IMPROVING STUDENT LEARNING OUTCOMES THROUGH THE USE OF DIGITAL LEARNING MEDIA

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Abstract
The success of a learning including by utilizing learning media. But in fact the use of learning media is still not used optimally. digital learning media is one of the media to improve student learning outcomes. This study aims to determine the use of digital learning media to improve student learning outcomes. The design of this study was a true experimental study with a Pretest-Posttest Group Design. Learning outcomes data were obtained through pretest and posttest activities. The sample was 80 students who were taken randomly by adjusting the conditions and research objectives. There is a significant difference in the posttest results of the experimental class and the control class, this is evidenced by the value of Fo. For the value is 5.225 and Sig is 0.025 < 0.05. This means that there is a difference in the interaction effect of using digital learning media to improve student learning outcomes.

Keywords: Digital Learning Media, Learning outcome, Students.

There are numerous ways in which educators and teachers can use new technology in education to enhance teaching, learning, and other activities both in and beyond the classroom (Akyuz & Yavuz, 2015; Ali et al., 2016; Bullock, S., 2015; Permansah & Murwaningsih, 2018). Technology is an essential aspect of the twenty-first century. A wide range of industries, including education, are using technology to help students learn. Examples of instructional technology include computers, LCDs, the internet, and data processing and presentation software (Pratama & Hartini, 2019). Students can more easily receive teachings when teachers use media to...
disseminate information. Visual and spoken information can be captured, processed, and rearranged using media, such as graphic, photographic, or technological tools (Soemantri, 2019). In addition to technology advancements, digital media is considered a modern communication approach. Change your attitude from traditional to contemporary or current (Hidayat et al., 2020).

How students learn depends on the teacher's strategies, methods, and media. The use of a computer system to provide information is more convenient, faster, and more accurate than any other method of distributing information, making digital learning media an essential component of the teaching-learning process (Panjaitan et al., 2020). Digital media used to communicate ideas or concepts, selected from those that are widely available through digital applications or platforms using electronic equipment or existing information and communication technology equipment (Faradilla et al., 2018). One of the functions of learning media is to serve as a teaching tool that influences the climate, circumstances, and learning environment that the teacher arranges and creates. In other words, learning media is a crucial instructional tool for the teaching and learning process in a learning environment (Adittia, 2017; Fajra et al., 2020; Ferdiansyah; et al., 2020).

Many students at SMKN 1 Kramatwatu complained that their teachers used only traditional teaching methods without incorporating digital media into their lessons. This was especially true for lessons on electrical power installations, where teachers at SMKN 1 Kramatwatu still rely on manual media rather than digital media as teaching aids and a number of facts were discovered in the observations made: (1) The learning media utilized were solely topic books and LKS, the teacher taught the content according to what was in the book, and then requested pupils to complete the tasks in the theme book or LKS. (2) There is no prior knowledge of the subject matter. Teachers may simply offer homework and expect their pupils to hand in their completed assignments with no further explanation of the topic being taught. Students' lack of interest and motivation, as well as the onset of boredom in learning, are both linked to teachers' monotonous teaching methods. SMKN 1 Kramatwatu students' daily assessments were also found to fall short of the minimal completeness criteria (KKM) for electrical power installation disciplines, which piqued researchers' interest in conducting study using digital learning medium to improve student outcomes. Learning outcomes are the results obtained by someone in the process of teaching and learning activities, and learning outcomes can be in the form of cognitive, affective and psychomotor which are assessed through tests (Novita & Sundari, 2020).

There are numerous advantages to using digital learning media, including the fact that they don't necessitate as much setup time as traditional media. Like concrete learning media, this medium is also low maintenance (Khairunnisa & Ilmi, 2020). Higher education instruction can be improved by the use of digital media (Bond et al., 2018). Media serves as a means of conveying a message (Kurniawati & Koeswanti, 2021).
Previous research that has been done (Rahmawati et al., 2021) on Digital Media Analysis of 21st Century Learning Videos Using Canva Applications for Science Learning. The result of this research is that the development of learning media in the form of videos through the Canva application is one of the references for innovative learning media by utilizing effective and efficient digital-based applications in accordance with developments in the 21st century. Further research on the Effect of Digital Animation Learning Media and Confidence on Learning Outcomes Islamic Religious Education for Children (Panjaitan et al., 2020) showed that the learning outcomes of Islamic Religious Education for the group of children who used animated digital learning media were higher than the group of children who used digital storytelling learning media. This research can be defined as the following questions: 1) is there a difference between improving learning outcomes before and after being taught with Digital Media?. 2) is there any influence of digital media to improve learning outcomes?.

METHOD
This study takes a quantitative method. In quantitative research, correlations between variables are tested in order to understand social phenomena. The positivist school of thinking informs this research methodology, which is also known as the positivistic method (Sugiyono, 2017). Refers to quantitative techniques as those originating from positivism, which are commonly used in population or sample analysis. This study makes use of an experimental design of the True Experimental variety.

Pre-experimental research designs, genuine experiments, factorial experiments, and quasi-experiments can all be employed in studies, according to Sugiyono (2017) Pre- and post-test groups were used in this investigation, which followed a traditional experimental design. According to Sugiyono, the participants in this study were divided into two groups at random. Experiment Group (B) and Control Group (A) are two separate groups.

Tests were carried out to evaluate whether or not there was a statistically significant difference. Experiment B is a control group that uses digital media to learn from researchers, while experiment A is an experimental group that does not use digital media.

