

Enhancing Practical Proficiency Of Nursing And Midwifery Students Through The Use Of Instructional Videos: A Study Focusing On Hospital-Based Training Procedures

Ohadugha, Michael
BMLS, Director E-Lab Academy,

Musa, Wazani Musa Wazani
Bsc. AIMLT, MHM, WAPCML. Msc.

Dr Emmanuel Udontre
Bsc. Nursing (Nig.), Msc (Flinders), Dip Strategic Mgt & Leadership (MSBM, UK) Phd (LAUTECH)RN, RPHN, FWAPCNM.

Com. Dr, Deborah Yusufu
Bsc Nursing, Msc Nursing, Phd Nursing, RN, RM, RCCN, RNE, Msc Admin, FWAPCNM. Director Nursing, Principal/ HOD Nursing College Of Nursing Sciences Gwagwalada Abuja.

Abstract

Integrating instructional videos into nursing education addresses the gap between theoretical knowledge and practical application. This study explored the effectiveness of instructional videos in enhancing the clinical proficiency of nursing and midwifery students in Nigeria. Conducted at Maitama District Hospital and College of Nursing Gwagwalada, the study involved 100 students using a quasi-experimental design. The study results revealed a statistical relationship between instructional videos and their effectiveness in enhancing practical proficiency in nursing and midwifery students ($P=0.041$). Similarly, results revealed significant improvements in performance after the intervention, with mean post-test scores rising from 49.3 to 55. The study concludes that instructional videos were particularly effective in improving skill retention, reducing anxiety, and fostering confidence. However, challenges such as accessibility and over-reliance on videos were identified. Based on the study's results, it is recommended that learning centres should ensure that videos are incorporated into both theoretical and practical training sessions to provide comprehensive learning.

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I. Introduction

1. Introduction

In the evolving landscape of healthcare education, integrating technology into teaching methods has become pivotal in addressing the gap between theoretical knowledge and practical application for nursing and midwifery students. Traditional methods, such as live demonstrations and lectures, often face challenges, including variability in teaching quality, time constraints, and limited opportunities for clinical placements. These challenges hinder the consistent acquisition of essential clinical competencies. As healthcare systems grow increasingly complex, the demand for innovative approaches to enhance clinical competencies among nursing and midwifery students has risen significantly (Youhasan et al., 2021; Ibrahim et al., 2020). Among these innovations, the use of instructional videos in hospital-based training procedures has emerged as a promising solution, offering flexibility, consistency, and improved engagement in learning.

As a result, instructional videos are gradually being appreciated as a source that can help fill the gap between theoretical and practical knowledge. They give a clear and easily followed pattern that the students can use to revise complicated procedures in their own time. This ability to revisit instructional content helps in better understanding and retention of clinical skills which are very important to the nursing and midwifery students as they determine the quality and safety of the patients (Shorey & Lopez, 2021). Many conventional approaches fail to achieve their potential because of the scarcity of resources, differences in tutor competence, and the number of

clinical sites. These limitations can lead to the development of uneven skills, and the students are not well-equipped for clinical practice.

The impact of instructional videos is based on the fact that they are flexible in terms of the learning process and individual learners' speed. Students are able to watch the procedures and practice them over and over again, thus increasing their preparedness for clinical practice. This approach is in accordance with Mayer's Multimedia Learning Theory, which advocates for the use of both visual and verbal information to enhance learning (Mayer, 2017). A study by Smith et al. (2021) shows that students who engage with instructional videos have higher self-efficacy and mastery of clinical skills. In addition, Yahya et al. (2024) and Taylor & Evans (2021) reported that the use of instructional videos in the curriculum enhances learning achievement and skills in practice.

The advantages of instructional videos extend beyond individual skill acquisition. They also foster collaborative learning and critical thinking among students. Group discussions centered on video content encourage analysis of demonstrated procedures, identification of potential improvements, and the exchange of best practices. This collaborative aspect not only enhances understanding but also promotes teamwork, an essential skill in healthcare settings (Ali et al., 2022; Yip & Wong, 2022).

In as much as the instructional videos have benefits, there are some challenges found in them, the video content must be valid and up-to-date, to avoid being found outdated or having an incorrect information (Smith et al., 2021). Furthermore, a high reliance on videos may foster shallow learning if such is not combined with hands-on practice. Accessibility remains another critical issue, especially in low-resource settings where poor internet connectivity and a lack of access to devices can impede the widespread adoption of instructional videos (Youssef et al., 2023). Given the potential to revolutionise nursing education, particular among Nursing students in Maitama, Abuja, the study will examine the effect instructional videos have on practical proficiency among nursing and midwifery students in Nigeria. This study fills the lacuna in traditional teaching methods and maximizes the strengths of multimedia tools in providing evidence-based recommendations for integrating instructional videos into nursing curricula to enhance clinical competence and quality patient care.

