JPPIPA 11(11) (2025)

Jurnal Penelitian Pendidikan IPA

http://jppipa.unram.ac.id/index.php/jppipa/index

The Effectiveness E-Learning Videos on Psychomotor and Cognitive Skills in Psychiatric Nursing Care of The Risk of Violent Behavior for Nursing Students: a Study Comparative

Nur Sriyanti[1*], Novita Ranti Muntiari[2], Rosaleni Rejin[1]

[1] Departement of Diploma III Nursing Program, Politeknik Kaltara, Indonesia.
[2] Departement of Diploma IV Health Promotion, Politeknik Kaltara, Indonesia.
[1] Student of Diploma III Nursing Program, Politeknik Kaltara, Indonesia.

Received: September 30, 2025
Revised: October 24, 2025
Accepted: November 25, 2025
Published: November 30, 2025

Corresponding Author:
Nur Sriyanti
sriyantinur82@gmail.com

DOI: 10.29303/jppipa.v11i11.13001

Abstract: This study aimed to analyze the comparative effectiveness of e-learning videos created by course lecturers versus externally produced videos in enhancing nursing students' cognitive and psychomotor skills regarding psychiatric nursing care for clients at risk of violent behavior. A quasi-experimental design with a pretest-posttest approach was employed. Student cohorts were divided into an intervention group, which used lecturer-made videos, and a control group, which used externally made videos. The findings revealed a substantial improvement in the intervention group, with cognitive skills increasing by 86.5% and psychomotor skills by 69.77%. In contrast, the control group showed no significant increase. This indicates that lecturer-created videos, likely due to their tailored relevance to the specific curriculum and learning context, are a more potent educational tool. It is concluded that e-learning videos developed by the course lecturers are significantly more effective than external videos in improving both the knowledge and practical skills of nursing students. The use of curated, internally developed video media is therefore highly recommended for optimizing learning outcomes in specialized nursing education.

Keywords: Cognitive Skills; E-Learning; Nursing Education; Psychiatric Nursing; Psychomotor Skills; Video Lecture

Introduction

The integration of technology in education is pivotal for enhancing the learning process, making complex material more accessible and understandable for students (Yudiyanto et al., 2020). Among various technological tools, instructional videos have emerged as a powerful medium, capable of stimulating the cognitive, psychomotor, and emotional domains of learning simultaneously. For the current digital generation, video-based learning aligns with their preferences, fostering greater interest and improving knowledge retention through dynamic visual and auditory stimuli (Jasmin et al., 2024).

This research is grounded in several key educational theories. Cognitive Theory of Multimedia Learning posits that people learn more deeply from words and pictures than from words alone, which supports the use of videos to explain complex nursing procedures. Furthermore, the concept of scaffolding suggests that learning is more effective when support is provided; a video created by a familiar lecturer can act as a tailored scaffold, guiding students through the correct steps before they practice independently. The effectiveness of such tailored media is evidenced in

How to Cite:
Sriyanti, N., Muntiari, N. R., & Rejin, R. (2025). The Effectiveness E-Learning Videos on Psychomotor and Cognitive Skills in Psychiatric Nursing Care of The Risk of Violent Behavior for Nursing Students: a Study Comparative. *Jurnal Penelitian Pendidikan IPA*, *11*(11), 144–153. https://doi.org/10.29303/jppipa.v11i11.13001

nursing education, where studies show that educational videos significantly improve students' skills, particularly in sensitive areas like therapeutic communication and managing patient violence, compared to traditional methods like role-play without video support (Avelina & Pora, 2021).

Despite the availability of digital resources, a significant gap persists between the potential of technology and its optimal application in practical nursing skills. While theoretical learning has embraced digital tools, practical skill development often relies on less standardized methods, leading to inconsistent competency outcomes (Anggreini & Situmorang, 2022). This gap is critical, as research by Firdaus et al. confirms that video-assisted learning provides a necessary foundation for acquiring essential nursing skills, ensuring equitable learning opportunities for all students (Fatimah et al., 2024). Students report high satisfaction with video learning, valuing the ability to review procedure steps at their own pace, which enhances clarity and mastery (Bahar et al., 2022; Ilmudinulloh & Kamaru, 2024; Lee et al., 2016; Sadeghi et al., 2023).

