Enhance on Clinical Education for Nursing Students with Videos: A Review of the Literature

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Abstract

Clinical education is the cornerstone of nursing education, essential to equipping students with the skills, knowledge, and attitudes required for professional practice. However, challenges such as limited clinical placement opportunities, varying levels of instructor support, and increasing student enrollment have necessitated the consideration of alternative or complementary teaching methods. One such method that is gaining prominence is video-based learning.

The review synthesizes findings from peer-reviewed studies published for ten years (2015-2025), highlighting the diverse ways in which videos have been employed-including procedural demonstrations, scenario-based simulations, and reflective learning modules. Evidence suggests that video-based instruction enhances *learning outcomes development, emotional-interpersonal development, and technological integration-accessibility*. Moreover, video tools offer flexible, repeatable, standardized learning opportunities that accommodate various learning styles.

Despite the numerous advantages, the literature also identifies challenges such as the need for high-quality, evidence-based video content, technological barriers, and the importance of integrating video resources with active learning strategies and instructor guidance. This review

concludes that while video-based learning should not replace hands-on clinical training, it serves as a valuable adjunct that can enrich the educational experience and better prepare nursing students for competent, safe, and compassionate patient care.

Keywords: nursing education, clinical training, video-based learning, educational technology, skills development, student engagement.

1. Introduction

Clinical education is a cornerstone of nursing training, essential for equipping students with the skills, knowledge, and attitudes necessary for professional practice. However, challenges such as limited clinical placement opportunities, varying levels of preceptor support, and increased student enrollment have necessitated the exploration of alternative or supplementary teaching methods. One method gaining increasing prominence in clinical education is video-based learning. With the growing availability of digital education tools and multimedia content, this approach offers flexible, consistent, and engaging instructional experiences that can enhance the quality and accessibility of clinical training.

This review aims to explore and synthesize the existing literature on video-based learning in clinical nursing education for ten years (2015-2025).The review explores the impact of video resources on developing key clinical competencies, examining their influence on three core areas of student learning outcomes: skill acquisition, emotional and interpersonal growth, and the integration of technology and accessibility. It also addresses the limitations associated with this educational approach.

Research Objective

The primary objectives of this study are:

1. To evaluate the effectiveness of video-based learning in clinical nursing education.
2. To provide recommendations on the use of clinical teaching videos in nursing.

2. Methodology

Fink, A. (2005) emphasizes that a literature review should adopt a systematic approach, involving a comprehensive search of existing literature and structured content analysis. Similarly, Zainuddin et al. (2019) advocate for a systematic literature review methodology, recommending the use of databases such as ScienceDirect, ERIC, and ResearchGate. In alignment with these guidelines, a systematic search of electronic databases including PubMed, ScienceDirect, ERIC, and Scopus was conducted for the present review. The included studies focused on undergraduate nursing students and investigated the application of video-based tools in clinical education. Articles that discussed non-clinical subjects, were not in English, and did not provide empirical evidence were excluded.

The initial search was based on the keyword “clinical training”. After obtaining 564.559 results, the searches were limited to“video-based learning”, which yielded 175.271 articles. To achieve fewer results, we added new keywords, such as “nursing education, and to ensure relevance, we limited the search to identify peer-reviewed literature published between 2015 and 2025. In addition, the search had no geographical limitations. **Figure 1** below suggests the steps for identifying and selecting sources.

After reviewing the results, 10 out of the 19 selected articles were excluded for not aligning with the research focus. Consequently, content analysis was performed on the remaining 9 articles relevant to the topic.