Table 1: Pre- and post-test research designs

<table>
<thead>
<tr>
<th>Class</th>
<th>Pre-test</th>
<th>Treatment</th>
<th>Post-test</th>
</tr>
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<tbody>
<tr>
<td>Control</td>
<td>Y1</td>
<td>-</td>
<td>Y2</td>
</tr>
<tr>
<td>Experimental</td>
<td>Y1</td>
<td>X</td>
<td>Y2</td>
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</tbody>
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Note:

Y1: Before using digital media to teach, conduct a preliminary test (Both Classes).
Y2: Post-test after using digital media for instructional purposes (Both Classes).
X: Digital media is being used to teach an experimental class.

This study took the population and samples from class X students of SMKN 1 Keramatwatu in the 2021/2022 academic year. total
population of 195 students. The research sample is 70 students of class x. To determine the number of research samples, researchers used a random sampling technique.

Data were obtained by conducting two types of tests on students. In the pretest, the researcher asked students to take a test for electrical installation subjects. In treatment, researchers teach using digital media on learning outcomes. In the posttest, students were asked to do a test of electrical installation subjects similar to the pretest. To analyze the data, the researcher used pre-test and post-test scores. Then, the researcher compiled the test results to take a summary.

RESULT AND DISCUSSION

Using digital media has a considerable impact on student learning outcomes, according to the study results. Students can benefit from using digital media to enhance their study. This is evidenced by the difference in the average test scores in class X TITL 1 and class X TITL 2 before and after treatment. In class X TITL 1 the average score of students before treatment was 68.55 and the average score after treatment was 86.70. In class X TITL 2 the average score of students before treatment was 65.40 and the average score after treatment was 73.55. Student learning outcomes in electrical installation disciplines are better when using digital media rather than manual media. Students gain skills and knowledge as a result of their educational experiences, which are known as learning outcomes. How well a person understands the content they’ve been exposed to while engaging in or completing assignments and learning activities (Rohmantoro et al., 2020). Learning about electrical installations can be made more enjoyable with the use of digital learning tools. Learning outcomes are the results obtained by someone in the process of teaching and learning activities, and learning outcomes can be in the form of cognitive, affective and psychomotor which are assessed through tests (Novita & Sundari, 2020).

Messages or information in the form of knowledge can be transmitted from one source to another using learning media as an intermediary or communication tool to achieve learning objectives. In the hopes of making learning easier for students, educational media strive to overcome the restrictions of location and time, as well as providing students with inspiration to learn (Rahmat, 2019). It is the combination of attitudes, knowledge and skills that students gain as a result of their education. Consequently, educational innovation is required to improve the quality of learning outcomes (Novita & Sundari, 2020). Digital media truly has numerous uses for instructors such as as a learning tool used for routines, games, filming movies, making anecdotes, and looking for the latest learning strategies and methods so that the classroom climate is more diversified (Hendraningrat & Fauziah, 2021).

In addition, the response to the first study question regarding the changes in student learning outcomes before and after being taught with digital learning media to increase student learning outcomes is evident from the Fo value of 5.225 and the Sig value of 0.025<0.05. Therefore, there are disparities in student learning
outcomes before and after digital learning medium instruction. Digital media used to communicate ideas or concepts, selected from those that are widely available through digital applications or platforms using electronic equipment or existing technology equipment (Faradilla et al., 2018). To help students learn, scientists and technologists are constantly developing new learning resources and media (Mulyaningsih & Saraswati, 2017). Learning media carry messages that can be used for learning purposes and convey learning materials more clearly (Hendraningrat & Fauziah, 2021). There are three primary functions of educational media: drawing attention (the purposeful role), communicating information (the communication role), and storing information for later recall (retention role) (Rahmat, 2019).

For the second study question, the researcher aimed to determine the effect of incorporating digital learning materials on improving student learning outcomes. Comparing the test scores of students who were taught with digital learning tools and those who were not was used to analyze the data. The improvement of student learning outcomes as a result of the use of digital learning materials indicates a significant influence. The result improves student understanding of electrical installations. It is proved by F of 13,882 and Sig of 0.000<0.005. This technique increases student learning outcomes up to 50.4%. Based on the results of this study, the use of digital learning media is feasible for students to use in electrical installation subjects for class X at SMKN 1 Keramatwatu. Digital learning technology continues to develop so that it affects educational efforts in formal, informal, and non-formal contexts (Buwono & Dewantara, 2020). Digital media used to communicate ideas or concepts, selected from those that are widely available through digital applications or platforms using electronic equipment or existing information and communication technology equipment (Faradilla et al., 2018). Digital media is also referred to as a modern communication strategy along with technological advances (Hidayat et al., 2020).

CONCLUSION AND SUGGESTION

Conclusion

Based on the results of the conducted research, the following are the conclusions: First, digital learning media can enhance student learning in electrical installation courses. Second, student learning outcomes are significantly increased by using digital learning media rather than manual learning media. (3) Third, students who are taught using digital learning media gain more knowledge about digital technology which is increasingly massive. This demonstrates that there is a considerable difference between pupils taught with digital learning media and those taught with manual learning media. It has been demonstrated that the usage of digital learning media yields superior results since it can substantially increase student learning outcomes.

Suggestion

There are several suggestions offered based on the conclusions above. First, the researcher advises that all teachers, especially in vocational high schools, should be able to employ
appropriate learning tools to teach all courses. Consequently, students can enhance their learning results and make the learning process more engaging and manageable. Digital learning media is the right media to teach students. This media should be applied to all students in order to avoid student boredom and to improve the ability and knowledge of digital technology. These facts make digital learning media capable of triggering student learning outcomes.

Second, the researcher suggests that all teachers of electrical installation subjects use learning media that are easy for students to understand. Because generally based on this study shows that using learning media makes it easier for students to understand learning more easily. Third, for researchers to research and develop more about learning media for all levels of education.

REFERENCES


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