The impetus for this study stems from a persistent, specific problem within the Diploma III Nursing program at the North Kalimantan Polytechnic. Internal data collected over three consecutive years reveals that students consistently struggle with the practical examination for managing the risk of violent behavior in psychiatric nursing. Difficulties in comprehending the material and correctly executing the Nursing Action Implementation Strategy have resulted in low pass rates, despite the abundance of available learning resources. This contradiction highlights a critical need for more structured and effective instructional media.

Therefore, this research is conducted to address this issue by developing and evaluating e-learning videos created by the course lecturers themselves. The central hypothesis is that lecturer-made videos, which are directly aligned with the specific curriculum and learning context, will be more effective than generic external videos. By personally presenting the material and demonstrating procedures, the lecturer can maintain a pedagogical connection with students, providing a consistent and reliable learning scaffold. This study aims to determine if such curated, internally developed video content can serve as a definitive solution for improving both the cognitive understanding and psychomotor skills of nursing students in this challenging domain.

Method

This study employed a quasi-experimental design with a pretest-posttest control group approach to quantitatively compare the effects of two different types of e-learning videos on student competencies. The research flowchart below provides a clear visual overview of the entire process.

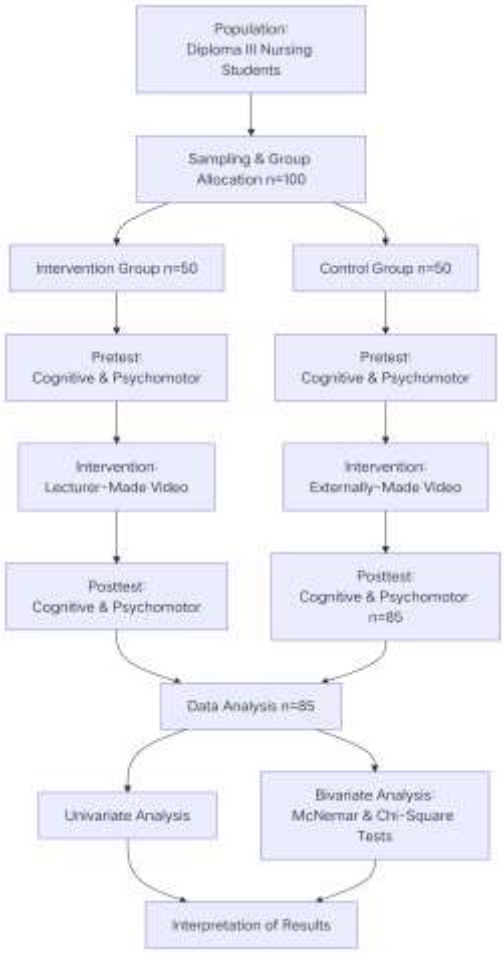

Figure 1. Research flow

Research Design and Participants

The study involved a sample of 100 Diploma III Nursing students, who were divided into two groups: an intervention group (n=50) that used an e-learning video created by the course lecturer, and a control group (n=50) that used an e-learning video on the same topic (psychiatric nursing care for clients at risk of violent behavior) sourced from YouTube. Ultimately, 85 participants completed all stages of the research, as 15 participants dropped out due to clinical work schedules and other undisclosed reasons.

Instruments and Intervention

The primary instruments were two e-learning videos, identical in content but different in source. The cognitive aspect was measured using a questionnaire with 24 items (12 positive and 12 negative statements) on a Guttman scale (Cronbach's Alpha = 0.983, indicating high reliability). The psychomotor aspect was measured using a standardized checklist based on the nursing procedure steps (stages 1-5). Both groups underwent identical pre-test and post-test assessments.

Data Analysis

Data analysis was conducted in two stages: Univariate analysis, to describe the frequency distribution and characteristics of all variables; and Bivariate analysis, to test the hypothesis, the McNemar test was used to analyze differences in pre- and post-test scores within each group (due to paired data), and the Chi-Square test was used to analyze differences in post-test scores between the intervention and control groups (due to independent data). A significance level of $p < 0.05$ was applied.

