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Development of IT-Based Learning Media in English for Nurse Anesthetists

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Abtract
Education is the most important thing in life which is one of the platforms to deepen knowledge and hone skills. Education can be obtained through formal and informal learning. Education involves many people including learners (students), educators, administrators, parents and the community. Therefore, in order for educational goals to be achieved effectively and efficiently, everyone involved in it must understand the behavior of related individuals. The problem that is often faced in the world of education is the weak learning process. In the era of scientific and technological advances, of course, the world of education must keep up with the times. Because (Zubaidah & Sulistyaningrum, 2020). One of the efforts to improve the quality of learning outcomes is through improving teaching materials by using the right learning approach/model (Putra et al., 2017). (Putra et al., 2017). The challenges of world education in Electronic-based learning (Damuri et al., 2021) certainly require approaches related to educational problems in the form of questionnaires, questionnaires, interviews, and interactive learning media in digital form, but in reality students find it difficult to apply procedures for making learning media in the form of multimedia and besides that how they must be able to collaborate with the understanding of multimedia with the mathematics learning process so that in the learning process students easily understand (Supriyanto, 2020). The method used is research and development (R&D). Research has commercial interests in relation to pure scientific research and applicative development in the field of technology while development is the process of making, testing feasibility until revision. The subjects of this study were students in the D IV Anesthesiology Nursing study program in semester VI. They were selected by purposive sampling and the types of data taken were qualitative and quantitative. Data were collected through questionnaires and tests.

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1. BACKGROUND

Learning English is very important because English is a global language used internationally. Government Regulation No. 32 of 2013 Article 77J Paragraph (1) Letter C concerning National Education Standards states that foreign languages, especially English, are international languages that are very important for their use in global relations. (Jumasa

& Surjono, 2016). In today's digital era, international relations are increasingly open and expanded, and we are required to be independent and survive in global relations and competition. In recent years, we have known the term globalization, namely the process of international integration that eliminates regional boundaries for exchanging information (Yusri, 2020). The development and progress of science and technology that continues to grow in the field of learning means that it is not surprising that in the future, educational technology will continue to develop and strengthen itself into a discipline and profession that can share benefits for achieving effective and efficient education. In the learning process, sometimes too much focus is placed on theoretical assignments and memorization so that student understanding or participation is hampered. The methods used are monotonous, focusing on theory, memorization, and assignments during the learning process, making students more likely to feel bored and fed up with the learning process. This, in turn, results in a lack of motivation for students to participate.

Learning media is a tool for conveying messages from senders to recipients to attract the attention, interest, and motivation of students in order to achieve effective learning goals. Learning media include books, tape recorders, video cassettes, films, slides (photo frames), photos, images, graphics, TV, and computers that can display the contents of the lesson module. The learning media used in this study are in the form of videos using the Canva application (Miangah, 2012). Canva is a design application that can be used both on Android and laptops online, equipped with various types of designs such as presentations, resumes, posters, pamphlets, brochures, graphics, line info, banners, flyers, certificates, diplomas, invitation cards, YouTube thumbnails, and so on (Admelia et al., 2022). The types of presentations that can be accessed on the Canva application are creative, educational, simple, business, marketing, sales, advertising, and technology presentations. By utilizing the Canva application learning media, educators can design interesting learning videos that can help students. Designing interesting learning videos that can help students. To create an active and interactive learning process, lecturers play a crucial role, as they interact directly with students as both subjects and objects of learning. Lecturers are also required to be skilled in planning, implementing, and evaluating the learning process (Mahardika et al., 2021). The learning process comprises several components, including objectives, learning materials, teaching and learning activities, methods, tools, and resources. One component that supports effective learning is learning media. Learning media, currently known as instructional media, function to assist lecturers in delivering material to students. Media, in a limited sense, is a learning aid, meaning media is a tool used by lecturers to motivate student learning and clarify learning information/messages.

