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Optimizing Learning Management in Nursing Professional Education

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ABSTRACT

Purpose: This study aims to promote nurse competency as well as sustainable development by conducting a systematic literature review (SLR) to identify successful teaching techniques in nursing education. The study will analyze influential elements, methodologies, and innovations in order to provide precise and reliable findings.

Method: A comprehensive review of 15 articles from both international and national sources was undertaken using a systematic approach. The review primarily aimed to find efficacious pedagogical approaches in nursing education, taking into account influential variables, methodologies, and novel advancements. The study examined the transition from conventional to digital education, prompted by the COVID-19 epidemic.

Findings: The evaluation determined that a combination of online and in-person learning, along with simulation-based training and thorough pre- and post-assessment, is the most efficient method for preparing nurses for real-life situations. This transformation has enhanced the accessibility of education for nurses from many geographical regions and diverse backgrounds.

Novelty: This study presents a thorough examination of the shift from conventional to online and hybrid teaching approaches in nursing education. This text emphasizes the significance of simulation-based training and comprehensive assessments, offering a new viewpoint on improving nursing proficiency and availability. This methodology fills the deficiencies in prior research by integrating cutting-edge instructional techniques with actionable application insights.

Conclusion: The SLR underscores the significance of incorporating hybrid teaching approaches in nursing education. By placing a strong emphasis on simulation-based training and implementing effective assessment methods, the competency of nurses can be greatly enhanced, better preparing them to handle real-world instances. These useful insights can be used to optimize nursing education and contribute to the attainment of Sustainable Development Goal number three.

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1. Introduction

Nurses are one of the pillars supporting the world of health. The contribution of nurses in the world of health is increasingly broad and impactful, so this profession needs attention in the form of educational development that has an impact on increasing insight, competence, and supporting facilities for nurses. This is in line with point number three of the Sustainable Development Goals (SDGs) which reads: "Ensuring Healthy Lives and Survival for All Ages" (Meleis, 2017).

So that in various countries, nursing professional education is a must for nurses before entering the real world. This nurse professional education is an integration of theory and practice, where practice is carried out in health environments such as: hospitals, health centers, clinics, communities, and even in family environments

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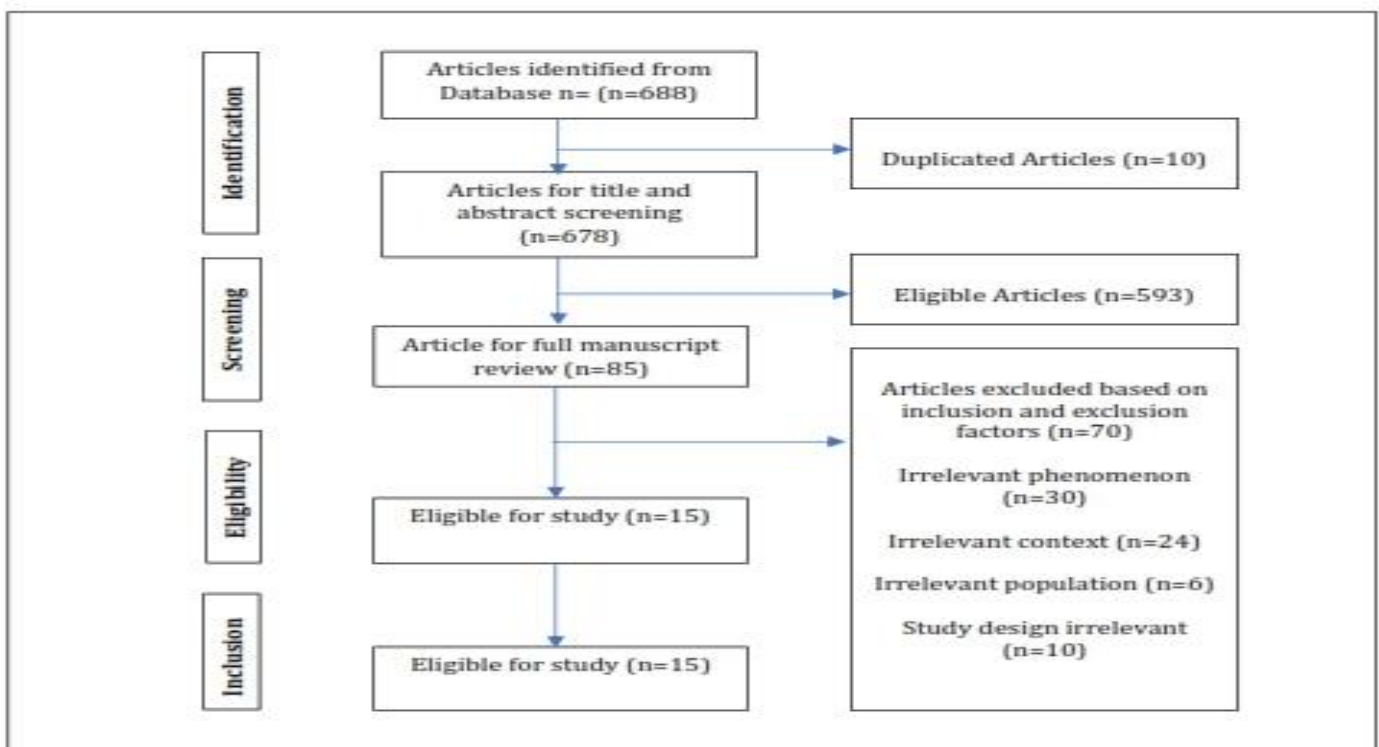
(Etildawati & Yulistika, 2022). It is expected that nurses who go through this stage have clinical (technical), intellectual (knowledge), personal values, interpersonal competencies (Ferreira, A.P., & dos Santos, 2023). In Indonesia, nurses who pass this stage receive two certificates: a certificate of competence and a professional certificate. These two certificates are useful for recognition to practice nursing according to the Ministry (Tarigan & Gaol, 2019).