Ethical Consideration

This study received ethical approval from the Faculty of Nursing, Brawijaya University, with certificate number: 201/KEPK-FIKES UBT/IX/2025, dated September 27, 2025.

Result and Discussion

Respondent Characteristics

This study involved a total of 85 second-year nursing students, comprising 43 respondents in the intervention group and 42 in the control group.

Table 1. Frequency Distribution of Respondent Characteristics (N=85)

Characteristics	Intervension Group		Control Group	
	n	%	n	%
19	21	48.8		
20	17	39.5		
21	4	9.3		
23	1	2.3		
Male	4	9		
Female	39	91	42	100
Total	43	100	42	100

As shown in Table 1, the majority of respondents were 19 years old, and the sample was predominantly female, which is representative of the general demographic in many nursing education programs (Nur et al., 2023).

Table 2. Frequency Distribution of Cognitive Aspects Before and After Intervention (N=85)

Group	Variable	Frequency	%
Intervention	Cognitive Result (Pre)	35	81.40
	Cognitive Result (Post)	37	86.05
Control	Cognitive Result (Pre)	27	64.29
	Cognitive Result (Post)	28	66.67

The data in Table 2 indicates an improvement in good cognitive scores in the intervention group (from 81.40% to 86.05%) following the use of the lecturer-made video. The control group, which used an external video, showed only a minimal increase (from 64.29% to 66.67%). This finding aligns with research by Ajhuri (2019), which demonstrated that instructional videos tailored to a specific curriculum led to significantly greater gains in knowledge retention among healthcare students compared to generic online resources. The tailored content in the lecturer-made video likely addressed the specific learning objectives and common misconceptions more directly, leading to a more effective cognitive consolidation.

Table 3. Frequency Distribution of Psychomotor Aspects Before and After Intervention (N=85)

Group	Variable	Frequency	%
Intervention	Psychomotor Result (Pre)	19	44.19
	Psychomotor Result (Post	30	69.77
Control	Psychomotor Result (Pre)	4	9.52
	Psychomotor Result (Post)	27	64.29

Table 3 reveals a substantial increase in good psychomotor outcomes within the intervention group, rising from 44.19% to 69.77%. This 25.58% point increase underscores the video's effectiveness in enhancing practical skills. This result is strongly supported by the work of Fatimah et al. (2024), who found that video-assisted learning provided a necessary and reliable foundation for students to acquire and practice essential nursing skills. The ability to pause, rewind, and repeatedly watch the lecturer demonstrate the correct procedure allows for better encoding of motor sequences, which is critical for complex psychomotor tasks like psychiatric nursing interventions.

Table 4. Cognitive Scores Before and After Intervention in the Intervention Group (N=43)

Pre Cognitive	Cognitive		Total	P-Value
	Post (Good)	Post (Less)		
Good (n=35)	33	2	35	0.001
Less (n=8)	4	4	8	
Total	37	6	43	

The McNemar test results in Tables 4 and 5 confirm statistically significant improvements in both cognitive (p=0.001) and psychomotor (p=0.002) aspects within the intervention group after watching the lecturer-made video. This is consistent with the Cognitive Theory of Multimedia Learning (Astra et al., 2022), which posits that learning is more effective when information is presented through both visual and auditory channels in a well-structured manner. The lecturer-created video acts as a unified instructional scaffold, guiding students through the material seamlessly.

Table 5. Psychomotor Scores Before and After Intervention in the Intervention Group (N=43)

Pre psychomotor	Psychomotor		Total	P-Value
	Post (Good)	Post (Less)		
Good (n=19)	18	1	19	0.002
Less (n=24)	12	12	24	
Total	30	13	43	

Table 6. Differences in Post-Intervention Cognitive Scores Between Groups (N=85)

Group	Cognitive		Total	P-Value
	Post (Good)	Post (Less)		
Interventation	37 (43.53%)	6 (7.06%)	43	0.002
Control	28 (32.94%)	14 (16.47%)	42	
Total	65	20	85	

Table 7. Differences in Post-Intervention Psychomotor Scores Between Groups (N=85)

Group	Psychomotor		Total	P-Value
	Post (Good)	Post (Less)		
Interventation	13 (15.29%)	30 (35.29%)	43	0.036
Control	15 (17.65%)	27 (31.76%)	42	
Total	28	57	85	

