Journal of
General Education Science
Open Access

Vol 1 No 1 2022
Page 23-30
ISSN 2963-0096

The Effect of Animated Videos on Creativity in Science Learning of Class V Students About Changes in Objectsin Elementary School 067256 Medan Marelan District Academic Year 2020-2021

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ABSTRACT
This study aims to determine whether the use of animated video media can affect students' creativity or not. The research method used is quantitative research method with experimental research type. The population and sample in this study were fifth grade students at SDN 067256 Medan Marelan sub-district totaling 30 students in the control class and 30 students in the experimental class. Based on the t-test Post test, it is known that the average experimental learning outcomes are 96.23 and the control class learning average is 70.73 so it can be concluded that the experimental class learning outcomes are 25.86 greater than the control class. . From the table, it is known that the t count is 17, 515 with a significance of 0.000. The t table of 58 db at a significant level of 5% is 1.671. If the value of t count > t table (17, 515> 1.671) and the significancevalue is less than 0.05 (0.000 < 0.05). So it can be concluded that there is an effect of animated video on the creativity of science learning for fifth grade students about changes in the shape of objects at SDN 067256, Medan Marelan District. Based on the results of this study, students are expected to be able to improve learning outcomes by fostering interest in learning, for example by paying great attention when the learning process takes place, daring to ask questions, having great curiosity.

Keyword: Animated, Video, Creativity

Introduction

Learning is something that must be fulfilled in the process of life. Learning is also one of the main pillars and capital in dealing with, facing the future, because learning is always oriented to increase students' energy resources. To be able to function at the time that is about to arrive and be shown to human needs (Husien, 2017: 11). Law No. 20 of 2003 states that learning is a conscious and planned effort in realizing learning conditions and the educational process so that students actively improve their abilities to have spiritual, religious, self-control, character, intelligence, noble character, and skills needed by themselves, citizens, nation and country. In the law, it is informed that the purpose of learning is for students to actively improve the abilities contained in themselves. In realizing quality learning, it takes a teacher who has expertise in realizing national learning goals, namely those who have competence, character, social and professional competence (Anonymous, 2006: 5-6). According to Slameto (2010:17) the characteristics of students' creativity with good creativity can be grouped into two categories, namely cognitive and non-cognitive. Cognitive traits include originality, flexibility, fluency, and elaboration. Meanwhile, non-cognitive characteristics include attitude motivation and creative personality. These two characteristics are equally important. Intelligence that is not supported by a creative personality will not produce anything. Creativity can only be born from intelligent people who have a healthy psychological condition. Creativity is not only an act of the brain, but emotional and mental health variables are very influential on the birth of a creative work. Intelligence without a healthy mentality is very difficult to produce creative work. At the stage of the learning process, ideal learning is learning that is able to encourage the creativity of students as a whole. Learning is able to make students active, achieve learning goals actively and take place in pleasant conditions, ideal learning is only possible if supported by ideal teachers (Suryono, 2012:207). The use of learning media will greatly help the effectiveness of the learning process and make students active so that the learning process is in a pleasant condition and achieves active and efficient learning (Yunita, 2017: 3). The science

learning process using learning media in the classroom is still lacking, even teachers have not used learning media, teachers only use teacher books and student books. Teachers also have not carried out the learning process systematically or using interesting media. In the learning process the learning media used can be of interest to students, which in essence in the learning process requires a variety of learning in order to generate interest for students. According to Sadiman (2010: 7), learning media is a tool that can provide certain experiences and motivations for learning and increase the absorption and retention of learning by students. The use of media can also improve the quality of teaching processes and outcomes, from concrete thinking to abstract thinking. The right choice of learning media will make students not bored and students motivated to learn. Learning media is a good advantage for students who add knowledge and foster students' learning desire. One of the media that will be used in this research is animated video media.

