of interest related to the publication of this work. All information and materials included in this study are entirely original, with no plagiarism or unauthorized use of external sources.

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