This professional education process was initially offline in the form of face-to-face meetings in the classroom to obtain theory and practice in a clinical environment. The teaching method that was initially often carried out was the clinical method or what is known abroad as continuing professional development (CFD) (Pagnucci, et al., 2023) based offline. This clinical method is usually divided into several types: clinical conferences, clinical tutorials, bedside teaching action and observation, client care, case presentations, journal presentations, and clinical enrichment (Rohmah, Hamid, & Walid, 2014). As the times are synonymous with technological development and triggered by the COVID-19 pandemic, the demand for transition to online or at least blended (hybrid) learning continues (Al-Yazidi, Toosi, & Forgrave, 2024). It is also expected that nursing professional education is not only limited to participants who are able to come face-to-face. It can be interpreted that the range of participants in nursing professional education is expected to be even wider in terms of space, time, and conditions of the participants (McLeod, 2024).

Therefore, using a literature study with several articles that passed the selection based on the inclusion and exclusion criteria, an optimized learning method will be proposed in nursing professional education. The proposed method has gone through several analyses such as: 1) factors that affect learning, 2) efficiency and effectiveness of the method, 3) the range of participants of the learning method.

2. Method

The "Optimizing Learning Management in Nursing Professional Education" research was carried out with the help of the systematic literature review approach. Through the identification, selection, evaluation, and statistical interpretation of a group of pertinent journals, the systematic literature review, or SLR, technique seeks to produce thorough and impartial information. This research is characterized by a methodical and clear process, including both quantitative and narrative (qualitative) methods.



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Figure 1. displays the research methodology chart.