The bivariate analysis reveals a crucial finding: while both groups showed some improvement, the intervention group performed significantly better than the control group in both cognitive (p=0.002) and psychomotor (p=0.036) outcomes after the intervention. This demonstrates the superior effectiveness of the lecturer-made video. This finding can be discussed in the context of scaffolding and personalization. A study by Netland et al. (2025) on online learning found that instructor-generated videos were perceived as more engaging and credible, fostering a stronger sense of connection and attention from students. The familiar presence of the course lecturer in the video likely created a more personalized learning experience, making the instructional content more relatable and the demonstrations more authoritative and trustworthy compared to an anonymous external source. This pedagogical connection is especially critical in psychomotor skill development, where confidence and correct technique are paramount.

Table 8. Differences in Cognitive Aspect Scores After the Provision of E-Learning Videos Created by the Lecturer in Charge of the Subject in the Intervention and Control Groups of Nursing Students at North Kalimantan Polytechnic in 2022 (N=85).

Group	Post Cognitive				Total		P-value
	Good		Less				
	n	%	n	%	n	%	
Intervention	37	43.53	6	7.06	43	50.59	0.002
Control	28	32.94	14	16.47	42	49.41	
Total	65	76.47	20	23.53	85	100	

Based on Table 8, it shows that the results of the chi-square test on Fisher's Exact Test show cognitive differences in the treatment group and the control group after the intervention of providing e-learning videos made by the lecturer in charge of the course to the students of the Diploma III Nursing Study Program at the North Kalimantan Polytechnic, so that there is an influence of the treatment on increasing the knowledge aspect (cognitive) related to effective communication in the Diploma III Nursing Study Program students at the North Kalimantan Polytechnic with a p value = 0.002

Table 9. Differences in Psychomotor Aspect Scores After Team Building Training in the Intervention and Control Groups of Nursing Students at the North Kalimantan Polytechnic in 2022 (N=85).

Group	Post psycomotor				Total		P
	Good		Less				
	n	%	N	%	n	%	
Intervention	13	15.29	30	35.29	43	50.59	0.036
Control	15	17.65	27	31.76	42	49.41	
Total	28	32.94	57	67.06	85	100	

Based on Table 9, it shows that the results of the chi-square test on Fisher's Exact Test show a difference in psychomotor in the treatment group and the control group after the intervention after the intervention of providing e-learning videos made by the lecturer in charge of the course to the students of the Diploma III Nursing Study Program at the North Kalimantan Polytechnic, so that there is an influence of the treatment on improving the skill aspect (psychomotor) related to effective communication in the Diploma III Nursing Study Program students at the North Kalimantan Polytechnic with a p value = 0.036

Discussion

The Effectiveness of Lecturer-Made E-Learning Videos in Enhancing Students' Cognitive and Psychomotor Domains

Characteristics of Respondents and Their Relevance to the Learning Context

The participants in this study were predominantly female students, with an average age of 19 to 20 years. Developmentally, this places them squarely within the period of early adulthood (18-25 years), a critical phase characterized by the maturation of higher-order cognitive functions and identity formation (Ajhuri, 2019; Mayer, 2014; Nur et al., 2023). During this stage, students refine their abstract reasoning, critical thinking, and metacognitive abilities, which are essential foundations for complex learning tasks such as clinical psychomotor skills and creative problem-solving (Perry, 1999; Vygotsky & Cole, 1978).

The finding that gender did not exert a significant influence on mathematical creative thinking (Astra et al., 2022) aligns with a growing body of contemporary educational research. These studies suggest that cognitive potential is equitable across genders, and any observed disparities are more likely attributable to contextual factors such as pedagogical approaches, societal stereotypes, self-efficacy, and implicit bias in the learning environment (Bandura, 1986; Dweck, 2006; Piaget, 2005). The relative homogeneity of the participants in terms of their developmental stage allows for a more focused examination of the intervention variable the type of e-learning video on the learning outcomes.