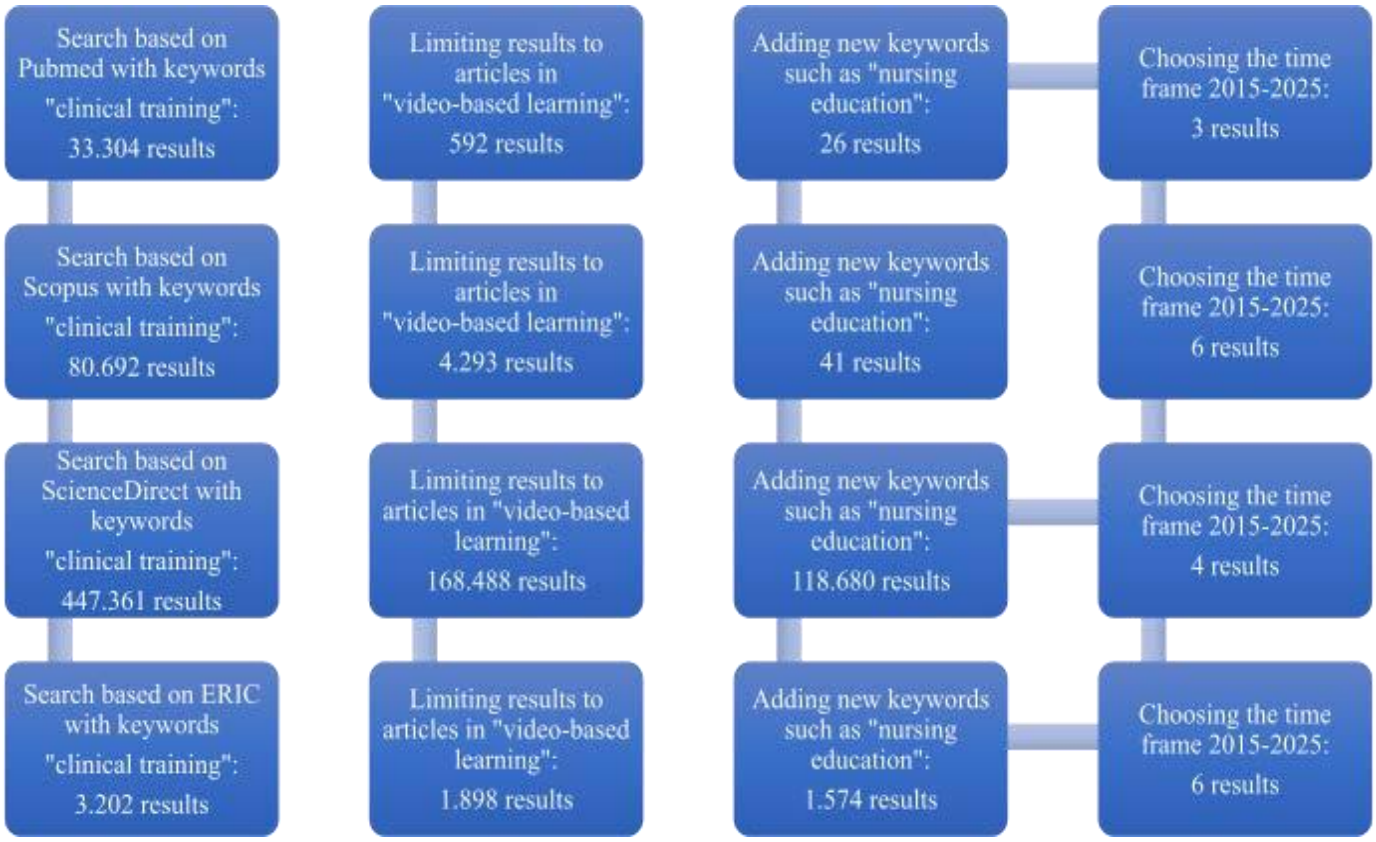

Figure 1. The steps to follow for identifying and selecting sources

3. Results and Discussions

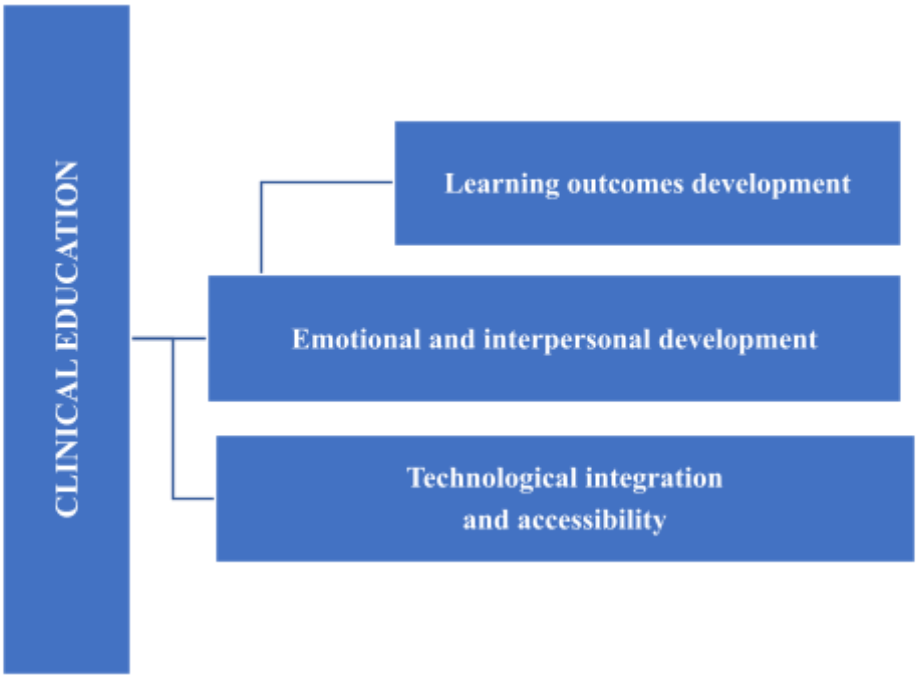

Figure 2. Major research focuses on video use in clinical education in nursing

This review examines current research on the use of video in teaching clinical nursing, identifying three major areas of focus: learning outcomes and skill development, emotional and interpersonal development, and technological integration and accessibility. The findings highlight video-based instruction as a promising and widely adopted method for enhancing nursing education. Based on **Figure 2** above, we analyze studies that emphasize three primary effects of using video in clinical nursing education.

1. Learning Outcomes Development

This theme explores how educational interventions influence knowledge acquisition, clinical skills, self-confidence, and overall performance.

Leidl et al. (2024) investigated the effectiveness of Branching Spherical Video Learning (BSVL) in mental health nursing education. The pilot study, employing a mixed-methods design (quasi-experimental and qualitative interviews), aimed to reduce student anxiety and improve knowledge of the Mental Status Examination (MSE). Students were assigned to either a control or intervention group. Findings revealed that BSVL significantly reduced anxiety, enhanced student confidence, and improved MSE knowledge in the intervention group.

Similarly, Chieh Wu et al. (2022) reported that video-assisted self-assessment is a powerful educational tool, demonstrating positive outcomes across several learning domains. This approach significantly enhanced students' knowledge, skill performance, and satisfaction while fostering reflective learning. It was particularly effective for developing psychomotor skills, such as nasogastric catheter (NGS) insertion. The method not only improved clinical readiness and reduced procedural errors but also boosted students' confidence and competence in real-world clinical settings.

Yavuz et al. (2025) examined the impact of two interprofessional education (IPE) methods simulation-based IPE (SIPE) and video-enhanced interactive discussion (VIPE) on knowledge acquisition, practical skills, and self-confidence among medical and nursing students. Both approaches significantly improved learning outcomes across multiple domains; however, SIPE demonstrated superior effectiveness in enhancing task performance and team behavior. However, SIPE incurred about twice the staffing costs and 1.3 times higher space usage costs than VIPE. Both SIPE and VIPE are effective for developing emergency response skills and team behaviors. SIPE offers better learning outcomes but at significantly higher costs. Educators should balance educational effectiveness with budget constraints when choosing IPE strategies.

