



THE EFFECT OF THE USE OF INTERACTIVE LEARNING MEDIA AND LEARNING MOTIVATION ON ECONOMIC LEARNING OUTCOMES (EXPERIMENTAL STUDY ON STUDENTS OF CLASS XI SMAN 50 JAKARTA)

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Abstract:

This study aims to see the effect of the use of interactive learning media and learning motivation on economic learning outcomes. The research method is a quasi-experimental with a 2-factor design conducted at SMAN 50 Jakarta. The method used is quantitative with a quasi-experimental design. The results of the study show (1) there is a difference in economic learning outcomes between students who use interactive learning media and students who use conventional learning media, (2) there is a significant difference in economic learning outcomes between students with high motivation and students with low motivation, (3) there is no significant interaction between the use of interactive learning media and learning motivation in influencing students' economic learning outcomes.

Keywords : Learning Media, Learning Motivation, Learning Outcomes, Interactive PowerPoint

BACKGROUND

Education is an important pillar as a basic foundation in life to improve the quality of life of individuals, without education a person's life will not be of quality (Aulia et al., 2024). Education is carried out through the learning process both at home and at school or in the community. In education there are elements consisting of students, teachers or educators, educational goals, materials or curriculum, learning methods used, and the learning environment (Made et al., 2022). Education plays a crucial role in advancing and improving a person's quality of life. In the context of learning economics at the high school level, student learning outcomes are greatly influenced by many elements in education that have been explained above, including learning media and student learning motivation (Lubis et al., 2024).

In education, effective measuring tools used to measure the success of learning carried out in the classroom are by reviewing the scores or values obtained by students as results and achievements that have been achieved by students, ways to detect and estimate the achievement



of success in learning are seen from the absorption and ability to understand the material by students. Learning outcomes are a benchmark to see whether there are changes in the cognitive, affective and psychomotor aspects of students. Currently, it is found that the results of students' economic learning in Indonesia are not optimal, this can be seen from the large number of students who have not yet achieved the expected competency standards.

In order to support the achievement of educational goals, learning media is an important component. Learning media is a medium used to convey educational materials and messages, information or materials to students to make it easier for students to learn which can attract their attention, interest, and understanding of the material explained (Rohima, 2023). Research that examines the factors that influence learning outcomes has actually been carried out by many researchers (Sutrisno & Siswanto, 2016), but over time and the rapid advancement of technology today will always present new challenges that must continue to be overcome and faced by continuing to follow technological advances to get maximum learning outcomes (Luthifah et al., 2022)

This research was conducted at SMAN 50 Jakarta with an experimental study of the use of interactive learning media where this media is adapted to the needs and character of students, as well as technological developments to improve the effectiveness of learning which is expected to provide an impact that can improve student learning achievement. This study will compare the scores of students who are not given interactive media in learning with the scores of students who learn with interactive learning media, using interactive power points that are specially developed by researchers and are more interactive than before.

2.1 Learning Outcomes

Learning outcomes can be explained as changes in a person's behavior that are carried out with awareness and have a clear purpose, resulting in additional knowledge, skills, and changes in attitudes that lead to better individual development (Manurung et al., 2020). Learning outcomes refer to changes in a person's behavior that occur as a result of active interaction with the surrounding environment. According to Oemar Hamalik, learning outcomes are characterized by changes in behavior in individuals after the learning process. (Nurrita, 2018). Furthermore, Winkel provides the opinion that learning outcomes are capacities that exist within an individual and have become elements of themselves, allowing the person to do various things based on what they have learned (Dianto, 2022). Fundamentally, student learning outcomes are changes in behavior and understanding obtained from the learning process carried out at school.

2.2 Learning Media

In the Dual Coding (TDC) theory proposed and developed by Allan Paivio in 1986, it explains how the human brain processes information (Khoirunisa et al. 2023). Dual coding is a mental process in which this process involves two information processing systems in the human brain (Fatah & Risfina, 2023). Based on this theory, the human brain analyzes information using two methods, namely verbal and visual methods. Words, language and sentences are usually processed through the verbal system. While shapes, graphics and colors are processed through the visual process. These two systems interact with each other and then process and store data or information. The benefits of dual coding theory in learning are to increase information retention, help understand complex contexts, develop problem-solving



skills, increase learning motivation, and facilitate knowledge transfer. The application and use of dual coding theory in learning is to use images, graphs or diagrams to explain concepts. In the context of economic learning, we can find the application of this theory, for example in the material on market price equilibrium or the influence of supply and demand curves, by using graphs, diagrams or tables, understanding concepts related to the material will be easier to understand.