Statement of Problem

Nursing and midwifery students in Nigeria face significant challenges in acquiring clinical skills due to limited opportunities for hands-on practice. Traditional teaching methods, such as live demonstrations and theoretical manuals, often fail to provide consistent, repeatable demonstrations, leading to gaps in skill acquisition and confidence. Moreover, resource constraints and variability in teaching quality exacerbate these issues, leaving students underprepared for clinical practice.

The integration of instructional videos offers a potential solution to these challenges. However, there is limited research on their effectiveness in the Nigerian context. This study aims to address this gap by evaluating the impact of instructional videos on the practical proficiency of nursing and midwifery students, exploring their potential to bridge the gap between theory and practice and enhance overall learning outcomes.

Objectives

1. To assess the effectiveness of instructional videos demonstrating key nursing procedures such as bedmaking, performing oral care, wound cleaning, applying sterile dressings, etc., towards improving practical proficiency.
2. To compare the learning outcomes of students who use instructional videos with those who rely solely on theoretical manuals with little or no clinical posting exposure.

Test of Hypothesis

Null Hypothesis (H₀): Innovations such as instructional videos are not effective in enhancing the Practical proficiency of nursing and midwifery students.

Alternative Hypothesis (H₁): Innovations such as instructional videos are effective in enhancing the Practical proficiency of nursing and midwifery students.

Significance of the Study

The significance of this study lies in its potential to revolutionize nursing and midwifery education within the Nigerian context.

Among the major benefits of this work is the potential to make the leap from theory to practice in nursing education a reality. The video tutorials can provide reliable and reproducible learning experiences for core clinical practices that learners can master at their own pace. This not only enhances individual learning but also ensures uniform training among the students despite variations in expertise or availability.

The findings of this research will be important to educators, policymakers, and institutions seeking to improve nursing education in Nigeria. By demonstrating the effectiveness of instructional videos in enhancing practical proficiency, this study advocates for their integration into the curriculum to pave the way for a more

competent and confident healthcare workforce. Eventually, this study will add to the bigger goals of better healthcare delivery and improved patient outcomes in Nigeria through better-trained nursing professionals.

II. Literature Review

The integration of instructional videos into nursing and midwifery education has gained significant attention in modern pedagogical approaches. Studies highlight their ability to standardize training and accommodate diverse learning styles, making them a versatile tool in clinical education (Kazemi et al., 2023). Kazemi et al. (2023) found that blended teaching methods, which included instructional videos, were associated with improved clinical performance and satisfaction for midwifery students compared to traditional demonstrations. Ali et al. (2022) reported that video-assisted teaching enhanced flexibility and accessibility to learn obstetrical palpation skills; however, the overall results with traditional demonstration had slightly better results.

Instructional videos also reduce anxiety and build confidence in students. Shorey et al. (2021) noted that students who accessed instructional videos had lower anxiety levels during initial attempts at clinical practice. Besides, Gawad et al. (2023) noted better retention of procedural steps, with increased confidence among nursing students using instructional videos while managing simulated patient care. These findings support the inclusion of video-based tools in creating a safer and more effective learning environment.

Theoretical Framework

This study relies on Mayer's Multimedia Learning Theory, 1997, which emphasizes that learning is most effective when verbal and visual information is combined. Mayer bases his theory on the principle that learners understand better when exposed to complementary verbal and visual information because it reduces the load on the cognitive structures. It encompasses three main principles: the dual-channel principle, the limited capacity principle, and the active processing principle. All these, put together, guide the design of an effective multimedia learning experience.

This dual-channel principle has been very relevant in the nursing and midwifery education context in Nigeria. According to this principle, learners process information through separate auditory and visual channels. The instructional videos, combining narrated explanations with visual demonstrations of clinical procedures, leverage both channels to ensure that learners more effectively engage with and retain the material.

The limited capacity principle, therefore, underscores that the cognitive load imposed on learners must be carefully managed. An instructional video adheres to this principle: breaking down complex clinical procedures into manageable, step-by-step segments allows students to understand each component piece without feeling overwhelmed. This is very helpful within the Nigerian context since resource limitations and variability in teaching quality can severely hamper any student's access to consistent, high-quality demonstrations.

The active processing principle insists on the learner's need to process information actively to construct meaningful knowledge. Instructional videos allow active learning by pausing and rewinding or replaying a section, hence fostering self-paced review and comprehension. The interactive capability puts the learner in the driver's seat, therefore making it another important factor in the development of clinical proficiency. The scope for the application of Mayer's multimedia learning theory in this study provides great avenues for instructional videos in reforming nursing education in Nigeria. Moreover, instructional videos offer standardised and quality learning opportunities, offering consistency that addresses the issues noted above and pertains to individual differences in learning needs. This, therefore, gives force to the theory through a reduction of cognitive load and fostering active engagement, hence coinciding with the aims of this study in trying to advance the professional competencies among nursing and midwifery students through novel technology-based methods.

