

The Impact of Interactive Learning Media on Students' Learning Interest

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ABSTRACT

This study discusses the effect of interactive learning media on eighth-grade students at SMP GKPI Padang Bulan. The research method applied was a quasi-experimental design. Based on the results of the study, the average score of the final learning interest questionnaire in the experimental class was 86.26, while the control class obtained an average score of 62.90. It was found that the Asymp. Sig. (2-tailed) value was < 0.001. Since the significance value was smaller than 0.05, it can be concluded that H_a was accepted and H_0 was rejected. Therefore, the study indicates that the use of interactive learning media in science subjects, particularly on the topic of the solar system, significantly influences the learning interest of eighth-grade students at SMP GKPI Padang Bulan.

INTRODUCTION

Education is a crucial foundation in the development of a nation because it functions to improve the quality of life. Efforts to enhance education can be carried out through various educational institutions, including schools as one of the formal educational institutions. One important factor in the progress of a nation is the quality of human resources in facing advancements and technology, especially towards the era of the 5.0 revolution (Surani & Fricticarani, 2023).

Learning media includes all tools used by teachers in the teaching process to assist students in learning. The use of interactive learning media can provide positive benefits and have a significant impact in making the learning process easier for students. In this case, teachers play a role as key figures in educating the next generation of the nation by applying learning methods that integrate the latest technology to create a more effective teaching and learning process. One of the tools One of the software programs used to develop interactive learning media is Adobe Flash. The media used in this study is an interactive multimedia developed using Adobe Flash software (Karimah & Wati, 2023).

Interactive learning media has great potential to increase students' interest and engagement, although there are a number of challenges that need to be addressed. These challenges include teachers' lack of skills in using information technology, limited availability of media that match the material, and teachers having difficulty in determining the right and effective learning materials or media. So far, the media used by teachers has mostly been textual learning media, such as books, texts, and worksheets.

SMP GKPI Padang Bulan Medan is one of the private educational institutions located at Jl. Letjen Jamin Ginting Komp. Pamen Padang Bulan, Medan City, North Sumatra Province. In the teaching and learning process, obstacles have been found in how teachers deliver material to students, especially in grade VIII. Often, students have trouble understanding the material because there are limited media to visualize it. Teachers tend to only provide material that sticks closely to the textbooks, which makes many students feel bored. As a result, the learning process in the classroom becomes less efficient. Teachers' awareness of using learning media is still relatively low due to several factors such as limited knowledge, lack of resources, minimal facilities, and difficulties in creating learning media. This significantly affects the decrease in students' interest in learning.

Based on these obstacles, solutions are needed to overcome this problem. One possible solution is to use interactive learning media in the form of animated videos, which are expected to increase students' interest in learning, make class VIII students at SMP GKPI Padang Bulan more active, and help them understand the material better. In connection with the background above, the author raises the theme in this research proposal with the title: "The Effect of Interactive Learning Media on the Science Subject Topic of the Solar System on the Learning Interest of Class VIII Students at SMP GKPI Padang Bulan".

LITERATURE REVIEW

Technology

Technology is a very important part of life as a nation and country. The benefits of technology on human activities today are indeed very significant. Technology has become a main facility for activities in various sectors of life, having a big impact on fundamental changes in the structure, operations, and management of organizations, education, transportation, health, and research. Therefore, it is very important to improve human resource capabilities to optimize the role of that technology, so that in the end it will provide results that are very impactful, both for humans as individuals and for all sectors of life. The development of technology is expected to have a big impact on the world of education, especially in the learning process (Akbar & Noviani, 2019).

Educational Technology

Educational technology has been developing very rapidly along with the times. In our day-to-day learning activities, we often come across the use of technological advancements in education, such as what teachers or lecturers often do, which is using technology tools in the learning process. Technology as an educational medium can be utilized by using technological media like computers, the internet, e-mail, and so on. The interaction between a teacher and students is not limited to just face-to-face meetings, but we also have to use the available technology through these media to support the learning process. Educational technology theoretically can play a role in educating people by adopting or utilizing various learning resources, including human resources (Chandra & Rustaman, 2020).