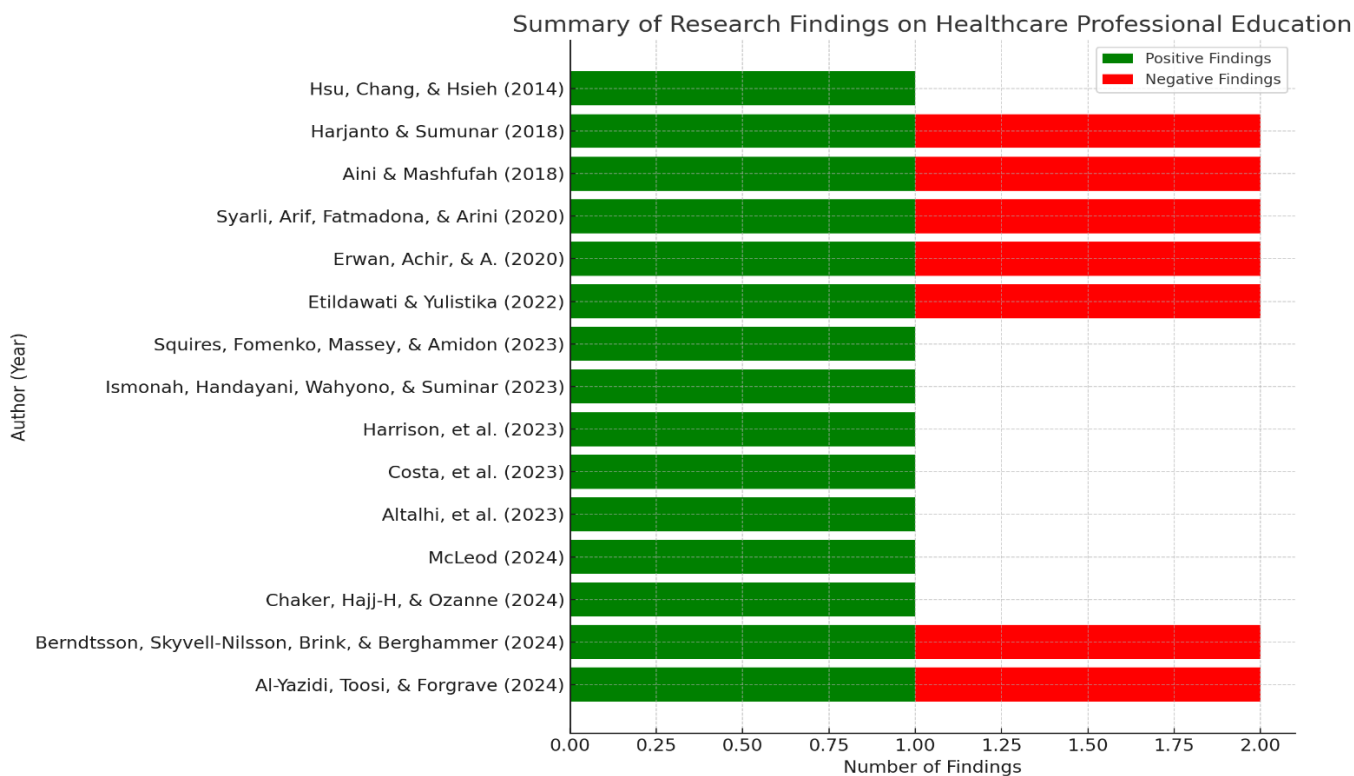
The study strategy for systematic literature review commences with the implementation of the Preferred Reporting Items for Systematic Reviews and Meta Analysis (PRISMA) technique, which has five distinct steps: The process has five steps: 1) establishing the criteria for include relevant themes in the literature, 2) determining the sources of information, 3) selecting the literature to be included, 4) collecting the necessary data, and 5) creating a comprehensive summary of the research findings. To begin, literature sources were acquired using the Publish or Perish program on the Google Scholar search engine. The search for English and Indonesian journal publications, beginning in 2014 and ending in 2024, was done using the terms "nurse education management," "nurse professional education," and "nurse education."

The search yielded 688 articles, from which 15 were chosen for evaluation. The papers were categorized into 10 foreign publications and 5 national publications. The article's inclusion requirements encompass three key aspects: 1) the presence of nursing professional education, 2) the inclusion of nurse education management, and 3) the consideration of issues that impact nurse education. The papers were excluded based on two criteria: 1) a research focus on respondents and 2) research conducted before to 2014. In order to ensure that the study is extensive and comprehensive, the criteria for inclusion were applied with the intention that it would concentrate on the management and kind of nursing professional education with an open location (it may be from any nation).

3. Result and Discussion

Here is a graphical representation summarizing the research findings on healthcare professional education. The green bars indicate positive findings, while the red bars indicate negative findings reported by each study. This visualization helps to quickly grasp the overall impact and challenges identified in each research.