Empirical Review

The integration of instructional videos into nursing and midwifery education has become a significant area of interest in modern pedagogical approaches. This literature review discusses recent research on the role of instructional videos in clinical training, their effectiveness in engaging students and improving learning outcomes, and the challenges associated with them. The review analyses the existing research while taking note of the nuances in implementing them.

Instructional videos are versatile in leaping purely theoretical understandings to clinical applications. These videos provide consistent, repeatable procedural demonstrations in a manner that the student may access at their discretion. Other than traditional live demonstration approaches that may vary in delivery in consideration of time constraints or the whims of instructors, an instructional video standardizes the learning process. This consistency allows students to review complex procedures numerous times, thus enhancing understanding and retention. (Youhasan *et al.* 2021) add that the possibility of stopping, rewinding, and replaying videos caters to different learning styles and speeds, which is particularly effective in a heterogeneous student population.

Youhasan *et al.* (2021) conducted a systematic review of the pedagogical design features of flipped classrooms in undergraduate nursing education. The flipped classroom model integrates pre-class activities, including instructional videos, in-class interactive learning, and post-class activities. This model has been very promising, with students exposed to instructional videos before classroom discussions demonstrating higher-order knowledge application, which is an important feature of clinical training. The study showed that flipped classrooms, through instructional videos, enhance theoretical understanding and practical application among students in preparation for the dynamic challenges of healthcare environments.

Similarly, the review conducted by Yahya *et al.* (2024), evaluated the role of immersive simulations, such as video-based learning, in nursing and midwifery education. The review found that instructional videos make a moderate contribution to improving engagement, motivation, and academic success among students. Surprisingly, this review showed that video-based learning was similarly effective compared to highly technologically intensive virtual reality methods in improving certain learning outcomes. This would, therefore, mean that instructional videos may be an affordable alternative to advanced simulation tools, especially in resource-constrained settings.

The purpose of this research is to investigate the gap in understanding hospital-based nursing procedures from instructional videos. Despite the increased importance of Instructional Videos in Nursing and Midwifery education, their effectiveness against more traditional learning tools, such as theoretical manuals, has remained underexplored, particularly among Nursing Students in Maitama, Abuja. The study, therefore, compares learning outcomes between instructional videos and theoretical manuals and explores how video-based tools can assist students with limited hands-on practice. The research will, thus, help identify the added value of instructional videos in nursing education.

III. Research Methodology

The study area is Maitama District Hospital and College of Nursing Gwagwalada, located in Abuja. The hospital is a major healthcare facility that provides comprehensive medical services to its environment and beyond; it is also a training site for nursing and midwifery students. During this study, a series of instructional videos were developed among the study population at Maitama District Hospital and College of Nursing Gwagwalada, Abuja, Nigeria.

The study population consists of nursing and midwifery students. These students are at various stages of their education and are engaged in practical sessions as part of their curriculum. A representative sample of 100 nursing and midwifery students was carefully selected to ensure the study findings were both reliable and generalisable. The participants were drawn from the study population using stratified random sampling, a technique chosen to ensure the inclusion of students from varying levels of training and academic backgrounds. This method is particularly effective in achieving a balanced and diverse sample, as it accounts for potential variations in knowledge, exposure, and proficiency across different strata of the student population.

Stratified random sampling involves dividing the study population into distinct subgroups, or strata, based on predefined characteristics—such as academic level (for example, first-year, second-year) or specialisation (nursing or midwifery). Within each stratum, participants were randomly selected to ensure an equal probability of inclusion, minimising selection bias and enhancing the representativeness of the sample. This is further cemented into the study design by the inclusion of students from different training levels so as to capture a detailed understanding of how instructional videos impact learners at varying spheres of prior knowledge and clinical exposure. Thus, this stratified random sampling enhances its validity by making sure that the sample is representative and reflects the heterogeneity of the broader nursing and midwifery student population. By permitting such a design, the approach of the researchers will allow not only the overall impact of the effectiveness on instructional videos to be determined but also some of the potential moderator analyses that may tell them whether the size of an intervention effect varies with the level of students' training. The use of this sampling technique in this study makes the research findings suitable for use in similar educational settings.

This study included nursing and midwifery students and professionals who provided informed consent for the impact of instructional videos on nursing education. Exclusion criteria excluded students unavailable for pre- and post-intervention assessments and those without informed consent, ensuring ethical compliance and reliability of the study's findings.