Inreactive Multimedia

Interactive multimedia is a type of media that can be used to make the learning process easier if supported by learning media that can capture students' interest and attention, creating an adaptive and varied learning environment. Students can also control and decide the sequence of learning materials according to their preferences. By combining various components (text, graphics, audio, video, animation) and using computers or laptops to illustrate concepts through animations, sounds, and engaging demonstrations, interactive multimedia in learning can lead to effective learning that allows students to develop according to their own abilities. Using media in learning is a teaching and learning process that can boost students' desire and interest, bring motivation, stimulate the learning process, and have a psychological impact on students (Anggraeni et al., 2021).

Interactive Learning

Interactive Learning This is a learning technique commonly used by teachers when presenting lesson materials. Teachers play an important role in creating an educational interactive atmosphere through interactions between teacher and students, student to student, as well as students with learning resources to support the achievement of learning goals. Interactive learning also involves learning processes that engage students with each other, students with

teachers, or students with their environment. Through this interaction process, students' abilities can develop mentally and intellectually (Dwi Poetra, 2019).

Animated Video Media

Animated Video Media Many new learning media have emerged nowadays due to technological advancements, and one of them is animation media. Animated videos are a form of moving images created from various objects arranged in a special way to follow the entire storyline that has been set. Using animation in learning adds value because it can explain complex concepts more clearly and understandably compared to other media. Through animated videos, events or concepts that require detailed explanation can be conveyed more clearly. Animation also has visual appeal that can boost students' interest in being more active in the learning process (Sae & Radia, 2023). Some advantages of animated media include: having more than one integrated medium, for example connecting audiovisual elements; making it easier for teachers to provide information about fairly complex processes; attracting students' interest to boost learning motivation; being interactive, meaning it can adapt to user reactions; and being independent, meaning it provides convenience and complete content so users can use it without guidance from others (Yulianti et al., 2022).

Solar System

The Solar System is a collection of various celestial objects, such as planets, moons, asteroids, and comets, all under the influence of the Sun's gravity. Since ancient times, humans have been fascinated by the beauty and mystery of the night sky. However, the existence and arrangement of these objects were only truly revealed after advancements in science and technology. The Solar System is a group of celestial bodies consisting of a star, commonly called the Sun, and all celestial objects associated with its gravitational pull. This solar system is located in the Milky Way galaxy. This galaxy itself is a collection of many stars, a star is a celestial body that can emit light, and the Sun is the star closest to Earth in the Milky Way Galaxy (Saputra et al., 2024).

Learning Interest

Learning interest is a consistent attraction to pay attention to and remember certain activities. The start of an activity and the outcome from participating in an activity can be driven by interest. A lack of interest can cause students to dislike the lessons taught by the teacher, making it difficult to understand the material in the subject and ultimately affecting learning outcomes. Someone who is interested in something will give their full attention all the time. In addition, students become motivated to seriously follow the learning process from start to finish in order to achieve positive learning results as a result of their interest (Yulianti et al., 2022).

METHODOLOGY

Quasi Experimental Design

This study employed a quasi-experimental research design using a total sampling technique, which is one type of quantitative research design. In this study, participants were not randomly assigned. The researcher selected participants from classes VIII-1 and VIII-2, totaling 61 students. Both groups were given learning interest questionnaires and tests; however, only the experimental group received treatment.

