

Research Article

The Effect of Video-based Learning Media on the Learning Interest of Elementary School Students

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Abstract.

In the learning process, students' interest in learning plays a crucial role. At the elementary school level, low interest in learning can impact their overall academic performance. Therefore, it is important to use appropriate learning strategies and adequate learning media to improve students' interest and learning outcomes. The purpose of this study is to investigate the use of video learning media in the independent curriculum, specifically in the subject of natural and social science. Students were divided into two groups using randomization techniques, namely the experimental group of 30 and the control group of 30. In the experimental group, the manipulation used was exposing animated videos as learning media and using conventional methods (lectures) for the control group. After the intervention, both groups measured the level of student interest in learning using a learning interest scale using a four-level Likert scale questionnaire. Through the hypothesis test using an independent samples t-test, it was found that the sig. value was $0.000 < 0.05$. From these results, we can conclude that learning using video-based learning media affects the learning interest of 4th-grade students.

Keywords: video-based learning, learning interest, elementary school

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1. Introduction

In this modern era, education is crucial for children. Education plays a role in shaping individuals who are knowledgeable and have a positive personality. The purpose of education is to facilitate people with the knowledge and skills needed by individuals to survive [1]. In the process, teaching and learning activities should have appropriate learning methods and appropriate learning media, and the use of learning media aims to increase students' interest and learning achievement. The learning methods used should support the course and achievement of the learning objectives that have been set. However, in the process, there are many challenges faced in teaching and learning activities. One of the biggest challenges is the low interest of students in learning,

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especially at the elementary school level. If students are not interested in the subject, it is likely that they will have difficulty understanding the material being taught.

Low student interest in learning has become a concern in the world of education. Based on data obtained from the Ministry of Education and Culture's PISA [2], student learning outcomes decreased by 12%. This shows an indication that student interest in learning is low and needs to be improved. According to Nugroho et al. [3], there is an influence of learning interest on student learning outcomes. In addition, based on research conducted by Anggraeni et al. [4], student interest in learning during the teaching activity process is very lacking. Students have no interest in the material being explained, and students are also not actively involved in the learning process. Low interest in learning will have an impact on overall learning. Based on research conducted by Pratiwi et al. [5], low interest in learning can affect their academic performance.

Low interest in learning doesn't just happen, interest in learning is influenced by a number of factors. One of these is the use of inappropriate teaching methods. Learning that seems monotonous makes students feel bored and disinterested in the learning process. Lecture or conventional methods make students feel bored and eventually their interest in learning decreases. This follows the statement by Sari & Ginting [6] that one of the main factors causing students' low interest in learning is monotonous and ineffective teaching methods. The lack of variety in learning methods will make students easily bored [7]. Therefore, there is a need for innovation in the learning methods used to increase students' interest in learning. Factors that need to be considered when choosing learning methods include effectiveness, suitability of the materials and conformity with the conventional education system [8]. The use of technology in the learning process as a medium can increase students' interest in learning.

Teaching media itself can affect the effectiveness of achieving learning objectives, and the application of technology in learning media can play a role in improving learning outcomes, interest, and student motivation [9]. Using a video as a tool in the teaching and learning process can make the material more interesting and easier to understand. Learning videos and animations can increase motivation compared to conventional methods. Currently, the world of education is moving from conventional methods to student-centered methods. This method allows learning to be more interactive, interesting and increases student understanding [10]. However, teachers, especially elementary school teachers, still use conventional methods. Learning with this method seems rigid, monotonous, and boring so it is less interesting for students [9].

Currently, elementary schools use the independent curriculum. One of the subjects is natural and social science. Natural and Social Sciences subjects are a combination of science and social studies. Natural and social science is a science that discusses everything in the universe, including living and non-living things and their interactions. In these lessons, students are expected to be able to develop curiosity about the phenomena around them [11]. Several studies have analyzed the difficulties of student learning difficulties in natural and social science subjects. As has been done by Alfa-tonah et al [12] there are difficulties for students of SD Islam Al-Alifah Palembang in natural and social science subjects influenced by several factors. The study said that there was a lack of motivation and interest which resulted in students feeling bored and not focusing on learning. Lack of interest is caused by learning methods that are still monotonous. In teaching, teachers are required to develop in accordance with the development of science and technology, this is because learning media plays an important role in determining the success of the teaching and learning process. Applying the right learning media can stimulate student interest and concentration.