The graphical representation summarizes research findings on healthcare professional education. Studies generally report positive outcomes, such as enhanced patient care through e-learning (Al-Yazidi et al., 2024), improved professional growth and patient care through mentoring (Berndtsson et al., 2024), and significant gains in knowledge, skills, and confidence via online CPD (Chaker et al., 2024).



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Figure 2: Graphical representation of the research findings on health professional education.

Positive impacts are also noted in special needs simulations (McLeod, 2024), infection control education (Altalhi et al., 2023), DigiCare interventions (Costa et al., 2023), rural healthcare through online postgraduate education (Harrison et al., 2023), and various other methods improving problem-solving and critical thinking. However, some challenges are highlighted, including organizational impacts (Al-Yazidi et al., 2024), high workloads in mentoring (Berndtsson et al., 2024), and issues with clinical mentor availability (Etildawati & Yulistika, 2022). Technical and supervision challenges in e-learning (Harjanto & Sumunar, 2018), time constraints (Aini & Mashfufah, 2018), and negative impacts from learning environments (Erwan et al., 2020) are also noted. Overall, while the positive findings significantly outweigh the negative ones, addressing these challenges could further enhance the effectiveness of healthcare professional education.

The discussion, based on the literature review, encompasses three primary areas: a comparison between face-to-face (offline), hybrid, and online learning modes; a comparison of methods and attributes in education (how materials are delivered and assessed); and factors influencing the learning process in professional nursing education.

In terms of facilities, face-to-face (offline) learning typically requires physical teaching aids that can be utilized in a classroom setting. Hybrid and online learning can utilize similar aids through video or conferencing applications like Zoom, and can also replace them with computer-based simulations. These methods necessitate more complex facilities and maintenance since they involve both teaching aids and network infrastructure. Online learning faces challenges in areas with poor network connectivity, cable networks, broadband, and access to digital devices (Nyungura et al., 2022; Al-Yazidi et al., 2024; Chaker et al., 2024).

Regarding effectiveness and efficiency, online learning has shown significant positive impacts on nursing competencies, outperforming other methods in these aspects (Chaker et al., 2024; Costa et al., 2023; Hsu et al., 2014). However, the reach of online learning is broader as long as there are no technical issues, offering advantages in terms of participant numbers and geographical accessibility. If online or hybrid learning is not well-structured and designed, they excel mainly in terms of time and material efficiency, and participant numbers alone. Effective teaching method design must consider the physical background of participants, learning models, and the quality of facilities in participants' areas to optimize results.

For a professional nursing education system, a hybrid approach is recommended to extend the reach to participants from various regions and address issues related to inadequate internet facilities (Harrison et al., 2023). Emphasis should also be placed on computer-based simulations that cater to participants with different physical backgrounds (e.g., disabilities) and learning styles (visual, auditory, and kinesthetic) (McLeod, 2024). This recommendation considers Indonesia's status as a developing country with a significant demand for medical professionals.

The effectiveness of teaching methods also depends on how content is delivered and assessed. Traditional face-to-face learning often involves direct interaction, physical materials, and immediate feedback, which can be highly effective but limited by logistical constraints. Hybrid and online learning methods incorporate digital tools and platforms that can deliver content asynchronously or synchronously, providing flexibility and accessibility. Assessment methods in online learning can include quizzes, simulations, and interactive modules, which have shown to enhance self-efficacy and skills transfer (Squires et al., 2023).

Factors such as technological infrastructure, internet connectivity, and access to digital devices significantly influence the success of online and hybrid learning. Studies have indicated that poor technical support and maintenance can hinder the learning process, emphasizing the need for robust IT infrastructure (Harjanto & Sumunar, 2018). Furthermore, the learning environment, including

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mentor availability and workload, plays a crucial role in the effectiveness of any educational program (Etildawati & Yulistika, 2022).

4. Conclusion

To summarize, online learning has proven to be highly effective and accessible. However, its success relies greatly on the availability of advanced technology infrastructure and carefully developed instructional frameworks. For professional nursing education, it is advisable to adopt a hybrid strategy that combines the most effective aspects of offline and online approaches. This approach is necessary to cater to the different learning needs of students and to overcome regional inequalities in infrastructure. Education in this sector can be further improved by placing an emphasis on tools for adaptive learning and extensive technical support.

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