



The Effectiveness of Using Digital-Based Teaching Materials on Craftsmanship and Entrepreneurship Learning Outcomes of Class XI Muhammadiyah High School Students

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ABSTRACT

This study uses a quantitative method with the type of experimental research that aims to determine the effectiveness of using Flip Books on the results of Craft and Entrepreneurship learning for class XI SMA Muhammadiyah Pangsidi, Sidenreng Rappang Regency. The population of this study were all 27 students of class XI SMA Muhammadiyah Pangsidi, and the sample of this study was 27 people using the total sampling technique, namely by taking the overall sample. The data collection techniques used were documentation techniques, test techniques, and questionnaire techniques. The indicators of effectiveness in this study are based on Sinambela's theory (2006), the three indicators of effectiveness are: learning completeness, timeliness, and student responses. Learning outcomes are a measure of one's success. The results of this study indicate that the average posttest score is 88.0% higher, while the pretest result is 70.9%. The results showed that the use of Flip Books on the learning outcomes of crafts and entrepreneurship in class XI SMA Muhammadiyah Pangsidi was declared effective.

Keywords: *Effectiveness, Learning Outcomes, Flip Book*

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INTRODUCTION

Education basically cannot be separated from human life, because with education humans can know and develop the potential that exists in them. Law No. 20 of 2003 concerning the National Education System states that education is a conscious and

planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have spiritual strength, religion, self-control, personality, intelligence, noble character, and skills that are needed by himself, society, nation and state (President of the Republic of Indonesia, nd) . Advances in information technology are in line with challenges that need to be welcomed and adequate competence, of course many sectors are directly affected by the development of this technological era. In another sense, the era of technological progress always presents challenges that need to be answered. Education is one of the sectors that is also experiencing these challenges, in this regard, educators as elements or direct users in the education process will face the challenges of technological advances, even though students are the main subject who is the main target of any changes. The development of the world of education will always go hand in hand with technological developments such as in the 4.0 revolution era which has the aim of facilitating work processes through automation and high accuracy. In addition, the era of the industrial revolution 4.0 is characterized by the speed of technology in various aspects of life, along with demands related to quality or quality issues. Likewise in the context of education, the role of technology is quite important to improve education so that it can be on par and compete with industry needs (Paud et al., 2020).

Meanwhile, learning is the process of interaction between students and educators, with learning materials, delivery methods, learning strategies, and learning resources in a learning environment. Then, success in the learning and learning process can be seen through the level of success in achieving educational goals. (Destiny et al., 2021) In the Law of the Republic of Indonesia Number 20 of 2003 concerning the National Education System (Sisdiknas) it is explained that education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious spiritual strength, self-knowledge, personality , intelligence, noble character, and skills needed by himself, society, nation and state. (Arfani et al., 2016) .Efforts that can be made For increase effectiveness process learning with method increase the use of appropriate learning media, namely by using appropriate teaching materials careful in accordance with the the needs of the era in the 4.0 era (Rochma & Ibrahim, 2019) . In the world of education learning is the most important part. According to (Pane & Darwis Dasopang, 2021) learning is a process of interaction between students and teachers, with learning materials, delivery methods, learning strategies, and learning resources in a learning environment. The word learning media comes from the Latin "medius" which literally means "middle", intermediary or introduction. To achieve effective learning, we need a media that is in accordance with the character of the students and the subjects taught, the atmosphere and supporting infrastructure. With good learning tools will guide students to be able to increase learning motivation. (Syamsunir & Agussalim, 2021) .

Teaching materials is a general term used to describe the learning resources that teachers use to convey learning. Teaching materials can support the learning process and increase student success. Ideally teaching materials will be adapted to the content

used by the teacher, for students in class in various forms and types, but all have the same learning objectives (Hutson, 2016). Teaching materials are one of the important tools when the teacher provides material because teaching materials are intended as something that can be used to get messages back and forth from the sender to the recipient of the message. So that the existence of teaching materials can stimulate the thoughts, feelings, interests and attention of students so that the teaching and learning process occurs. (Miarso, 1989)

The use of teaching materials is a material that functions to assist educators in carrying out the learning process in class. The material in question can be in the form of written and unwritten materials (Hobri, 2010). With the existence of teaching materials, the teacher is no longer the only source of learning in the classroom. In this case, the teacher is more directed to act as a facilitator who helps and directs students in learning. Meanwhile, by utilizing teaching materials that have been designed according to learning needs, students are directed to become active learners because they can read or study the material in the teaching materials first before participating in class learning. Thus, when discussing material in class, students are prepared with sufficient information and knowledge so that the available study time is no longer used by the teacher to explain material at length, but is more used for discussion and discussing certain materials that are not yet discussed. understood by students. (Ajar, n.d.) Use Digital-based media can increase students' learning motivation as well can affect student achievement or learning outcomes. The use of Flipbook can also increase understanding and improve achievement learning outcomes (Nazeri, 2018).

A learning management system/technology platform can be used to automate the administration, development and delivery of all frequently used learning programs. The existence of a learning design system helps teachers complete learning targets, innovate learning outcomes and the effectiveness of students in the learning process (Winataputra, 2007)

Based on the results of observations made by researchers in class XI SMA Muhammadiyah Pangkajene that there are several obstacles including unattractive learning media and a lack of motivation to learn in students, this situation is the task of an educator to create innovations in supporting better learning, so that student learning outcomes experience enhancement. With use media digital based, expected capable help achievement objective learning. Wrong an indicator of student learning success between other is happening change in realm cognitive affective nor student psychomotor. Integration of the three domains the applied in process learning.