Animated video is the movement of one frame with other frames that differ from each other in a predetermined duration of time, thus creating the impression of moving and there is also a sound that supports the movement of the image, for example the sound of conversation or dialogue and other sounds. Animated videos are also the newest media used in foreign language learning in the classroom. This media can increase learning motivation and provide more insight to students. The new term in learning to use this media is edutainment (learning in a fun way) (Kurniawan, 2015: 17). Animated video media can be used as learning media. This media can help students to focus more and more easily accept the material in accordance with the learning objectives. The use of animated video media in the learning process can be uniformed, students can see and hear through the same media and receive the same information. This animated video media can also save time and effort, in delivering material the teacher does not need to present concrete objects. Such as the process of forming something that will take a long time or the types of soil that must present several types of soil to be shown to students. So that this animated video media is very good to serve as a distributor of information. So that this animated video media does not cause misconceptions to students, the contents of the media are interspersed with original images of the material presented and accompanied by appropriate audio (Rahmayanti, 2018: 430). This animated video media can also save time and effort, in delivering material the teacher does not need to present concrete objects. Such as the process of forming something that will take a long time or the types of soil that must present several types of soil to be shown to students.

So that this animated video media is very good to serve as a distributor of information. So that this animated video media does not cause misconceptions to students, the contents of the media are interspersed with original images of the material presented and accompanied by appropriate audio (Rahmayanti, 2018: 430). This animated video media can also save time and effort, in delivering material the teacher does not need to present concrete objects. Such as the process of forming something that will take a long time or the types of soil that must present several types of soil to be shown to students. So that this animated video media is very good to serve as a distributor of information. So that this animated video media does not cause misconceptions to students, the contents of the media are interspersed with original images of the material presented and accompanied by appropriate audio (Rahmayanti, 2018: 430). Such as the process of forming something that will take a long time or the types of soil that must present several types of soil to be shown to students. So that this animated video media is very good to serve as a distributor of information. So that this animated video media does not cause misconceptions to students, the contents of the media are interspersed with original images of the material presented and accompanied by appropriate audio (Rahmayanti, 2018: 430). Such as the process of forming something that will take a long time or the types of soil that must present several types of soil to be shown to students. So that this animated video media is very good to serve as a distributor of information. So that this animated video media does not cause misconceptions to students, the contents of the media are interspersed with original images of the material presented and accompanied by appropriate audio (Rahmayanti, 2018: 430). With the animated video media, it will determine the level of creativity in student learning, can help teachers in the science learning process and provide sufficient knowledge about how to identify various science materials, especially in the material of changing the shape of objects. Animated video media that is displayed during the learning process can make it easier for students to understand the material being taught. The video teaching process used is an animated video in the form of real illustrations and changes in the shape of objects. On the basis of this condition, the researcher considers that to conduct research on "The Effect of Animated Video on Creativity in Science Learning for Class V Students regarding Changes in Objects in Elementary Schools at SDN 067256, Medan Marelan District".

Research Methodology

The research was carried out in semester 1 of the 2021/2022 academic year at SDN 067256, Medan Marelan District. The researcher took the research place here because this location was in accordance with the problems in the background. According to (Sugiyono, 2013:117) explains the population is a generalization area consisting of objects or subjects that have certain qualities and characteristics determined by researchers to be studied and then drawn conclusions. In this study, the population was 30 class VA students and 30 VB students at SDN 067256 Medan Marelan District.

Table 3.1. Research Population

Class	Number of Students
VA	30
VB	30
Amount	**60**

According to (Sugiyono, 2015:122) the sample is part of the number and characteristics possessed by the population. The sample in this study was class VA SDN 067256 which amounted to 30 people and class VB SDN 067256 which amounted to 30 people where class VA SDN 067256 was used as a control class, and class VB SDN 067256 was used as an experimental class.

Table 3.2. Research Sample

No	Teaching Treatment	Class	Amount
1	Experiment	VA	30
2	Control	VB	30
	Amount		60 People

According to Sugiyono (2018: 57) suggests that "a research variable is an attribute or nature or value of a person, object or work that has a certain variation determined by the researcher to be studied and then drawn conclusions. The variables in the study are: X1: learning by using video animation media material about changes in the shape of objects. X2: students' creativity using learning media animation video material about changes in the shape of objects.

The definition of research attaches meaning to a construct or variable by specifying the activities or actions necessary to measure the construct or variable. Or in other words, the operational definition provides the limits or meaning of a variable Arikunto (2006:51). In this study the operational definition of each variable is as follows: Animated videos used by researchers are animated videos that attract the attention of students and are able to understand learning. The material used is material about changes in the shape of objects. Creativity that is measured in this study is the creativity of students in working on essay questions after being treated by using the animated video media provided. A test is a series of questions or exercises or other tools used to measure knowledge skills, intelligence, abilities or talents possessed by individuals or groups (Arikunto 2002:127). The tests carried out in this study were to measure the creativity of students in the control class and the experimental class through the material of changing the shape of objects. This test is a trial test, pretest (initial test) and Posttest (final test). The questions in the form of essays consist of 6 creativity questions. The results of the initial test obtained will determine the students' creativity ability before being given treatment and the final test will be used to determine the creativity of students after being given treatment.