The Pedagogical Shift to Video-Based Learning and its Dual Outcomes

The global landscape of higher education has undergone a significant transformation, with a proliferation of online courses and degree programs where video-based learning has become a cornerstone (Netland et al., 2025; Siemens, 2005). This shift necessitates a clear distinction between learning experiences and learning outcomes. The learning experience encompasses the holistic journey of the student, including their emotional engagement, cognitive investment, and social interaction with the content, instructors, and peers (Brown et al., 1989; Lave & Wenger, 1991). In contrast, learning outcomes are the measurable demonstrations of knowledge, skills, and competencies acquired as a direct result of that engagement (Biggs & Tang, 2003; Netland et al., 2025).

The results of this study indicate that both the intervention and control groups, after receiving treatment via e-learning videos, showed improvement in cognitive understanding and psychomotor proficiency. This underscores the inherent efficacy of video as a medium for demonstrating procedures and conveying complex information, consistent with principles of multimedia learning (Clark & Mayer, 2023; Dede, 1996). However, the more pronounced improvement in the intervention group, which viewed videos created by their own lecturers, points to factors beyond mere information delivery.

The Lecturer Effect: Why Instructor-Created Videos Yield Superior Results

The superior performance associated with lecturer-made videos can be attributed to a combination of social, cognitive, and pedagogical advantages, which we term the "Lecturer Effect."

Social Presence and Emotional Connection

The visibility of an instructor in video content is a critical factor in replicating the human elements of a traditional classroom within a digital space. Research consistently demonstrates that this practice significantly enhances what is known as "social presence," which is the learner's sense of being connected to and interacting with a real person (Fidan & Debbag, 2023; Johnson et al., 2000). In the often-impersonal context of online learning,

this connection is not a mere luxury but a fundamental component for reducing the sense of isolation and building a supportive learning community. Without this presence, students can feel as though they are learning from a faceless entity, which undermines engagement and morale.

This connection operates as a parasocial interaction, a one-sided relationship where the student feels they know the instructor, even without direct reciprocal communication. When the lecturer speaks directly to the camera, using conversational language and expressive gestures, it creates an illusion of a personal tutorial. This perceived relationship is a powerful antidote to the loneliness that can plague online learners, making the educational experience feel less transactional and more relational. The simple act of seeing a familiar face provides a point of human focus that anchors the learning process.

The emotional dimension of this presence is equally important. Students are highly attuned to the non-verbal cues and emotional tone displayed by their lecturer. When an instructor appears enthusiastic, warm, and engaged, it directly influences students' attitudes (Lawson et al., 2021). This positive emotional transfer fosters a more receptive and open mindset toward the subject matter, making students more likely to approach difficult concepts with curiosity rather than apprehension. The instructor's demeanor sets the emotional tone for the entire learning module.

These principles are firmly grounded in emotional design theory. Studies show that positive emotional cues from on-screen agents including a visible instructor can make learning more enjoyable and less daunting (Li, 2025; Plass et al., 2014, 2020; Um et al., 2012). By creating a positive affective environment, the instructor can reduce the learner's perceived cognitive load. When students feel at ease and positively connected, their mental resources are freed up to focus on understanding and synthesizing information rather than on managing frustration or disconnection.

In conclusion, the strategic use of instructor visibility is a multifaceted tool that directly counteracts the core psychological challenges of distance education. It builds social presence, mitigates isolation through parasocial interaction, transfers positive emotional states, and applies proven emotional design principles to create a more effective and humane learning environment. Ultimately, this approach transforms a sterile information delivery system into a dynamic and supportive educational experience.

Curriculum Alignment and Contextual Relevance

The primary and most compelling advantage of lecturer-created video content is its inherent and precise alignment with the specific curriculum, intended learning outcomes, and syllabus of a course (Sweller et al., 2007; J. Wang & Antonenko, 2017). Unlike generic resources, these videos are conceived and produced with a single purpose: to serve the exact educational needs of a particular cohort of students. The lecturer, as the architect of the course, possesses an intimate and comprehensive understanding of the intellectual journey upon which the students are embarked, ensuring that every piece of content is purpose-built.

This deep understanding extends most critically to the realm of assessment. The lecturer knows the precise knowledge, skills, and competencies that will be evaluated in summative assessments, such as exams and major projects. This allows them to create highly focused and relevant content that directly prepares students for these evaluations. There is no guesswork for the students; they can trust that the material presented is essential and directly applicable to their success in the course, providing a clear and efficient path to mastery.