HyeSun Jeong (2017) conducted a quasi-experimental study to evaluate the impact of smartphone video recordings on nursing competency, self-efficacy, and learning satisfaction. Sophomore nursing students were divided into an experimental group (using video recordings) and a control group (traditional practice). The study assessed self-evaluation, nursing skill

competency, self-efficacy, and learning satisfaction. Findings revealed significant improvements in competency and learning satisfaction for the experimental group, highlighting the effectiveness of smartphone videos in self-directed learning.

Forbes et al. (2016) reviewed the effectiveness of video use in teaching clinical skills; The integration of information and communication technology (ICT) in education is growing, especially in nursing, where clinical skill training is vital. Videos offer a flexible, visually rich tool for linking theoretical knowledge to practice, providing simulated clinical experiences. This review explores current research on employing videos in teaching clinical nursing skills, identifying four main research areas: effectiveness, efficiency, usage, and quality.

In conclusion, innovative tools like videos and interactive technologies enhance nursing students' cognitive and practical competencies, leading to better learning outcomes.

2. Emotional and interpersonal development

This theme includes empathy, teamwork, communication, leadership, and student satisfaction-skills critical for clinical settings.

Wong et al. (2024) assessed teamwork, communication, and leadership through simulation or tech-enhanced methods; The Collaborative Learning in a Student-led Global Classroom (CLSGC) program effectively improved students' non-technical skills and global nursing perspectives. The study supports integrating video-based simulations and student-led debriefings into curricula to build culturally competent, team-ready future nurses. Early and continuous exposure to non-technical skill training is recommended to bridge gaps between theory and real-world clinical practice.

Mei-yi Siu (2025) investigated the development of empathy using digital storytelling (YouTube); Digital storytelling using YouTube is an effective, flexible, and engaging pedagogy for teaching empathy in nursing education. It supports deep learning and enhances emotional engagement, making it a valuable tool in curricula.