Conceptual Framework

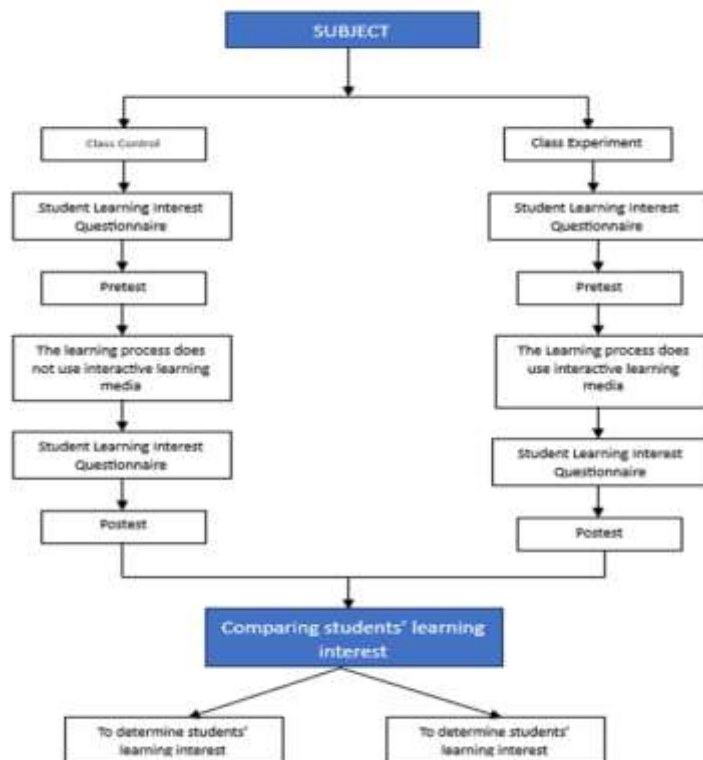


Figure 1. Conceptual Framework

The study involved two classes: one experimental class and one control class. Initially, both classes were given a pre-questionnaire to measure students' initial learning interest before treatment. Afterward, different treatments were applied to each class. The experimental class used interactive learning media based on animated videos, while the control class did not use such media. Following the treatment, both groups were given a post-questionnaire to determine the improvement in students' learning interest before and after the treatment. The final stage involved processing and analyzing the research data and drawing conclusions.

Research Hypotheses

A hypothesis is a temporary answer to the formulation of the research problem, where the research problem is stated in the form of a question.

1. Alternative Hypothesis (H_a): There is a significant effect of interactive learning media on the learning interest of grade VIII students at SMP GKPI Padang Bulan.
2. Null Hypothesis (H_0): There is no significant effect of interactive learning media on the learning interest of grade VIII students at SMP GKPI Padang Bulan.

Population and Sample

The population of this study consisted of students from classes VIII-1 and VIII-2 at SMP GKPI Padang Bulan. Class VIII-1 consisted of 31 students, while class VIII-2 consisted of 30 students. The sample was selected using the total sampling technique because the population size was relatively small. Class VIII-1 served as the experimental class, while class VIII-2 served as the control class.

Research Variable

This study included two variables: independent and dependent variables.

1. Independent Variable: Interactive Learning Media Based on Animated Videos
2. Dependent Variable: Students' Learning Interest

Data Collection Techniques

Data collection techniques are systematic procedures conducted objectively by researchers in the field to answer research questions. In this study, the methods used included questionnaires, documentation, and tests.

Questionnaire

The questionnaire technique was applied to collect data regarding students' learning interest. This study used a closed-ended questionnaire based on a Likert scale.

Documentation

Documentation was used as a method to obtain direct data from the research site. Documentation includes collecting data from written records and images as sources of information.

Test

Tests are assessment tools in written form used to measure students' achievement in line with the learning objectives. In this study, multiple-choice tests were administered to determine students' learning outcomes in grade VIII at SMP GKPI Padang Bulan.

Data Analysis Technique

Data analysis techniques were used to test the validity of the hypotheses and answer the research questions:

Normality Test

A normality test was conducted to determine whether the collected data were normally distributed. This study used the Liliefors test because the sample size was ≤ 200 .

RESEARCH RESULT AND DISCUSSION

Learning Media Interface Design

a. Initial Display

The initial interface display included the main title “Introduction to the Solar System” and a play button located in the center of the screen.



Figure 2. Initial Display

b. Solar System Orbit Menu Display

The interface displayed the solar system orbit, with the sun as the center and the planets revolving around it.



Figure 3. Solar System Orbit Menu Display

c. Closing Display

The closing display contained the text “Finished,” “Thank You,” and information about the media developer. A home button was also available in the upper-right corner to return to the homepage.