In line with research conducted by Novita & Novianty [13], student learning achievement can be improved through the use of student learning media, this improvement can be seen in learning outcomes and increased student interest. Similar research conducted by Viviantini [14] and Pagarra & Idrus [15] states that the use of video media has a significant effect on student interest in learning, this study shows there are differences between the treated class and the control class. This is also reinforced by research conducted by Ula & Nugraha [16] which shows similar results, the use of audio-visual media can increase student interest in the learning process. Thus, the use of audio-visual media has a positive impact on student interest in learning. Learning will also be fun because of the visualization of what they are learning, not just reading and listening which is done in conventional methods [8].

The learning videos that will be used by researchers are learning videos in the form of animated videos, which are provided based on several sources. The first source is from YouTube, then presented in video form to students. Next, use audio-visuals in the form of several pieces of images and videos which will be put together into a learning video using the Inshot application, which is then presented as attractively as possible by the researcher. The curriculum used in this research is different from the previous curriculum, namely using an independent curriculum. because previous research was still limited and no one had yet explored the independent curriculum, so we will explore it using the science and sciences subject. Therefore, this research aims to explore the

use of audio-visual media in the independent curriculum, especially in science and science subjects.

2. Literature Review

2.1. Learning Interest

Learning interest is one of the important factors that influence the learning process [17]. Learning interest is defined as “the tendency to pay attention” [17]. Learning interests each individual is not the same, individuals who have a high interest in learning will feel happy and be able to direct their behavior so that they can follow the learning process well, while individuals with low interest in learning tend to be unhappy in participating in learning activities that take place [17]. According to Djamarah [17], indicators of interest in learning include feelings of pleasure, statements of preference, there is a sense of interest, awareness of learning, involvement in learning activities, and giving attention. Meanwhile, Safari [17] identifies indicators of interest in learning as follows: (1) feelings of pleasure, (2) interest, (3) involvement, and (4) attention.

There are two groups of factors, internal and external, that influence interest in learning [17]. Internal factors include a concentration on learning, strong feelings or attitudes to know something, self-needs that become a driving force to carry out certain activities to achieve a goal, and motivation from within the individual to achieve the desired goal [17]. Meanwhile, external factors that influence learning interest include encouragement from parents, encouragement from educators, availability of facilities and infrastructure, and the surrounding environment [17]. In addition, the learning methods used can also affect students' interest in learning [17]. In addition, there are other factors according to Sari & Ginting [6] which state that one of the factors causing low student interest in learning is monotonous and ineffective teaching methods.

Learning interest is the tendency or interest of individuals to pay attention, get involved, and show pleasure in participating in the learning process without coercion from other parties. Learning interest can be measured through the following indicators: feelings of pleasure, namely individuals feel happy or like the learning activities being carried out, interest, namely the desire or desire to find out more about the material or learning activities carried out, involvement, namely individuals actively participate and are involved in learning activities carried out, attention, namely individuals can focus attention and concentration on ongoing learning activities. Interest in learning can also

be influenced by internal factors such as concentration of attention, feelings or attitudes, self-needs, and motivation from within the individual, as well as external factors such as encouragement from parents, the learning environment, and the learning methods used.

2.2. Concrete Operational Stage (Jean Piaget)

At the developmental stage of 7-12 years old, categorized as the concrete operational stage by Jean Piaget, children are in a period that is very sensitive to the formation of attitudes and behaviors. During this period, they tend to quickly imitate and adopt behaviors they observe from their surroundings, without first considering whether the behavior is good or bad. Children at this age absorb and imitate what they see directly, without any sorting process or assessment of the consequences of the actions they imitate. This concrete operational phase is a critical time in shaping children's attitudes and behavior patterns because they tend to impulsively absorb what is presented in the surrounding environment [18].

Children can easily understand something if there is a physical example in front of them and struggle when asked to solve logical problems. For example, children who are given real doll objects with different colors will not find it difficult when asked to identify which doll has the darkest hair among the three dolls compared to children who are given questions about the doll without giving concrete examples that they can see. This happens because children at this stage are not yet able to think using parables or by using symbols [19].

2.3. Video-based Learning Media

Audio-visual media integrates auditory (hearing) and visual (sight) components, resulting in a more impactful mode of communication [20]. It combines audio and visual elements, frequently described as hearing media. Audio-visual media merges video displays accompanied by sound, which can be presented to students. Hamdani [20] accentuated that audiovisual media is a fusion of audio and visual media. Meanwhile, Hayati & Harianto, F. [21] posited that audiovisual learning media acts as an intermediary, facilitating absorption through sight and hearing, thereby fostering conditions conducive for students to acquire knowledge, skills, or attitudes that aid in achieving learning objectives. Contrasting with Hayati, Purwono [22] asserted that audiovisual learning

media is an integration of audio and visual media with audio tapes containing auditory and visual components that can be perceived, such as video recordings, sound slides, and similar formats.