The data analysis technique uses quantitative data analysis techniques using the analysis prerequisite test with the normality test. The normality test of the data distribution uses the residual normality test, namely the Normality Test in the Kolmogorov-Smirnov test section with the help of SPSS 20.0 for windows using a significance level of 0.05 while the homogeneity test is calculated using Levene's Test with the help of SPSS 20.0 for Windows with criteria if significance > 0.05 or 5% then the data is declared homogeneous. Previously, the validity test was carried out using the Pearson product moment formula, the reliability test using the Cronbach's Alpha method, and hypothesis testing using the Independent sample t-test.

Table 3.3 Result of Question Validity Test

No Item	Sig	*A*	Information
1	0.001	0.05	Valid
2	0.001	0.05	Valid
3	0.000	0.05	Valid
4	0.390	0.05	Invalid
5	0.005	0.05	Valid
6	0.061	0.05	Invalid
7	0.056	0.05	Invalid
8	0.002	0.05	Valid

9	0.015	0.05	Valid
10	0.148	0.05	Invalid

Table 3.4 Reliability calculation results using SPSS version 20.0

Reliability Statistics

Cronbach's Alpha	N of Items
.662	6

Based on the data about the post test, it is said to be reliable. This can be seen in Cronbach's Alpha if the value of r count > r table. At = 5% with n = 30 obtained rcount = 0.662 because 0.662 > 0.361 then the question is said to be reliable. The value is included in the high interpretation because 0.662 lies at (between 0.600 to 0.800).

Table 4.5 Normality Test using SPSS version 20.0.

	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistics	df	Sig.	Statistics	Df	Sig.
Experiment Class	.139	30	.146	.942	30	.103
Control Class	.157	30	.058	.940	30	.093

a. Lilliefors Significance Correction

Based on the results of the normality test output using the Kolmogrov-Smirnov in Table 4.5 the significance value in the significant column of data, the value of the experimental class is 0.146 and the control class is 0.058. Because the significant value of both classes is more than 0.05, it can be said that the control class and the experimental class are normally distributed.

Table 4.6 Homogeneity Test using SPSS version 20.0 Test of Homogeneity of Variances

Levene Statistics

			df1	df2	Sig.
Creativity Test Results	Based on Mean	.008	1	58	.930
	Based on Median	.001	1	58	.975
	Based on Median and with adjusted df	.001	1	55.532	.975
	Based on trimmed mean	.012	1	58	.913

Based on the test table using SPSS version 20.0, it can be seen that the significance value is 0.930, because the significance value is more than 0.05, namely 0.930 > 0.05 so that the data can be said to be homogeneous. So the two classes that are used as research are homogeneous classes. Because the two classes are homogeneous, a study can be carried out.

Table 4.7 Hypothesis Test Results Through SPSS version 20.0 Group Statistics

	Class	N	mean	Std. Deviation	Std. Error Mean
Science Learning Outcomes	Experiment Class	30	96.23	4,591	.838
	Control Class	30	70.87	6.469	1.181

Table 4.7 Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference e	Std. Error Difference	Lower	Upper
Learning Creativity Test Results	Equal variances assumed	.214	.645	17,515	58	.000	25,367	1.448	22,468	28,266
	Equal variances not assumed			17,515	52.306	.000	25,367	1.448	22,468	22,461

Based on table 4.7 of the t test (Independent sample t test) above, it shows that there is a significant difference between learning outcomes using the lecture method and learning outcomes using animated video media. To see the value of the t table, it is based on the degrees of freedom (dk), whose magnitude is N-1, which is 60-2=58. The value of dk = 58 at a significant level of 5% obtained t table that is 1.671. Based on the results of the t test (Independent sample t test), it can be obtained that the t count is greater than the t table, namely 17,515 > 1,671 and sig. (2 tailed) = 0.000 < 0.05, then Ho is rejected and Ha is accepted. So it can be concluded that there is an effect of Animation Video Media on the Creativity of Science Learning for Class V Students regarding Changes in the Form of Objects at SDN 067256, Medan Marelan District TP.2021/2022.