In stark contrast, externally sourced videos, while potentially high in production quality and presented by subject matter experts, are inherently generic. They are designed for a broad audience and are not tailored to the specific nuances, emphases, or sequencing of a local curriculum. While they may cover the same general topic, they often include extraneous information, omit critical course-specific details, or approach concepts from a different theoretical perspective that may confuse rather than clarify.

This lack of specific alignment can be cognit detrimental to students. When learners are required to use third-party videos, they must expend significant mental effort to sift through the content, identify which parts are relevant to their course, and reconcile differences in terminology or approach (Sweller, 1988; Van Merriënboer et al., 2024). This process creates extraneous cognitive load, which is the unnecessary consumption of limited working memory resources on activities that are not directly related to learning the core material.

Therefore, lecturer-created videos are not just a matter of convenience but a crucial tool for efficient learning. They act as a curated and targeted resource that eliminates noise and sharpens focus. By providing content that is perfectly synchronized with the course's goals and assessments, the lecturer streamlines the learning process, ensuring that students' cognitive efforts are invested in understanding and application, rather than in filtering and deciphering misaligned information.

Pedagogical Customization and Cognitive Load Management

Effective teaching is not merely about transmitting information but about tailoring that transmission to the specific audience. Lecturers possess an invaluable, ground-level understanding of their students' unique characteristics, including their predominant learning styles, their academic level, and, most importantly, the common misconceptions and stumbling blocks they face (Fink, 2013; Hattie, 2012). This knowledge is the foundation of pedagogical customization, allowing for explanations that are perfectly pitched.

This customization manifests in several critical ways. A lecturer can use terminology and jargon that is familiar to the students, having introduced it in prior lectures. They can anticipate points of confusion and preemptively address them, using analogies and examples that resonate with the students' known frame of reference and cultural context. This tailored approach makes complex material significantly more accessible by connecting it to what students already know, thereby managing the intrinsic cognitive load associated with the material's inherent difficulty.

The cognitive benefits of this familiar presence are not just theoretical but have been empirically demonstrated using physiological measures. Supporting this, EEG (electroencephalogram) studies have shown that students' cognitive load decreases when the lecturer is visible on screen (Antonenko et al., 2010; C. Wang et al., 2020). This suggests that the brain processes information more efficiently when it comes from a known and trusted source. The familiar instructor acts as a cognitive schema, a mental shortcut that helps students organize and integrate new information with less effort.

Furthermore, the lecturer's ability to manage pace, emphasize key points through vocal inflection and visual cues, and structure the presentation in a way that mirrors the course's progression all contribute to reduced cognitive load. This careful orchestration ensures that students are not overwhelmed by the complexity of the information or distracted by an unfamiliar presentation style. The learning environment becomes predictable and supportive, which is conducive to deep processing.

In essence, the lecturer acts as a cognitive guide, using their insider knowledge to scaffold the learning experience. By customizing their pedagogy, they transform potentially overwhelming material into digestible segments. The scientific evidence from EEG studies confirms that this familiar presence literally makes thinking easier. Therefore, this approach is a direct and powerful application of cognitive load theory, optimizing the use of students' finite mental resources for better learning outcomes.

Facilitated Discourse and Dynamic Content

The use of lecturer-created videos creates a uniquely integrated and responsive learning ecosystem, primarily because of the lecturer's dual role as both the content creator and the course tutor. This integration breaks down the traditional barrier between static learning objects and live teaching. Students are not consuming content from an anonymous source; they are learning from the same person who leads their discussions and assessments, creating a continuous and cohesive educational experience.

This seamless connection facilitates rich and immediate discourse. A student can watch a video lecture, identify a point of confusion, and then directly ask the lecturer for clarification during a subsequent face-to-face or online synchronous session (Garrison et al., 1999; Salmon, 2003). The lecturer, being the author of the content, can provide an instant and authoritative explanation, perhaps even elaborating on the very thought process behind that segment of the video. This "closed-loop" of instruction and feedback is a powerful pedagogical cycle that is simply not feasible with third-party videos.