Video-based learning media is a type of instructional media that integrates audio (hearing) and visual (seeing) elements in the form of video displays along with sound. This media is a combination of audio media and visual media, or often referred to as seeing and hearing media. As a learning media that combines the senses of sight and hearing, video-based media has the advantage of conveying information more concretely and attracting students' attention. This media aims to create a more effective way of communicating in the learning process by utilizing two sensory pathways at once. By absorbing information through the senses of sight and sound, video-based media can create conditions that enable students to acquire the knowledge, skills or attitudes needed to achieve learning objectives more effectively. The form of video-based learning media can be in the form of video recordings, sound slides, animated videos, or other formats that combine audio and visual elements to present learning materials more vividly and easily understood.

3. Method

Before conducting experimental research, the researcher conducted a Preliminary study to analyze the problems that occurred at the research location. To find out the field conditions, researchers interviewed homeroom teachers and 2 students to identify learning experiences and challenges that are often faced in the teaching and learning process. After the data was collected and analyzed, the researcher made an experimental research design including research design, research instruments, participants, and procedures in data collection. In this experimental research, a post-test control group design is used with a two group design system, namely the experimental group and the control group.

By taking the research subjects of 4th grade elementary school students in the age range of 9-11 years, because according to Piaget's cognitive development theory, the stages and factors of intelligence development of 4th grade elementary school students are still not able to think abstractly so that it will be appropriate to be given learning using video media. In addition, the research sampling criteria were based on specific characteristics such as schools from accredited elementary schools and those that use the independent curriculum. Therefore, this study took 60 participants

of 4th-grade elementary school students using purposive sampling or more precisely 2 classes. Considering the criteria for research subjects, SDN Sawojajar 1 was chosen as the research sample, besides that this elementary school was chosen because it was easily accessible by researchers and had cooperation with the school.

The reason the researchers took the research sample at Sawojajar Elementary School was firstly because of its geographical location in the middle, namely between the city center and the district. Also, the new student admission system (PPDB) already uses a zoning mechanism. Where this zoning mechanism requires prospective students to choose a school with the closest distance from home to the school so that the accreditation of the school is no longer a benchmark for school selection [23]. In addition, Permendikbud number 1, article 13 of 2021, states that 70% of the school's capacity for new students comes from the zoning route [24]. This means that the zoning route is an effort to equalize educational institutions by the government, and this has proven to be very effective [25]. Therefore, it can be said that the research sample taken by the researcher can already represent the research subject.

The variables used in this study are video learning media and student learning interest, where video learning media is categorized as an independent variable (X) which affects student learning interest as the dependent variable (Y). So that the instrument in this study uses a questionnaire in the form of a Likert scale containing 22 statement items with a choice of a scale range of 4 (Strongly Agree, Agree, Disagree, Strongly Disagree), which is used to measure the effect of video learning media on student learning interest. The experiment was carried out by dividing the experimental and control groups through randomization because the groups had previously been formed, this was done as a form of control over the research subjects. Then, the experimental group will be given treatment in the form of learning using video media, while the control group is given learning with conventional media or lectures.

More details about the experimental activity design can be seen in the table above, where the left side is the activity design for the experimental group and the right side for the control group. In accordance with what is listed in the table above, the video provided as learning media is an animated video, animation media was chosen because learning material can be packaged in a more concise and more interesting form [26]. The animated video shown in class contains natural and social science learning material, which lasts between 10-15 minutes as a substitute for explaining the material in lecture or conventional media by the teacher. Furthermore, at the end of the study both groups

TABLE 1: Experiment Implementation Activity Design.

Experiment Group		Control Group	
Natural And Social Science (Norms and Customs)		Natural And Social Science (Norms and Customs)	
Activities	Duration	Activities	Duration
Watch Animated Learning Videos	10-15 minutes	Listening to Learning Lectures	35 minutes
Questions and Answers (discussion)	10-15 minutes	Providing concrete examples of material through activities in everyday life	10 minutes
Review of animated video according to the material (feedback)	30 minutes	Questions and Answers (discussion)	10-15 minutes

will be given a questionnaire that has been adjusted to be filled in, this questionnaire is also an evaluation of the implementation of the experiment.