The descriptions above demonstrate that the use of learning media can help teachers conduct learning activities, making them more engaging and enjoyable, even online, and can also foster student interest in learning English. However, teachers must be able to choose the right learning media. One alternative learning media that can be used is Renderforest-based video learning media. Video is a type of audiovisual media and can depict moving objects accompanied by appropriate sound. Video is a powerful medium for conveying messages and disseminating ideas (Zubaidah & Sulistyaningrum, 2020). Renderforest itself is a website that provides animated video creation features. Because Renderforest is a website, it is more easily accessible to anyone who wants to create videos online.

The AENA (Advanced English for Nurse Anesthesiologist) course has a study load of 4 credits. This course discusses the integration of four basic English language skills: speaking, listening, reading, and writing, including aspects of grammar and vocabulary within the scope of anesthesiology nursing services and work carried out by an

anesthesiologist, both in classroom learning, laboratories, and/or clinical practice. At an advanced stage, this course not only prepares students to be able to use spoken and written English with foreign patients and other foreign health workers, but also prepares students to be able to obtain adequate TOEFL/IELTS scores to continue their education to a higher level or work abroad. Some of the study materials explained in the AENA course include General Duties of a Nurse Anesthetist, establishing relationships, Part of the body, medical equipment, checking personal hygiene of the patient, checking vital signs, Asking the dimension of symptoms, Starting an intervention, Giving injection, Giving infusion, Fill in the pain assessment form, Direction and showing rooms, Asking and telling doctor's schedule, Medication, Pain management, Post-operative pain management and Discharge planning.

Furthermore, the researcher's research urgency is to analyze the use of the Canva application as a learning medium in the Advanced English in Nursing Anesthesiologist course. Based on this problem, the researcher wishes to conduct related research on the AENA (Advanced English for Nurse Anesthesiologist) course at ITEKES Bali for third-year students in the sixth semester of the 2023/2024 academic year.

To support the current research, there are several related studies. First, a study conducted by Zubaidah and Sulistyaningrum (2020) aims to describe the results of the validity of the development of video learning media based on a contextual approach using Renderforest on the material of flat-sided geometric shapes for grade VIII junior high school. The subjects of this study were media experts and material experts who were competent teachers in mathematics and IT. The type of research conducted in this research and development is Research and Development/R&D using a 4-D development model consisting of 4 stages, namely the Define, Design, Develop, and Disseminate stages. The research conducted obtained media validation results of 84% with an average of 4.27, and material validation of 89% with an average of 4.466. Therefore, it can be concluded that the video learning media based on a contextual approach using Renderforest that the researchers developed has met the valid qualifications because it has achieved the minimum criteria of good.

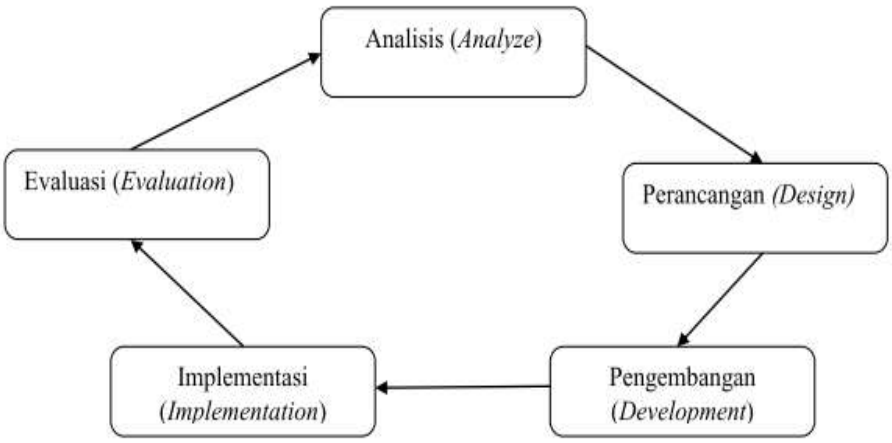
Furthermore, research conducted by Aeni et al. (2022) using the Design and Development (D&D) model where this research is to determine the design and development of learning media. The research also uses a qualitative approach method by means of observation, interviews, and distributing questionnaires at SDN Nagreg 05, especially grade IV. The results of the study show that, according to the results of student responses to this animated video product from the average overall response of the expanded trial subjects is 34.1, with the category of "Very Good". Then, from the results of the trial, teacher responses are expanded on the use of animated video media in learning in the category of "Very Good". And finally, the data from the results of the feasibility assessment of animated video media products by material experts received a total score of 65, with the category of "Very Good". Learning media in the form of animated videos based on the Renderforest application is categorized as very good and can help educators in teaching, and also increase student learning motivation.