HyeSun Jeong (2017) linked self-evaluation and satisfaction to skill development; The study underscores the importance of fundamental nursing practice in preparing students for clinical work. However, challenges like limited practice time and resources make it hard to achieve competency. Self-directed learning using smart learning methods like smartphone videos is proposed as a potential solution to enhance engagement, skill acquisition, and student satisfaction.

Patchra Eamcharoen (2024) found that interactive videos fostered active learning and student engagement, contributing to emotional and social development. The study highlighted how creatively designed YouTube videos incorporating interactive pathways can effectively teach entrepreneurial concepts in higher education. Students gained deeper insights into entrepreneurship, appreciated decision-based learning, and reported high satisfaction. However, the study suggested that increasing choice options, diversifying storylines, and incorporating peer discussions could further enhance the learning experience.

Instructional approaches that incorporate storytelling, simulation, and interactivity cultivate emotional intelligence and interpersonal skills, which are crucial for delivering comprehensive nursing care.

3. Technological integration and accessibility

This section focuses on how various digital methods such as videos, mobile technologies, IVT, and YouTube impact access, flexibility, student engagement, and the quality of instruction.

Leidl et al. (2024) investigated the feasibility of technology-enhanced interventions and identified Branching Spherical Video Learning (BSVL) as a promising instructional tool in nursing education, particularly within mental health settings. BSVL was shown to reduce student anxiety, enhance confidence, and improve learning outcomes. However, the authors highlighted the need for further large-scale studies and recommended enhancing scenario design-especially by increasing interactivity to maximize its effectiveness.

Joel et al. (2021) highlighted flexibility and valuable access through IVT (Interactive Video Tech); The study concluded that IVT offers valuable access and flexibility, particularly in resource-constrained environments. However, technical and infrastructural challenges hinder its effectiveness. Nursing students appreciate IVT but call for improvements to enhance the learning experience. The researchers recommend infrastructure upgrades, more trained personnel, and blended approaches to improve teaching outcomes.

Patchra Eamcharoen (2024) emphasized the role of interactivity and engagement through YouTube videos. This study explored the innovative design of YouTube videos for teaching entrepreneurship and assessed their effectiveness in enhancing student learning. Conducted with 20 graduate students, the research found that the videos were highly engaging, interactive, and promoted active learning, leading to high learning outcomes and student satisfaction. The innovative use of YouTube's end-screen features enabled students to make choices within scenarios, fostering critical thinking and reflection. The author recommends expanding the video series to create more complex and nuanced learning pathways, incorporating scenarios of failure to enhance realism, allowing time for reflection and peer interaction to deepen learning, and conducting future research with a larger, more diverse sample to validate findings.

Forbes et al. (2016) addressed broader tech considerations like efficiency, usage, and content quality; Videos are a valuable, increasingly popular tool in nursing education for teaching clinical skills. While effective in many ways, their design, delivery, and quality control require further attention. Research should focus on optimizing video-based learning strategies and expanding studies into mobile accessibility, user-generated content, and quality assurance.

Decision, tech-enhanced learning (video, mobile, YouTube) is accessible, flexible, and highly engaging but requires attention to content quality and infrastructure for maximum impact. Findings indicated that video-based learning enhances cognitive, motor, and affective learning domains. Videos improve knowledge retention, support the development of clinical skills,

promote critical thinking, and accommodate diverse learning styles. However, challenges include ensuring high-quality video content, avoiding passive learning, and maintaining equity in access.

4. Conclusions

Video-based learning has emerged as a highly effective and adaptable tool in clinical nursing education, offering significant benefits that complement traditional teaching methods. This literature review demonstrates that video-based instruction not only enhances the acquisition of theoretical knowledge but also plays a crucial role in developing essential clinical competencies, such as procedural skills, decision-making, and self-confidence. Through consistent, repeatable, and visually rich content, videos help bridge the gap between classroom learning and real-world practice, providing students with a safe environment to observe, practice, and reflect.

Moreover, video-based learning enhances emotional and interpersonal development by fostering empathy, effective communication, and teamwork-core competencies essential for delivering patient-centered care. The integration of storytelling, simulations, and interactive video elements has been shown to engage students more deeply and promote critical thinking.Research also indicates that video-based learning can reduce learner anxiety, increase satisfaction, and promote self-directed learning-particularly when complemented by timely feedback and active instructor facilitation.