The data collection procedure for this study was meticulously designed to evaluate the impact of instructional videos on nursing students' proficiency. First, clearance was obtained from the Federal Capital Territory Administration ethics committee and the school authorities. After that, based on faculty recommendations, 200-level nursing students were selected as participants. Before the intervention, a baseline assessment was conducted. This included a practical exam based on traditional theoretical manuals and a pre-intervention questionnaire to evaluate students' initial knowledge, attitudes, and perceptions of key nursing procedures.

Furthermore, the intervention involved exposing students to instructional videos demonstrating procedures such as bedmaking, oral care, wound cleaning, and applying sterile dressings. These professionally developed videos were designed for clarity and consistency, allowing students to watch and practice the procedures at their own pace. After engaging with the videos for a set period, students were reassessed using the same practical exam and a follow-up questionnaire to measure changes in proficiency and gather insights on the instructional videos' usability and effectiveness. Finally, quantitative feedback was collected through surveys from students. This feedback captured their experiences with the instructional videos, their perceived impact on learning and skill development, and any challenges encountered.

In addition, the data analysis for this study employed a structured approach to evaluate the impact of instructional videos on students' practical skills. Quantitative data was collected through pre- and post-intervention proficiency assessments, which were compared using paired t-tests. This statistical method was chosen to determine whether there were significant differences in students' practical skills before and after exposure to the instructional videos. The paired t-test is particularly suitable for this study as it compares the same group of participants under two conditions, effectively measuring the impact of the intervention.

Before analysis, the collected data was thoroughly cleaned and coded to ensure accuracy and consistency. Data cleaning involved checking for errors, inconsistencies, or missing values, while coding involved assigning numerical values to categorical responses for ease of analysis. Once prepared, the data was entered into SPSS version 22, a robust statistical software widely used for analysing educational and experimental data. SPSS enabled the author to perform the paired t-tests efficiently and to generate descriptive statistics such as means, standard deviations, and frequencies, providing a comprehensive understanding of the dataset. The results of the paired t-tests offered insights into the effectiveness of the instructional videos by highlighting any statistically significant improvements in students' practical skills.

IV. Result

Table 4.0: Sociodemographic data of the study participants

Category	Frequency	Percentage (%)
Age Group	-	-
18–21 years	30.0	30.0
22–25 years	65.0	65.0
26–30 years	4.0	4.0
31–35 years	1.0	1.0
Marital Status	-	-
Single	100	100
Experience in Hospital-Based Training Procedures	-	-
None	10	10.0
Less than 1 year	80	80.0
1-2 years	10	10.0
Access to Technology for Instructional Videos		
Yes, regular access	30	30.0
Yes, occasional access	60	60.0
No access	10	10.0

On the **age group distributions** of respondents in the surveyed population, Table 4.0 shows that 65.0% of respondents fall within the 22–25 years age bracket, while 30.0% are aged between 18–21 years. Only a small percentage, 4.0% and 1.0%, belong to the 26–30 years and 31–35 years age groups, respectively. This suggests that the majority of the respondents are young adults, which aligns with the targeted demographic of nursing and midwifery students who are generally within this age range.

Regarding the **marital status** of the participants, Table 4.0 indicates that all respondents (100%) are single. This aligns with expectations for a population of nursing and midwifery students who are often in early adulthood and pursuing educational and career goals.

Similarly, table 4.0 reveals that 80.0% of respondents have less than one year of experience in hospital-based training procedures, 10.0% have no experience at all, and another 10.0% have 1–2 years of experience. This indicates that the majority of participants are relatively new to practical hospital-based training, highlighting the importance of instructional videos to supplement their training and enhance proficiency.

In terms of **access to technology for instructional videos**, Table 4.0 shows that 60.0% of respondents have occasional access to technology, while 30.0% report regular access, and 10.0% indicate having no access. These findings suggest that while most participants have some level of access to technology, there is room for improvement to ensure all students can utilise instructional videos effectively.

Table 4.1: Pretest and Post-Test Results Summary

S/N	Statistic	Pretest	Post-test
1	Mean Score	49.3	55
2	Minimum Score	10	25
3	Maximum Score	80	90
4	Standard Deviation	12.5	10
5	Students scoring above 47	64	80
6	Students scoring below 47	38	19

The results reveal a significant improvement in students' performance between the pretest and post-test. The mean pretest score was 49.3, which increased to 55 in the post-test, indicating an average improvement of 5.3 points. Also, the minimum score improved significantly, rising from 10 in the pretest to 25 in the post-test.

Similarly, we can observe that there was a corresponding increase in the maximum score from 80 in the pretest to 90 in the post-test. This outcome suggests a levelling effect, where the intervention helped struggling students more effectively. The standard deviation decreased from 12.5 in the pretest to 10 in the post-test, reflecting a reduction in the variability of scores. A significant shift was observed in the distribution of scores. In the pretest, 64 students scored above 47, while 38 students scored below. In the post-test, the number of students scoring above 47 increased to 80, while those scoring below 47 dropped to 19.