2.3 Learning Motivation

Learning motivation is a person's ability and desire to learn that is strong and unstoppable, namely an internal drive that comes from within a person to learn and achieve academic goals (Dwi et al., 2022). This learning motivation includes curiosity, motivation, and dedication as well as cognitive, affective, and conative aspects to improve knowledge and skills. High learning motivation allows a person to face challenges and difficulties in the learning process with confidence and determination, so that they can overcome obstacles and achieve learning goals more effectively. Learning motivation has a very important and influential role in determining learning outcomes, because high motivation can encourage individuals to learn more diligently and consistently.

THEORETICAL FRAMEWORK

This theory was developed by a figure named Piaget who put forward the theory of constructivism, he stated that students develop their understanding independently through experience and relationships with their environment. Constructivism Learning Theory is a view in learning that emphasizes the importance of students in creating their own knowledge through experience and interaction with their environment. (Nainggolan & Daeli, 2021).

The main principle in this theory is first active learning, students are expected to be active in learning in class, not just passively receiving information, which means that teachers are not the only source of learning (Nuryati & Darsinah, 2021). Second, knowledge development, students are able to develop their understanding through experiences and relationships with their surroundings in the learning process. Interacting with learning media provides a learning experience that is liked and enjoyable for students, learning that does not provide a two-way response makes students not bored. With experience and interaction in this learning, it makes it easier for students to understand the learning delivered at school.

Third, experience and interaction, experience and interaction with the environment play an important role in the learning process. From the construction of knowledge that provides enjoyable learning experiences and interactions, this happens through interactions with other people or study partners and reflections on those experiences. In this case, the reflection obtained can generate motivation for students to continue to be active in learning (Wardani, 2022). So with the three principles in this theory, it will create a fun learning process and experience with the active role of students while learning, where it is hoped that this will have a positive impact on the achievement of learning outcomes.

METHOD

The preparation of this research uses a quantitative approach research method, namely using a quasi-experimental technique. Experimental research is a research design designed to test the effect of a particular treatment or intervention on other variables in controlled and well-



controlled conditions. Thus, researchers can see how the causal relationship between variables in this study affects (Campbell & Stanley, 1963).

In this experimental study, the independent variables are controlled and manipulated directly, there is a determination of groups that will compare one class as a control group that uses conventional teaching methods and another class as an experimental group that will use interactive learning methods. The experimental design in this study is to use a 2x2 experiment with one variable of learning media, namely interactive media and conventional media and the second variable is high and low learning motivation. This study uses a pre-test to measure initial abilities before the intervention is carried out, then a post-test after the intervention to see the difference.

Two-Factor Experimental Design		
Factor B	Factor A	
	Level A1	Level A2
Level B1	Group 1	Group 2
Level B2	Group 3	Group 4

Description :

Factor A	: Independent Variable A
Factor B	: Independent Variable B
Level A1 & A2	: Branches of factor A
Level B1 & B2	: Branches of factor B
Group 1	: Average value of dependent A1B1
Group 2	: Average value of dependent A1B2
Group 3	: Average value of dependent A2B1
Group 4	: Average value of dependent A2B2

Learning Motivation	Learning Media	
	Interactive Media (A1)	Conventional Media (A2)
High (B1)	A1B1	A2B1
Low (B2)	A1B2	A2B2

Description :

A1B1	: Learning outcomes of students taught using interactive learning media for students with high learning motivation
A1B2	: Learning outcomes of students taught with interactive learning media for students with low learning motivation
A2B1	: Learning outcomes of students taught with conventional learning media in students with high learning motivation



A2B2 : Learning outcomes of students taught with conventional learning media for students with low learning motivation

RESULT

The Two Way ANOVA test was conducted with the help of SPSS software. The following are the results of the Two Way ANOVA test..