Analysis of the data results of this experimental research was carried out qualitatively and qualitative descriptive analysis. For qualitative data analysis using SPSS, with the stages of testing the validity and reliability of measuring instruments, then testing normality, homogeneity, and hypotheses through independent sample t-test. The validity and reliability tests of measuring instruments were carried out after the pilot study data collection. After the data is processed using SPSS, then the data will be analyzed descriptively qualitatively by comparing the results of this study with the results of previous studies.

4. Result and Discussion

4.1. Result

This research was analyzed using statistical techniques, while the steps taken were normality test, homogeneity test, and hypothesis testing. The data that has been obtained is analyzed using SPSS version 21.0 for windows.

In the normality test, it was found that the significance value of the experimental and control groups conducted through the Kolmogorov-Smirnov and Shapiro-Wilk tests showed a sig. value. >0.05 . With this it can be stated that the experimental and control groups are normally distributed.

Based on the test of homogeneity of variances, the significance value of the variable learning interest in the experimental group and the control group is 0.129 ($p >0.05$).

TABLE 2: Normality test of data on student learning interest results.

Tests of Normality							
Group		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Results	experimental group	0.146	30	0.103	0.949	30	0.160
	control group	0.108	30	.200*	0.958	30	0.278

*. This is a lower bound of the true significance.
a. Lilliefors Significance Correction

TABLE 3: Homogeneity test of student interest data.

Test of Homogeneity of Variances					
		Levene Statistic	df1	df2	Sig.
Results	Based on Mean	2.377	1	58	0.129
	Based on Median	2.006	1	58	0.162
	Based on Median and with adjusted df	2.006	1	57.998	0.162
	Based on trimmed mean	2.539	1	58	0.116

Therefore, it can be concluded that the variance of the data between the experimental group and the control group is equal or homogeneous.

TABLE 4: Descriptive statistical analysis of student learning interest results.

Group Statistics						
Group		N	Mean	Std. Deviation	Std. Error Mean	
Results	experimental group	30	63.03	7.654	1.397	
	control group	30	50.87	9.035	1.650	

Based on the average value, we can see that there are differences between the two groups. The experimental group has a higher average learning interest of 63.03 compared to the control group which has an average of 50.87. Thus, descriptively statistically it can be said that there is an average difference between the learning interest of the experimental group and the control group.

The results of the data analysis show that there is an effect of using video-based learning media on students' learning interests (H_a). The sig. (2-tailed) was obtained at $0.000 < 0.05$, indicating that there was a significant difference between the experimental group and the control group. In other words, the use of video-based learning media affects students' interest in learning compared to conventional methods/lectures.

TABLE 5: Hypothesis testing of student interest data.

		Independent Samples Test								
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Results	Equal variances assumed	2.377	0.129	5.628	58	0.000	12.167	2.162	7.839	16.494
	Equal variances not assumed			5.628	56.474	0.000	12.167	2.162	7.837	16.497

4.2. Discussion

Based on the results of the research conducted, it can be seen that the learning method using video media has a significant effect on the learning interest of grade 4 students of SDN Sawojajar 1 with a sig. value of 0.000 where $0.000 < 0.05$, video-based learning media is considered effective in increasing students' interest in learning compared to the control group that conducts learning using lecture or conventional methods. The description of interest in learning among students of grade 4 of SDN Sawojajar 1 is included and in line with research that interest in learning also arises from the influence of the availability of adequate facilities and infrastructure, namely with learning methods that are more innovative and not monotonous, which will cause internal encouragement to develop attention in learning [17]. This is in line with Sari & Ginting's [6] statement that the main factor contributing to low student interest in learning is monotonous and ineffective teaching methods.

The results of this study are in accordance with the results of previous research conducted by Novita & Novianty [13] where the use of video learning media can improve student learning achievement as seen from learning outcomes and increased student interest in learning. In addition, the results of the study are also in line with research conducted by Viviantini [14] and Pagarra & Idrus [15] where the use of video learning media has a significant effect on student interest in learning between those given treatment and those not given treatment, namely groups who study with video learning media and groups with conventional learning or lectures. Therefore, the results of this study show very significant results that the learning method using video media has an

influence on the learning interest of grade 4 elementary school students. Where this video learning method is considered fun because of the visualization using animation of what they learn, not just reading and listening to explanations from the teacher which is done in conventional methods or lectures.

In this research, there are several limitations, namely regarding the short research time because it was only carried out for one day. Then the next limitation is that the research population is not large enough. Although the results of this research show that there is a significant influence of the use of video media on the learning interest of grade 4 students at SDN Sawojajar 1, this research was only conducted at one school and at one particular grade level. Suggestions for further research include exploring the types and styles of video media that are most effective in increasing students' interest in learning, then extending the research time and expanding the population.

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