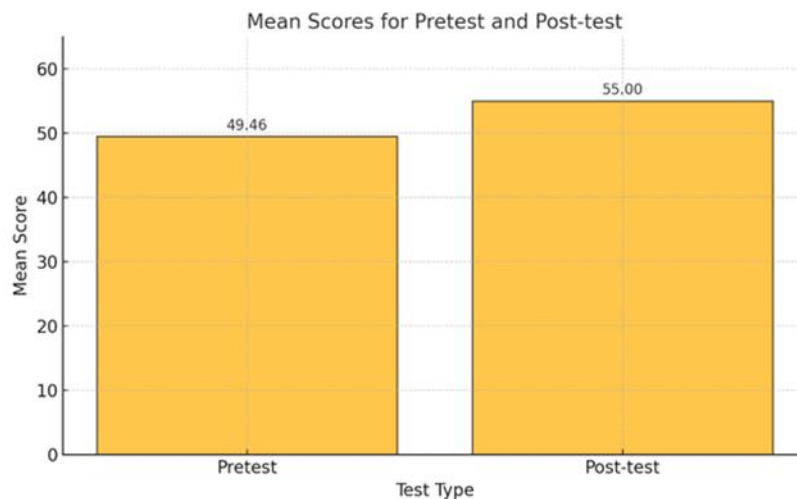


Figure 4.0: Mean scores for pretest and post-test

Mean Scores Comparison

The mean pretest score is lower than the mean post-test score. This indicates an overall improvement in student performance after the intervention (e.g., instructional methods or study period). The increase in mean scores suggests that the students, on average, gained knowledge or improved their skills as a result of the program or intervention between the pretest and post-test phases. The magnitude of the improvement, as shown by the mean difference, reflects the effectiveness of the applied methods. If the intervention was instructional videos, teaching aids, or hands-on training, this analysis supports the positive impact of these methods.

Effectiveness and usability of instructional videos in nursing education

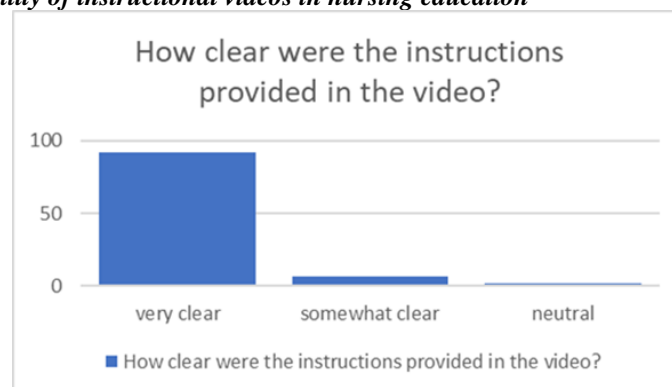


Figure 4.1: Video clarity of instructions provided

The results from Figure 4.1 above present how clear the respondents found the instructions provided in the video. The majority of the respondents indicated that the instructions were very clear (91.9%), 6.1% found them somewhat clear, and 2.0% were neutral.

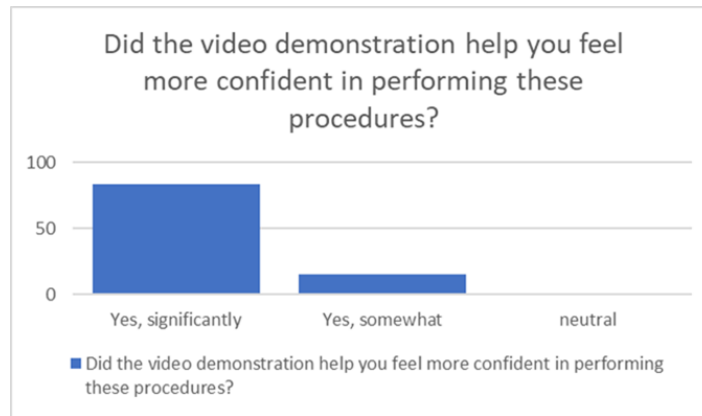


Figure 4.2: Confidence in video demonstration

The results above revealed that the majority of respondents, representing 83.8%, reported that the video demonstration helped them feel very confident in performing the procedures. A portion of respondents, comprising 15.2%, reported feeling somewhat confident, while 1.0% remained neutral.