Technological integration through platforms like YouTube, mobile apps, and virtual reality adds flexibility and accessibility to clinical education. This is especially valuable in resource-limited settings or during disruptions to in-person training. However, the effectiveness of these tools depends on the quality of video content, infrastructure readiness, and proper instructional design. While video-based learning should not replace hands-on clinical experience, it functions as a powerful adjunct that can enrich nursing education, improve learner outcomes, and better prepare students for the dynamic demands of healthcare environments. Thoughtful implementation,

alongside traditional methods and reflective practices, will ensure that video-based learning continues to evolve as a transformative element in clinical education.

On the one hand, video-based learning is a powerful supplement to traditional clinical education. When thoughtfully integrated, it enriches the educational experience and better prepares nursing students for safe and effective clinical practice. It should function alongside hands-on training and instructor-led activities to create a balanced instructional approach. This review aims to explore and synthesize the existing literature on video-based learning in clinical nursing education.

The review focuses on the effectiveness of video resources in supporting the development of specific clinical competencies that promote knowledge acquisition, practical skills, confidence, empathy, teamwork, communication, leadership, flexibility, and accessibility.

Simultaneously, video-based learning offers a valuable and versatile supplement to traditional clinical education in nursing. By enhancing learning outcomes development, emotional-interpersonal development, and technological integration-accessibility, videos can help bridge the gap between classroom instruction and clinical practice. While challenges exist, thoughtful integration of video resources can enrich nursing education and better prepare students for the complexities of real-world healthcare environments.

Limitations of the study

While this study provides insights into the effectiveness of video-based learning in clinical nursing education, several limitations should be acknowledged:

Limited sample size and scope of reviewed studies: the review is based on only 9 articles selected from an initial pool of thousands. This small number restricts the generalizability of the findings and may not fully represent the global landscape of video-based clinical education.

Narrow time frame and inclusion criteria: although the review spans a decade (2015–2025), the inclusion criteria (English language, peer-reviewed, empirical evidence) may have excluded valuable qualitative studies, grey literature, or innovations published in other languages.

Lack of Primary Data or Meta-analysis: the study relies exclusively on secondary data and content analysis. It does not perform a meta-analysis or primary investigation, which could provide more robust statistical conclusions about effectiveness.

Variability in video design and implementation: the reviewed studies employed diverse video formats (e.g., simulations, YouTube, smartphone videos), making it difficult to compare outcomes consistently. Differences in content quality, interactivity, and instructional design limit the ability to generalize findings.

Technological and contextual disparities: many of the reviewed studies highlight technological limitations such as inadequate infrastructure, poor video quality, and limited internet access which were not uniformly addressed or evaluated across contexts.

Lack of focus on long-term learning outcomes: few studies included in the review examined long-term knowledge retention, post-graduation clinical performance, or the real-world application of video-supported learning.

Recommendations

Despite the significant benefits of using videos in clinical teaching for nursing students, several limitations persist, including challenges related to resources, facilities, content quality, and limited patient interaction. Based on these findings, we propose several key recommendations on the use of clinical teaching videos in nursing. Overall, four main themes have been identified:

- Broaden Research Scope and Diversity: expand the literature base to include studies from a wider range of countries and educational systems. Incorporate qualitative and mixed-methods research to gain deeper insights into learners' experiences and contextual factors influencing video-based learning.

- Develop and Standardize High-Quality Video Content: establish criteria for video quality, realism, and instructional design. Encourage collaboration between educators and media professionals to ensure videos meet pedagogical goals.

- Enhance Interactivity and Engagement: incorporate interactive elements such as branching scenarios, quizzes, and decision-making tasks within videos to actively engage learners. Utilize storytelling techniques and reflective prompts to deepen emotional connection and support the development of interpersonal skills.

- Promote Infrastructure and Technical Support: improve institutional investment in technology infrastructure to support video-based education. Provide training for faculty and students on how to create, evaluate, and use video materials effectively.

- Integrate with Blended Learning Approaches: combine video-based learning with simulation labs, peer discussion, and instructor-led feedback for a holistic educational model. Support self-directed learning with structured guidance and assessment criteria.

- Assess Long-Term Educational and Clinical Impact: conduct longitudinal studies to evaluate the sustainability of skills and knowledge gained through video learning. Investigate correlations between video-based training and clinical competence or patient care quality in practice.

- Address Equity and Accessibility: design content and delivery methods that are accessible for learners with disabilities or limited resources. Ensure video content is mobile-friendly and downloadable to support learning in low-bandwidth environments.

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