Finally, the research conducted by Apriliansyah and Kusumawati (2022) is a research and development (R&D) study. Research and development is a type of research method that aims to develop a product. The product to be developed in this study is the Renderforest learning media, an application in the form of video creation for presentations, and can also be used as a learning medium. In research, the development model uses the 4D Define, Design, Development, and Disseminate model. The feasibility of the Renderforest media is measured through assessments by validation experts, student response questionnaire

assessments, and teacher response questionnaire assessments. The validity level of renderforest media in science learning based on the research results of three experts, namely material experts at 84.00%, media experts at 80.00%, language experts at 86.00%, the combined results of the validation experts reached a percentage of 85.5% with the category "very feasible" the feasibility level of renderforest media in science learning, the assessment of student response scores got a percentage of 90.87% with the category "very feasible" the assessment of teacher response scores reached a percentage of 90.00% with the category very feasible.

2. METHOD

In this study, the type of research conducted was the Research and Development (R&D) method. The Research and Development (R&D) method is a type of research that produces a product. The research design that will be created in this study uses the ADDIE model. This model consists of five steps, namely: (1) analysis, (2) design, (3) development, (4) implementation, and (5) evaluation.

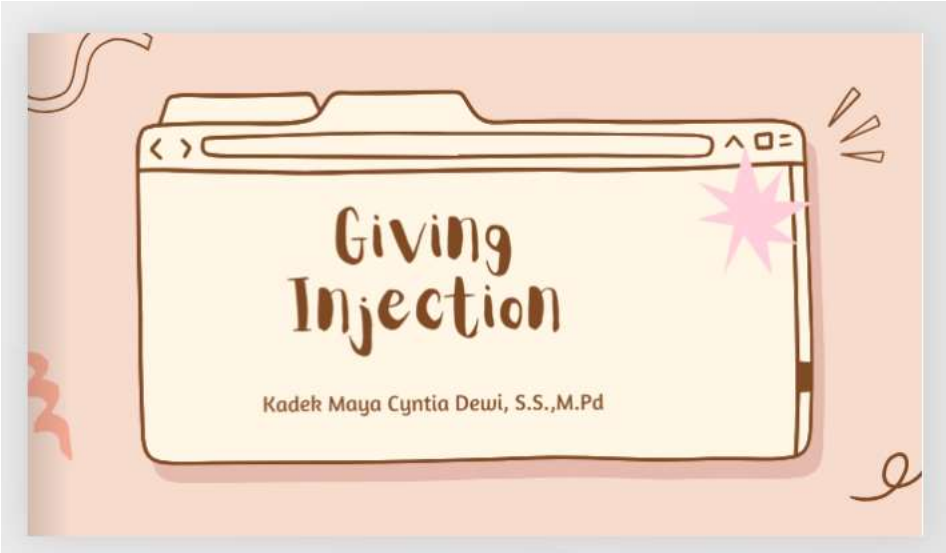


3. RESULTS

Developing material on giving injections for anesthesia nursing students is very important for the following reasons:

a. Patient Safety: Good materials will help nurses understand safe injection procedures, reducing the risk of infection and other complications.
b. Professional Competence: With comprehensive materials, nurses can improve their skills and knowledge in administering injections, which is an important part of their duties.
c. Improving Quality of Service: Good materials will ensure that nurses can provide effective and efficient services, improving the quality of patient care.
d. Compliance with Standards: Developing materials that comply with safety standards and guidelines will help nurses comply with procedures established by professional organizations and regulatory bodies.

e. Education and Training: This material can also be used in education and training programs to ensure that prospective and new nurses are well trained in injection techniques.