The dynamic nature of lecturer-created content is another significant advantage. Unlike static, published third-party videos, a lecturer can continuously update and improve their own materials. They can release a new version of a video to reflect a recent discovery, to incorporate a new example that emerged from a class discussion, or to better explain a concept that many students found difficult (Weller, 2011). This ensures that the course content remains current, relevant, and constantly evolving in response to the learners' needs.

This responsiveness creates a living curriculum. If student feedback indicates that a particular topic was poorly explained, the lecturer can re-record that segment for the next cohort or even mid-stream, ensuring continuous improvement. This ability to adapt makes the learning materials far more effective than any off-the-shelf resource could be. The content is not a fixed product but a dynamic process, refined through direct interaction with the student audience.

Ultimately, this model fosters a collaborative learning environment where the lines between content consumption and knowledge co-creation are blurred. Students feel that their questions and difficulties directly shape the learning resources, increasing their sense of agency and engagement. The lecturer-created video is not the final word, but a key part of an ongoing academic conversation, making the entire educational process more adaptive, responsive, and effective.

Trust and Perceived Relevance for Assessment

In an educational landscape saturated with information, the source of that information is paramount. Students instinctively place greater trust and credibility in content created by the authority who will ultimately assess their learning (Biggs, 1999; Ramsden, 2003). This trust is rooted in a clear understanding of cause and effect; the lecturer who designs the exam is the most reliable source for knowing what will be on it. This perception transforms the video content from a optional resource into an essential one.

This established trust creates a powerful perception of relevance that directly fuels student motivation. When students watch a lecturer-created video, they do so with the confidence that the material is directly pertinent to their required competencies and summative assessments. This eliminates the existential question of "Do I need to know this?" and allows them to engage with the material more deeply and with greater focus, knowing their investment of time and effort is efficient and purposeful.

The lecturer, as the assessor, possesses an implicit "gatekeeper" knowledge. They understand not just the factual content, but the depth of understanding, the application skills, and the critical thinking approaches they expect to see in assignments and exams. This insider perspective allows them to infuse their videos with these subtle cues, emphasizing not only what is important but how it is important in the context of the course's evaluation criteria.

While externally sourced videos can be valuable as supplementary resources to provide alternative explanations or spark interest, they are rarely viewed as the primary authoritative source. Students may enjoy them, but they will almost always cross-reference the information with the lecturer's own materials to verify its relevance and accuracy for their specific context. The third-party video is a guest speaker; the lecturer's video is the course director.

Therefore, the use of lecturer-created videos leverages a fundamental principle of student psychology: the direct link between instruction and assessment. By consolidating these roles, the lecturer builds unparalleled trust and signals the unequivocal relevance of the learning materials. This strategic alignment ensures that students channel their energy into the most impactful resources, maximizing engagement and providing a clear, authoritative pathway to academic success.

Conclusion

Based on the overall results and discussion of this study, it can be concluded that the e-learning videos developed by the course lecturers demonstrated a significant positive impact, effectively enhancing student competencies in psychiatric nursing care for patients at risk of violent behavior. This improvement was observed comprehensively, with a marked increase in cognitive understanding of the theoretical concepts, as well as a measurable development of psychomotor skills related to planning and demonstrating appropriate nursing interventions. Therefore, the findings validate that the implemented e-learning videos serve as a highly effective and feasible learning medium to support educational outcomes in this critical area of nursing.

Acknowledgments

The author expresses his deepest gratitude to the Ministry of Education, Culture, Research, and Technology of the Republic of Indonesia for the financial support through the 2025 Independent Learning, Independent Campus (MBKM) Policy Research Program Funding Assistance Program (BIMA), so that this research can be carried out properly.

Author Contributions

Conceptualized the title and content of the study, designed the research design, collected data, and finalized the preparation for the journal publication N.R; analyzed the data, assisted with the video concept, and assisted with the preparation of the publication N. R. M; assisted in the creation of the e-learning video R.R.

Funding

This research activity received funding support from the Ministry of Education, Culture, Research, and Technology through the BIMA Grant scheme with contract number 132/C3/DT.05.00/PL/2025

Conflicts of Interest

there is no conflict of interest in this research.

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