Tests of Between-Subjects Effects					
Dependent Variable: HasilBelajar					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	445.527 ^a	3	148.509	4.042	.011
Intercept	569810.480	1	569810.480	15508.320	.000
MediaPembelajaran	192.846	1	192.846	5.249	.025
MotivasiBelajar	200.016	1	200.016	5.444	.023
MediaPembelajaran * MotivasiBelajar	90.706	1	90.706	2.469	.121
Error	2498.473	68	36.742		
Total	575394.000	72			
Corrected Total	2944.000	71			

a. R Squared = .151 (Adjusted R Squared = .114)

Based on the results of the Two Way ANOVA test above, it shows that:

1. Two-Way ANOVA analysis shows a significant difference in economic learning outcomes between students who use interactive learning media and students who use conventional learning media, with a Sig. value of 0.025 which is lower than the significance level of 0.05.
2. The results of the Two-Way ANOVA test also show significant differences in learning outcomes between students with high learning motivation and students with low learning motivation, as evidenced by the Sig. value of 0.023 which is smaller than the significance level of 0.05.
3. There is no significant interaction effect between the use of interactive learning media and the level of student learning motivation on economic learning outcomes. This can be seen from the Sig. value of 0.121 which is greater than the significance level of 0.05, indicating that there is no interaction effect between the two variables on economic learning outcomes.

DISCUSSION

1. Differences in Economic Learning Outcomes of Students Who Participate in Conventional Media Learning and Using Interactive Media.

Based on the results of the previous ANOVA test, the Sig. value was obtained. of 0.025, which means that there is a significant difference in economic learning outcomes between students who use interactive learning media and students who use conventional learning media. This is in line with previous research conducted by Udi Budi Harsiawi and Liss Dyah Dewi Arini (Harsiwi & Arini, 2020), where in their research they found that the interactive learning model applied can improve student learning outcomes. In another study conducted by Lizma Nur Saidah and colleagues (Saida et al., 2019), the results of their study stated that interactive powerpoint media has a positive effect on motivation and learning outcomes.



2. Differences in Economic Learning Outcomes of Students with Low and High Motivation.

Based on the results of the tests that have been carried out, it can be seen that there is a significant difference in economic learning outcomes between students with low motivation and students with high motivation. This is evidenced by the Sig. value of 0.023, which shows that the difference did not occur by chance and can be interpreted as a significant difference in students' economic learning outcomes based on high learning motivation and low learning motivation. This is in line with previous research, namely research conducted by Almi Ranti Datu and colleagues (Datu et al., 2022) where the results of this study found that there was an influence between learning motivation and student learning outcomes.

3. The Influence of Interaction between the Use of Interactive Learning Media and Learning Motivation on Students' Economic Learning Outcomes

Based on the results of the ANOVA test, it can be concluded that there is no significant interaction effect between the use of interactive learning media and student learning motivation on economic learning outcomes. This can be seen from the Sig. value of 0.121, which indicates that the interaction between the two variables does not have a significant impact on students' economic learning outcomes. In other words, the results of this study indicate that the third hypothesis stating that there is an interaction effect between the use of interactive learning media and student learning motivation on economic learning outcomes cannot be accepted, so the hypothesis is rejected. The use of interactive learning media is likely to have a more effective effect on students who have high levels of motivation so that it provides less encouragement for students who have low levels of motivation (La Guardia et al., 2000)

CONCLUSION

Based on the results of research that has been conducted on the influence of the use of interactive learning media and learning motivation on economic learning outcomes in class XI students of SMAN 50 Jakarta, several important findings can be concluded as follows:

1. There is a significant difference in economic learning outcomes between students who use interactive learning media and students who use conventional learning media. The use of interactive media has a positive and significant impact on the economic learning outcomes of class XI students of SMAN 50 Jakarta. Therefore, it can be concluded that the development of interactive learning media can improve the quality and outcomes of students' economic learning. Conversely, if interactive learning media is not developed properly, students may feel bored and unenthusiastic in learning. Interactive learning is very important to maintain students' interest and motivation in the learning process.
2. The results of the study show that there is a significant difference in economic learning outcomes between students with high motivation and students with low motivation. Student motivation is proven to have an important role in determining their learning outcomes.
3. The results of the study indicate that there is no significant interaction between the use of interactive learning media and learning motivation in influencing students' economic learning outcomes. Thus, the use of interactive learning media and learning motivation have an independent influence on economic learning outcomes.



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