Students' knowledge of injection procedures significantly improved after utilizing new learning tools. Interactive learning tools, such as demonstration videos, 3D simulations, and educational apps, allow students to see and understand each step of the procedure in detail. With a visual, hands-on approach, students can deepen their understanding of correct technique and the importance of sterility in injections. Furthermore, these tools provide students with the opportunity to practice and evaluate their skills in a safe environment before entering clinical practice. As a result, students become more confident and competent in performing these procedures, ultimately improving the quality of healthcare they provide in the future.

After students were exposed to new learning tools, their knowledge of vocabulary related to injection administration significantly improved. Interactive learning tools that combined video tutorials, simulations, and educational apps enabled students to learn medical terms in a realistic and practical context. By watching live demonstrations and practicing using the apps, students were able to recognize and use terms such as "syringe," "needle gauge," "injection site," "intramuscular," "subcutaneous," and "sterilization" with greater accuracy and confidence. The use of technology in this learning not only enriched their vocabulary but also deepened their understanding of medical procedures, ultimately improving their preparedness for clinical practice and the quality of healthcare they provide.

After receiving new learning media, students' knowledge of expressions related to injections significantly increased. Interactive learning media, including simulations, video tutorials, and educational apps, provided students with the opportunity to hear and practice various expressions in realistic contexts. For example, they learned how to say "This may sting a bit," "Please relax your arm," or "I'm going to clean the injection site now" in English. By practicing these expressions through interactive scenarios, students became more familiar and confident in communicating with patients. They also understood the importance of using clear and reassuring language to ensure patients' comfort during procedures. This improvement not only enriched their communication skills but also enhanced the quality of healthcare they provide in the future. Research into the development of English learning media often utilizes various approaches, such as Research and Development (R&D) or ADDIE (Analysis, Design, Development, Implementation, Evaluation). This approach ensures that the developed media is tailored to the needs and characteristics of students. Identifying the needs of students and lecturers is a crucial initial step. This includes analyzing students' difficulties in learning English and preferences for effective learning methods. These needs will influence the design and features of the learning media developed. Learning media design must be interactive and engaging, thereby increasing students' motivation and interest in learning. The use of technology such as video, animation, and web-based or mobile applications can make learning more dynamic and interactive. For example, the use of interactive videos that show everyday communication situations in English. The content presented in learning media must be relevant to the curriculum and students' abilities. This research often involves language and education experts to ensure that the material presented is accurate and easy to understand. The content should also cover a range of English language skills, such as listening, speaking, reading, and writing.

The developed media was then implemented in the classroom for trial testing. During the trial, researchers observed how students interacted with the media and gathered feedback from both students and lecturers. This trial is crucial for evaluating the effectiveness of the

learning media and determining any aspects that need improvement. Based on the trial results, an evaluation of the learning media's strengths and weaknesses was conducted. Feedback from students and lecturers was used to revise and refine the media. This evaluation also included an analysis of students' English language proficiency improvement after using the media. This study aimed to examine the impact of using learning media on improving students' English language proficiency. Research results generally indicate that interactive, technology-based learning media significantly increase student motivation, interest, and learning outcomes.

4. CONCLUSION

The use of technology-based learning media in injection materials offers several significant benefits for nursing students. First, technology such as video tutorials, 3D simulations, and interactive applications allows students to learn injection procedures in a more in-depth and realistic way. Through realistic visualizations and practice, students can more clearly understand the correct steps and techniques, which enhances their practical competence. Second, technology-based learning media also provide a safe and controlled learning environment, where students can practice repeatedly without risk to patients. This helps build their confidence and skills before facing real-life clinical situations. Furthermore, technology enables more flexible learning, where students can access materials anytime and anywhere, according to their needs. This makes learning more effective and adaptable to individual learning schedules and rhythms. Overall, the integration of technology in nursing learning not only improves the quality of education but also prepares students to become more competent healthcare professionals prepared to face challenges in the field.

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