RESEARCH METHODOLOGY

This research uses quantitative research which aims to test the hypothesis from the data that has been collected in accordance with previous theories and concepts. This type of research uses quasi-experimental with one group pretest post test design. This study did not use a comparison class but used a pre-test so that the magnitude of the effect or effectiveness of using digital-based teaching materials can be known with

certainty. The data obtained is used only to compare pretest and posttest results on the use of digital-based teaching materials on Craft and Entrepreneurship learning outcomes.

SubSection 1

In engineering This collected data is analyzed using statistical techniques. The ability determined by the percentage of 75% with a value of 75 is declared successful or passes the criteria. As for changing the score data into a value with the formula:

$$N = \frac{SP}{SM} \times 100$$

Source : Arifin (2012)

Information :

N = Student Score

SP = Gain Score

SM = Maximum Score

100 = Standard Score

To find out whether or not the use of digital-based teaching materials is effective for class XI student learning outcomes at SMA Muhammadiyah Pangkajene, the formula is used:

$$P = \frac{F}{N} \times 100$$

Information :

P = Percentage

F = Frequency

N = Number of Individuals

The results of data analysis obtained through this formula will be used to test the hypotheses that have been proposed. If the data processing results are greater than the hypothesis rejection limit, then the proposed hypothesis is rejected, but if the data analysis is smaller than the hypothesis rejection limit, it means that the proposed hypothesis is accepted.

SubSection 2

In this study, research subjects were first given pretests to find out the extent of students' abilities before being given Craft and Entrepreneurship learning using digital-based teaching materials. After being given an initial test, these students are then given treatment, namely Craft and Entrepreneurship learning by using digital-based teaching materials, then all students are given a final test (posttest) to find out how effective the use of digital-based teaching materials is on student Craft and Entrepreneurship learning outcomes. .

The data collection techniques used in this study are as follows: (1) Tests. The test technique is a data collection technique that is carried out by giving a series of questions or assignments and other tools to the subject whose data is needed. Test techniques are used to measure the achievement of Craft and Entrepreneurship subjects for class XI SMA Muhammadiyah Pangkajene namely pretest t and posttest . The pretest is a test conducted to measure students' initial abilities before using learning media, while the

posttest is a test carried out after students take part in learning using media. The questions given in Essay form are 5 numbers, each number of scores varies . Total score of 100 with a rating scale of 10-100. Therefore , if the test taker answers all the questions correctly, he will get a point maximum 100 . (2) Documentation. This technique is used to obtain data about the number of students in class XI SMA Muhammadiyah Pangkajene. (3) Questionnaire. Questionnaire is a data collection method that is carried out by asking the interviewee a series of questions or written statements and the person being interviewed fills out the questionnaire according to his own feelings (Solihudin JH, 2018) .

RESULT AND DISCUSSION

The results of the study were obtained based on predetermined indicators of effectiveness as follows: (1) Completeness of study, achievement of student learning completeness can be seen from the results of the tests that have been given, where all class XI SMA Muhammadiyah Pangsid students can complete 5 essay questions given with a satisfactory value (2) Timeliness, the time set by the school for each meeting 2 x 45 minutes in one week (3) Student responses, student response questionnaires are instruments used to measure student responses to learning. The percentage was declared effective if it reached 75% of student responses, and the responses of students who returned the questionnaire reached 100%, which means that overall students were enthusiastic in responding to the questionnaire. Based on the results above, it can be concluded that the hypothesis which states that "the effectiveness of using digital-based teaching materials on the results of craft and entrepreneurship learning of class XI SMA Muhammadiyah Pangsid" is declared accepted.

Discussion

In this technique the collected data is analyzed using statistical techniques. The ability determined by the percentage of 75% with a value of 75 is declared successful or passes the criteria.

Table 1. Comparison of the maximum scores of students' pretest and posttest results in the use of digital-based teaching materials on the results of craft and entrepreneurship learning of class XI SMA Muhammadiyah Pangsid

No.	Test	N	F	P
1	Pretest	27	1.915	70,9
2	Posttest	27	2.378	88,0

Results analysis data on with exists comparison score maximum Which obtained student from results posttest more tall than score maximum Which obtained student dari results pretest. Based on results test analysis descriptive the show 70,9<88,0 , so that can said that there is difference significant between results Study student in use digital-based teaching materials And No using digital-based teaching materials

CONCLUSION

Based on the results of this study, it can be concluded that there is effectiveness in the use of digital-based teaching materials on the learning outcomes of Craft and Entrepreneurship for Class XI SMA Muhammadiyah Pangsid. This is based on the results of data analysis obtained by the results of the initial test scores lower than the final test results, namely $70.9 < 88.0$. Timeliness, where the time required is 2×45 minutes and can be seen in the questionnaire with the result that 100% of students are sufficient with the specified time. In addition, it can also be seen that student responses to the student questionnaire have an interest in learning using digital-based teaching materials. Results study the show that use digital-based teaching materials to results Study Crafts and Entrepreneurship student class XI SMA Muhammadiyah Pangsid Regency Sidenreng Rappang year lesson 2022/2023 stated effective.

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