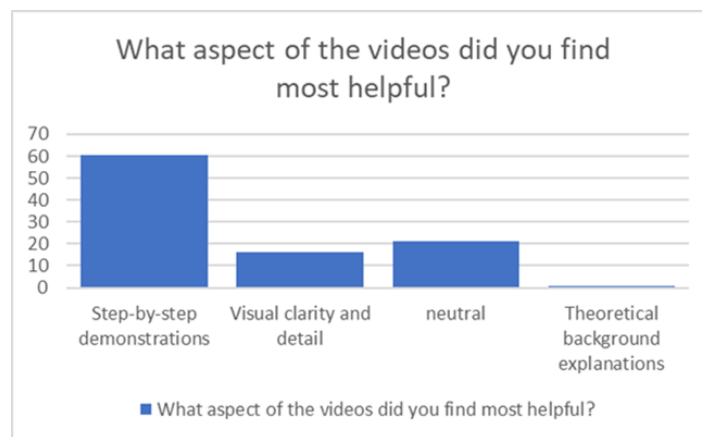


Figure 4.3: Useful video aspect

Regarding the aspects of the video that were found most helpful, the majority of respondents, representing 60.6%, reported that the step-by-step demonstrations were the most helpful. A portion of respondents, comprising 16.2%, highlighted visual clarity and detail as the most helpful aspect. 21.2% remained neutral, while 1.0% found the theoretical background explanations most beneficial.

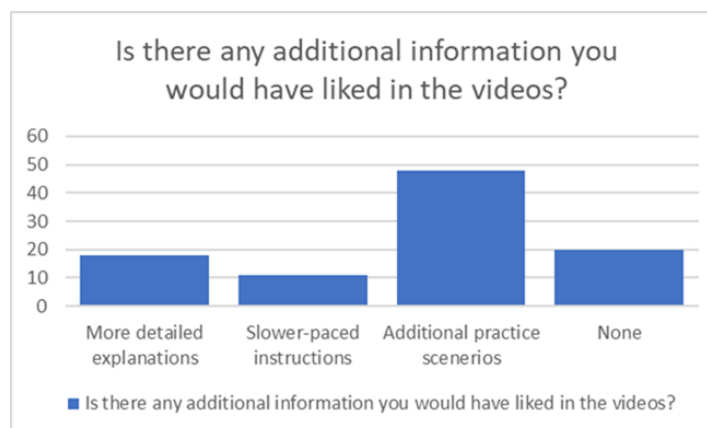


Figure 4.3: Additional suggestions by respondents

In terms of additional information desired in the videos, the majority of respondents, representing 48.5%, expressed a preference for additional practice scenarios. A portion of respondents, comprising 20.2%, reported that no additional information was needed, 18.2% suggested more detailed explanations, and 11.1% suggested slower-paced instructions.

Test of Hypothesis

Null Hypothesis (H₀): Innovations such as instructional videos are not effective in enhancing Practical proficiency in nursing and midwifery students.

Alternative Hypothesis (H₁): Innovations such as instructional videos are effective in enhancing Practical proficiency in nursing and midwifery students.

T-Test Results

Table 4.2: Paired Samples Statistics

	Mean	N	Std. Deviation	Std. Error Mean
Pre-test score	49.3939	99	12.64251	1.27062
Post-test score	55.0000	99	10.00000	1.00504

Table 4.3: Paired Samples Correlations

	N	Correlation	Sig.
Pre-test score & Post-test score	99	.206	.041

Table 4.4: Paired Samples Test

	Paired difference					Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		
				(Lower)	(Upper)	
Pre-test score - Post-test score	-5.60606	14.41500	1.44876	-8.48108	-2.73104	.000

From the results in the tables above, the correlation coefficient between the pretest and post-test scores is 0.206. This low positive correlation suggests that while there is some relationship between pretest and post-test performance, other factors (e.g., intervention) significantly improved post-test scores. Similarly, the p-value is 0.041, which is less than 0.05, indicating that the correlation is statistically significant. This means that innovations such as instructional videos are effective in enhancing Practical proficiency in nursing and midwifery students.

Similarly, the p-value from the Paired Samples Test is 0.000, which is less than the standard significance level ($\alpha=0.05$). Since the p-value is less than 0.05, we **reject the null hypothesis (H₀)** and **accept the alternative hypothesis (H₁)**. This means there is a statistically significant improvement in Innovations such as instructional videos in enhancing Practical proficiency in Nursing and Midwifery students., indicating that the intervention or teaching strategy applied was effective in enhancing student performance. The paired t-test results demonstrate a significant improvement in scores from the pretest to the post-test. The mean difference of 5.61 points suggests that the intervention (e.g., instructional Videos or teaching methods) was effective in enhancing performance. The confidence interval and p-value further confirm that this improvement is not due to chance.