Figure 4. Closing Display

Questionnaire Trial Results

This study used a learning interest questionnaire instrument consisting of four indicators based on the ARCS model: Attention, Relevance, Confidence, and Satisfaction. These indicators reflect important aspects that may influence students' learning interest. Based on these indicators, 20 statement items were developed

Validity Test

The validity test was conducted on classes VIII-1 and VIII-2 with 30 students in the control class and 31 students in the experimental class. The instrument consisted of 20 items. Based on the calculation results, $r\text{-count} \geq r\text{-table}$ with $\alpha = 0.05$ and $r\text{-table} = 0.361$. All 20 items were declared valid.

Reliability Test

The data analysis showed that Cronbach's Alpha value was greater than 0.60, specifically 0.776. Therefore, all 20 questionnaire items were considered reliable.

Descriptive Test

The raw scores of the pre-test and post-test learning interest questionnaires for the experimental class (which used interactive animated video-based learning media), as well as the raw scores of the pre-test and post-test questionnaires for the control class (which used the conventional learning model), were obtained.

- a. Experimental class pre-questionnaire: minimum score = 46, maximum score = 63, mean = 54.68, standard deviation = 4.158.
- b. Experimental class post-questionnaire: minimum score = 82, maximum score = 93, mean = 86.26, standard deviation = 2.556.
- c. Control class pre-questionnaire: minimum score = 46, maximum score = 57, mean = 50.77, standard deviation = 2.661.
- d. Control class post-questionnaire: minimum score = 56, maximum score = 69, mean = 62.90, standard deviation = 3.507.

Data Analysis Requirements

- a. Normality Test

The purpose of this test was to determine whether the data distribution was normal. With a significance level of $\alpha = 0.05$, if the significance value ≥ 0.05 , the data are normally distributed and analyzed using parametric tests (t-test). If the significance value ≤ 0.05 , non-parametric tests (Wilcoxon test) are used

Table 1. Normality Test

Class Data	N	Sig.(0.05)	Sig.	Description
Initial Questionnaire of the Experimental Class	31	0,05	0,200	Normally Distributed
Final Questionnaire of the Experimental Class	31	0,05	0,037	Not Normally Distributed
Initial Questionnaire of the Control Class	30	0.05	0.172	Normally Distributed
Final Questionnaire of the Control Class	30	0.05	0.59	Normally Distributed

b. Wilcoxon Test

After confirming that the sample data were not normally distributed, hypothesis testing was conducted using the non-parametric Wilcoxon test.

Decision Criteria:

- If $p \leq 0.05$, H_a is accepted and H_0 is rejected.
- If $p > 0.05$, H_a is rejected and H_0 is accepted.

The Wilcoxon test results showed significance values of < 0.001 for both experimental and control classes.

Table 2. Wilcoxon Test

Class Data	z	Sig.(2-tailed)
Experimental Class	-4.927 ^b	<,001
Control Class	-4.847 ^b	<,001

CONCLUSIONS AND RECOMMENDATIONS

Based on the overall results of the study, it can be concluded that the use of interactive learning media has a positive effect on students' learning interest in science subjects, particularly on the topic of the solar system. The use of interactive media in learning resulted in higher learning interest among students in the experimental class compared to students in the control class who used conventional methods without interactive media.

Therefore, the findings confirm that interactive learning media based on animated videos can be used as an effective strategy to improve students' learning interest. The implementation of this media can create a more engaging, enjoyable, and meaningful learning experience for students. Based on the "Test Statistics" output, the Asymp. Sig. (2-tailed) value was < 0.001 . Since the value was smaller than 0.05, H_a was accepted and H_0 was rejected. Thus, it can be concluded that there is a significant effect of using interactive learning media in science subjects on the topic of the solar system toward the learning interest of grade VIII students at SMP GKPI Padang Bulan.

ADVANCED RESEARCH

Future research can expand this study by exploring the long-term impact of interactive learning media on students' learning interest across different educational levels and subject areas. It is also important to examine how various types of interactive media, such as gamified platforms, virtual reality, and mobile-based applications, influence students' motivation and engagement differently. Additionally, further studies may investigate the role of teachers' digital competencies and instructional strategies in maximizing the effectiveness of interactive media. Comparative research involving diverse cultural and institutional contexts would also provide deeper insights into the generalizability of the findings. Finally, integrating qualitative approaches could help uncover students' personal experiences and perceptions in using interactive learning media.

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