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The Application of the Demonstration Method Assisted by Video Media in Information and Communication Technology Learning

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A B S T R A C T

This study aims to examine the improvement of student engagement and participation in teaching and learning activities through the implementation of the demonstration method assisted by video media in the subject of Information and Communication Technology (ICT). The research was conducted on eleventh-grade students of SMA Nasrani 3 Medan. The method used is Classroom Action Research (CAR), which was carried out in two cycles. Each cycle consisted of four stages: (1) Planning, (2) Action Implementation, (3) Observation, and (4) Reflection. Video media was used as a supporting tool in practicum activities to provide more concrete visualizations of the material being taught. The results showed a significant increase in students' learning activity in each cycle. Students became more enthusiastic, focused, and actively involved in the learning process, especially during practical sessions. These findings indicate that the application of the demonstration method supported by video media can be an effective strategy to enhance student participation in ICT learning.

1. Introduction

Education is a conscious and planned effort to create a learning atmosphere and process that enables students to actively develop their potential. Its primary goal is to form individuals with spiritual strength, intelligence, noble character, and the skills necessary for their personal life, society, the nation, and the state (Republic of Indonesia Law No. 20 of 2003 on the National Education System). In its implementation, the effectiveness of the learning process is greatly influenced by the teaching methods and media used by educators.

In reality, however, classroom learning processes often remain one-directional. Teachers tend to dominate the learning process by using lecture-based methods supported by conventional media such as blackboards. This approach leads to passive student participation. This is in line with Hamalik (2003, p. 201), who states that to improve learning outcomes, educators must optimize students' potential by applying teaching methods that emphasize student-centered activities throughout the learning process.

The lack of student engagement in learning, particularly in the subject of Information and Communication Technology (ICT), has been identified as one of the contributing factors to poor academic performance. Based on preliminary observations conducted in grade XI at SMA Nasrani 3 Medan, ICT learning is often monotonous and lacks innovative media. Teachers do not use

appropriate instructional media; material is presented verbally and is often too broad; clear instructions for practicum activities are lacking; and there is limited practice time due to inadequate facilities and infrastructure. These factors collectively hinder the effectiveness of the learning process.

According to Heinich et al. (2005), the use of video media in teaching can help explain complex concepts, foster learning interest, and increase students' active participation. Therefore, integrating the demonstration method supported by video media is a promising solution to enhance the quality of instruction, particularly in ICT subjects. Video media provides both visual and auditory learning experiences, allowing students to grasp concepts more easily and stimulating active participation in practical activities.

Based on these issues, this study aims to implement a demonstration method assisted by video media in ICT learning to increase student engagement and learning outcomes. The urgency of this research lies in the need for innovative teaching strategies that align with technological advancements and the characteristics of 21st-century learners, who are accustomed to visual and digital media. It is hoped that the findings of this study will contribute to improving the quality of education through more engaging, interactive, and relevant learning approaches tailored to students' current needs.

2. Research Methods

This study is a Classroom Action Research (CAR) conducted collaboratively between the researcher and the ICT (Information and Communication Technology) subject teacher at SMA Nasrani 3 Medan, Grade XI. CAR is a reflective process used by educators to identify and solve problems in teaching and learning by planning and implementing actions in real classroom situations and analyzing the impact of those actions.

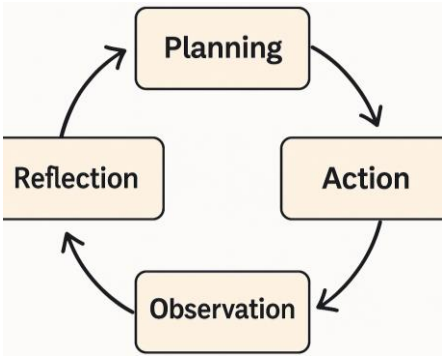

Figure 1. Classroom action research

This research adopts the model proposed by Kemmis and McTaggart, which consists of four main stages in each cycle:

1. Planning

   In this stage, the researcher and teacher collaboratively design the learning activities using the demonstration method assisted by video media. This includes preparing the lesson plans (RPP), video scripts, observation sheets, and evaluation instruments.

2. Action

   The teacher carries out the teaching and learning process according to the previously developed lesson plan. The demonstration method is used to deliver the material, supported by educational videos as a visual aid.

3. Observation

Observation is conducted during the learning process to monitor student activities, participation, engagement in practical tasks, and their responses to the use of video media. Data are collected using structured observation sheets.

4. Reflection

After the learning activities, both the teacher and the researcher reflect on the outcomes of the action. This stage is aimed at evaluating the strengths and weaknesses of the learning process, which then informs the planning of improvements in the next cycle.

This study consists of two cycles, each implemented over two classroom sessions. The researcher acts as the teacher of the ICT subject and carries out the teaching duties as usual, without informing students that they are part of a study. This approach is expected to yield more natural and objective data.

3. Results and Discussion

Learning is a core aspect of the educational process, aimed at shaping learners into independent, intelligent, and morally upright individuals. Effective learning must create dynamic interaction between educators and learners, utilizing relevant learning resources (Law No. 20 of 2003 on the National Education System). Sudjana (2004) emphasized that learning is a systematic and deliberate process designed to create meaningful educational interactions between teachers and students.

In this study, the implementation of the demonstration method assisted by video media showed a significant improvement in student engagement during the ICT learning process. The use of video as a supportive medium helped simplify complex material, combining visual and auditory elements that enhance students' understanding. This aligns with Heinich et al. (2005), who stated that video media can improve motivation and participation by offering more concrete and engaging learning experiences.

Observations from Cycle I revealed that some students remained passive, especially during discussions and practical activities. However, after reflection and refinement of the teaching strategy in Cycle II, there was a noticeable increase in student activeness and comprehension. Students demonstrated more interest in the subject, paid closer attention to the video tutorials, and were better able to follow the steps during practical sessions.

The demonstration method itself is known to be effective, particularly for procedural subjects such as ICT. Muhibbin Syah (2000) asserted that this method allows students to directly observe processes or procedures, enabling them to imitate and practice independently. Demonstration combined with video media provided a realistic visualization of computer software usage, helping students understand each step in a structured manner.

The use of computer media in ICT classes is highly relevant to the demands of 21st-century learners. Computers not only serve as tools in the learning process but also represent core competencies students must acquire for digital-age readiness. Roestiyah (2008) noted that effective teaching methods should align with the material, students' conditions, and learning objectives. Thus, the choice to use video-assisted demonstrations in this study is considered appropriate and relevant.

Student learning outcomes, as measured through post-tests, showed an improvement in average class scores. Furthermore, student interviews revealed positive responses regarding the use of video media. They felt more supported and more interested in participating in ICT lessons compared to conventional lecture methods.

In conclusion, this study demonstrates that the use of the demonstration method assisted by video media in ICT learning effectively enhances student engagement and learning outcomes. This

approach also addresses common learning issues such as low motivation, the limitations of traditional media, and students' difficulties in understanding practical activities in ICT.

4. Conclusion

The implementation of the demonstration method assisted by video media in Information and Communication Technology (ICT) learning has proven effective in enhancing students' understanding of the material being taught. The use of video media provides a more visual and interactive learning experience, making it easier for students to grasp abstract and complex concepts in ICT. This method also captures students' attention and increases their active participation in the learning process. Moreover, with the availability of videos, students can revisit the material anytime, which helps deepen their understanding. Overall, the demonstration method supported by video media can improve the quality of learning, particularly in subjects that require practical and technical understanding, such as ICT.

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