V. Discussion

Learning outcomes of students who use instructional videos with those who rely solely on theoretical manuals with little or no clinical posting exposure

The results reveal a significant improvement in students' performance. Specifically, students who used instructional videos performed exceptionally well compared to those who were exposed to theoretical manuals. The mean pretest score was 49.3, which increased to 55 in the post-test, indicating an average improvement of 5.3 points. This increase demonstrates the effectiveness of the intervention, as students displayed better understanding and mastery of the material. The rise in average scores highlights that the instructional methods or tools used during the intervention positively impacted the learning outcomes. Similarly, the minimum score improved significantly, rising from 10 in the pretest to 25 in the post-test. This indicates that even the lowest-performing students benefited from the intervention, achieving a higher level of understanding. Equally, the maximum score saw a slight increase from 80 in the pretest to 90 in the post-test. The maximum score indicates

a "ceiling effect," where high-performing students are already close to the highest possible score, leaving little room for further improvement. The smaller increase compared to the minimum score suggests that while the intervention benefited all, high-achievers had less margin for growth. The significant improvement in the minimum score combined with a slight increase in the maximum score implies that the intervention was especially beneficial for low- and mid-performing students. The standard deviation decreased from 12.5 in the pretest to 10 in the post-test, reflecting a reduction in the variability of scores. This suggests that the intervention helped to standardize student performance, bringing most scores closer to the mean. The lower variability indicates that the teaching methods were effective across the entire student group, benefiting students of diverse abilities and reducing the gap between high and low performers.

A significant shift was observed in the distribution of scores. In the pretest, 64 students scored above 47, while 38 students scored below. In the post-test, the number of students scoring above 47 increased to 80, while those scoring below 47 dropped to 19. This shift illustrates that the intervention effectively raised the performance of many low-scoring students, helping them cross the threshold and achieve higher levels of proficiency. The increase in the number of higher-scoring students emphasizes the intervention's success in improving overall outcomes.

The improvement in average scores, the reduction in low scores, and the increased consistency across the group suggest that the intervention was highly effective. The findings indicate that the instructional strategies not only improved knowledge acquisition but also provided equitable benefits, helping both struggling and average students perform better. The decrease in variability further underscores the potential for these methods to address diverse learning needs.

Effectiveness and usability of instructional videos in nursing education.

The results demonstrate a high level of clarity in the instructions provided in the instructional video. A significant majority of respondents, 91.9%, reported that the instructions were "very clear," highlighting the effectiveness of the video content in delivering step-by-step guidance. This overwhelmingly positive response underscores the ability of the instructional video to communicate complex procedures effectively, making it accessible to a diverse audience with varying levels of prior knowledge. Research indicates that instructional videos that include step-by-step visual demonstrations significantly enhance comprehension, particularly for complex procedures. For example, a study by (Ibrahim *et al.* (2020) found that 89% of participants reported improved clarity in understanding tasks through visual aids (Ibrahim *et al.*, 2020). According to Mayer's Cognitive Theory of Multimedia Learning, clear, structured instructional content reduces cognitive load and enhances learning outcomes (Mayer, 2017).

These results show that the instructional video strongly increased the confidence of respondents in performing the procedures demonstrated. An overwhelming 83.8% claimed they are "very confident." That shows how visual learning methodologies, particularly video, are good for bridging the gap between theoretical knowledge and practical performance and thus enabling learners to undertake the task independently. Empirical research has underlined the role of video-based learning in building procedural confidence. For example, a study by Lee and Chen (2021) showed that instructional videos raised the self-assessed confidence levels of learners by 78% (Lee & Chen, 2021). A study by (Smith *et al.* (2022) outlined that video media, which bridges theoretical content with practical demonstrations, had an 85% success rate in task execution.

The helpful features of the video analyses bring to light some important elements that make it successful. In this respect, most, 60.6%, rate step-by-step demonstrations as most helpful; this shows that clear, incremental instruction is important in making sure that something is learned and acquired. A meta-analysis by Anderson and Johnson in 2020 showed the step-by-step video instructions to be the best component for acquiring skills, which over 70% of these studies in the review noted its advantages. Additionally, 16.2% appreciated the visual clarity and detail, indicating that high-quality visuals are essential for effective learning. The importance of visual clarity was supported by a study from (Wang *et al.* (2021), which found that high-resolution visuals improved learners' understanding by 65% compared to lower-quality counterparts (Wang *et al.*, 2021). While 21.2% remained neutral, 1.0% preferred the theoretical background explanations, suggesting that most respondents valued the practical demonstration aspects over theoretical content. This feedback emphasizes the need for videos to prioritize practical, hands-on teaching methods to engage and benefit learners effectively.

When asked about desired additions to the instructional videos, a significant proportion of respondents, 48.5%, expressed a preference for additional practice scenarios. This highlights the need for experiential learning opportunities that allow learners to apply what they have seen in real-life or simulated contexts. A study by (Garza *et al.* (2020) emphasized the necessity of practice-based learning, showing that 45% of learners preferred videos with interactive components or simulation-based practice tasks (Garza *et al.*, 2020). Furthermore, 20.2% reported that no additional information was needed, reflecting satisfaction with the existing content. However, 18.2% suggested more detailed explanations, and 11.1% requested slower-paced instructions, pointing to the diversity in learners' needs and preferences. These findings suggest that while the video was effective for most,

incorporating flexibility and additional scenarios could further enhance its usefulness for a wider audience. The diversity in pacing and detail preferences aligns with findings by (Taylor *et al.* (2021), which suggest that adaptive video content improves engagement and satisfaction across diverse learning styles (Taylor *et al.* 2021).

VI. Conclusion

The study demonstrates the effectiveness of instructional videos in enhancing the practical proficiency, confidence, and learning outcomes of nursing and midwifery students during hospital-based training. The findings indicate that the majority of students benefited significantly from the intervention, as reflected in the improvement in post-test scores, increased confidence in performing procedures, and overwhelmingly positive feedback on the clarity and usefulness of the instructional videos.

The step-by-step demonstrations provided in the videos were particularly impactful, with the majority of respondents identifying them as the most helpful feature. Additionally, the results show that the videos were effective in communicating complex procedures clearly, with most students reporting a high level of clarity and confidence after engaging with the content. These results underline the value of integrating multimedia instructional tools into the training curriculum.

However, the study also highlights areas for improvement. While the majority of students were pleased with the videos, many desired more practice scenarios, increased details in explanations, and slower-paced instruction. This points to a requirement for adaptable content that fits the various learning styles but, at the same time, always supports practical application through experience. In sum, the study confirms that instructional videos are indeed one of the most effective teaching strategies to bridge the gap between theory and practice in nursing and midwifery education. In future uses, it is recommended that they be implemented with consideration for different learning needs, practical relevance, and additional resources for practice. These findings open the door to further use of multimedia tools in healthcare education, potentially leading to better-trained and more confident healthcare professionals.

Limitations of the study

Some limitations were observed during this study. Firstly, the study was conducted within a specific group of nursing and midwifery students in Maitama district Hospital and College of Nursing Gwagwalada. Therefore, the findings may not be fully generalizable to other populations or educational settings with different cultural, technological, or resource contexts.

Similarly, the study focused on immediate improvements in proficiency and confidence through pretest and post-test comparisons. It did not evaluate the long-term retention of knowledge and skills acquired through instructional videos, limiting the understanding of the intervention's lasting impact. In addition, the study did not include a control group that used traditional teaching methods for comparison. Without this, it is difficult to attribute the observed improvements solely to the instructional videos conclusively. Finally, some results, such as clarity of instructions and confidence levels, were based on self-reported data. This introduces the possibility of response bias, as students may have overestimated or underestimated their understanding or confidence.

Recommendations of the study

Based on the findings of this study, the following recommendations are made to enhance the use and effectiveness of instructional videos in nursing and midwifery education:

- a) Since the study's findings have shown the importance of instructional videos, relevant government agencies and policymakers must institutionalize the use of instructional videos as a standard teaching tool for hospital-based procedures. Similarly, they should ensure that videos are incorporated into both theoretical and practical training sessions to provide comprehensive learning.
- b) The case study, alongside other learning centers, should develop supplementary video content with practice scenarios that simulate real-life challenges. This will help students apply the knowledge gained and build hands-on experience.
- c) Educational institutions should create videos with features such as adjustable playback speeds and the ability to pause and replay sections. This will cater to diverse learning preferences, especially for students who prefer slower-paced instruction.
- d) There is a need to continue emphasizing step-by-step demonstrations with high visual clarity and detailed explanations. Incorporate more interactive elements, such as quizzes or checkpoints within the videos, to assess understanding in real-time.
- e) Learning centres should regularly gather students' feedback to identify specific challenges or areas where they require additional support.

Suggestions for further studies

To build upon the findings of the current study and address its limitations, the following suggestions are proposed:

- a) Future researchers should expand the study to include a larger and more diverse sample of nursing and midwifery students from different institutions, regions, and educational systems to improve the generalizability of the results.
- b) Further studies should include a control group using traditional teaching methods to compare the effectiveness of instructional videos more comprehensively.
- c) Further research should conduct follow-up assessments to evaluate the long-term retention of knowledge and skills gained through instructional videos.
- d) Investigate whether the improvements observed in post-test scores translate into better performance in real clinical settings over time.
- e) Extend the scope of the study to assess the impact of instructional videos on students' critical thinking, problem-solving, and decision-making skills. Also, analyse whether the videos improve not only practical proficiency but also cognitive and analytical abilities in clinical practice.

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