Results and Discussion

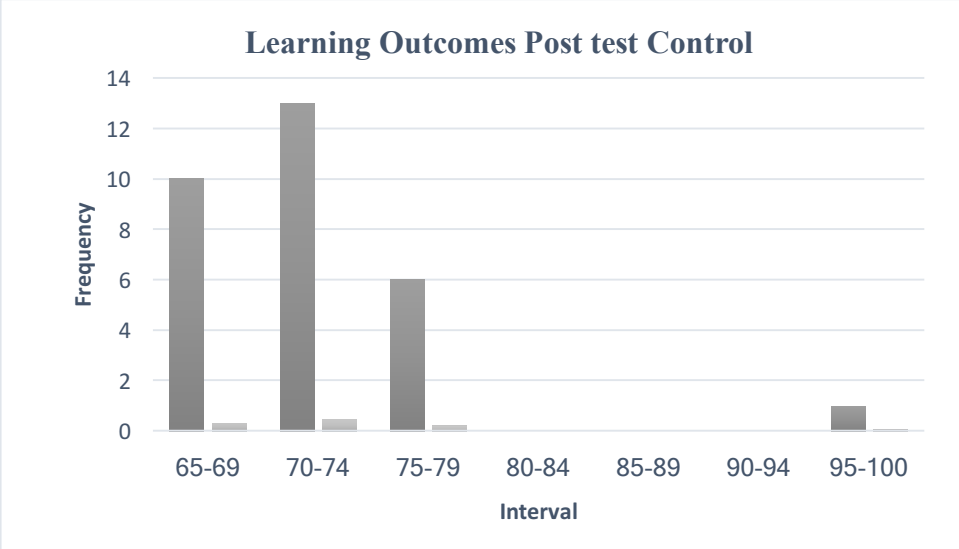
Based on the results of research conducted at SDN 067256 Medan Marelan District with the data analyzed, it can be concluded: This research is an experimental study that aims to determine whether there is an effect of animated video media on the creativity of science learning for fifth grade students about changes in the form of objects at SDN 067256, Medan Marelan District, TP.2021/2022. To find out whether there is an effect on students' creativity, the researchers previously conducted instrument trials in the form of validity tests, instrument reliability, and analysis prerequisite tests. After testing the instrument, the researcher conducted research by giving pre-test and post-test and then after that it was continued by stabilizing the average value of the control class and experimental class students. Furthermore, the analysis prerequisite test was carried out with tests for normality, homogeneity, and hypothesis testing to determine whether or not there is an effect on student creativity. This research was conducted on research samples consisting of 2 classes, namely the control class (VB) and the experimental class (VA). In the control class without being given treatment with the lecture method learning strategy and in the experimental class the treatment was given in the form of animated video media. Prior to the research, pre-test was given with the aim of knowing the initial ability of each student in each class. After that, the control class students and the experimental class students were given a post test which aims to determine the final ability of students. In the control class without being given treatment with the lecture method learning strategy and in the experimental class the treatment was given in the form of animated video media. Prior to the research, pre-test was given with the aim of knowing the initial ability of each student in each class. After that, the control class students and the experimental class students were given a post test which aims to determine the final ability of students. In the control class without being given treatment with the lecture method learning strategy and in the experimental class the treatment was given in the form of animated video media. Prior to the research, pre-test was given with the aim of knowing the initial ability of each student in each class. After that, the control class students and the experimental class students were given a post test which aims to determine the final ability of students. After doing the research, the results of the research in the control class obtained the results of the pre-test of 68.43 and the results of the post-test of 70.37. While the results of research in the experimental class using animated videos obtained the average pre test results of

students amounted to 66.87 and post test results of 96.23. So it can be concluded that there is a significant difference in students' creativity between the control class and the experimental class. Then after testing the hypothesis, the results of the hypothesis test are obtained with sig = 0.000 > 0.05, then H0 is rejected and Ha is accepted. So it can be concluded that there is an effect of Video Animation on Student Creativity at SDN 067256 Medan Marelan District.

Table 4.2 Distribution of Control Posttest Frequency

interval	Frequency	Percent
65-69	10	33.33%
70-74	13	43.33%
75-79	6	20.00%
80-84	0	0.0%
85-89	0	0%
90-94	0	0%
95-100	1	3.33%
total	30	100%

Based on the post test results obtained in the experimental class, it can be described in the following graph:

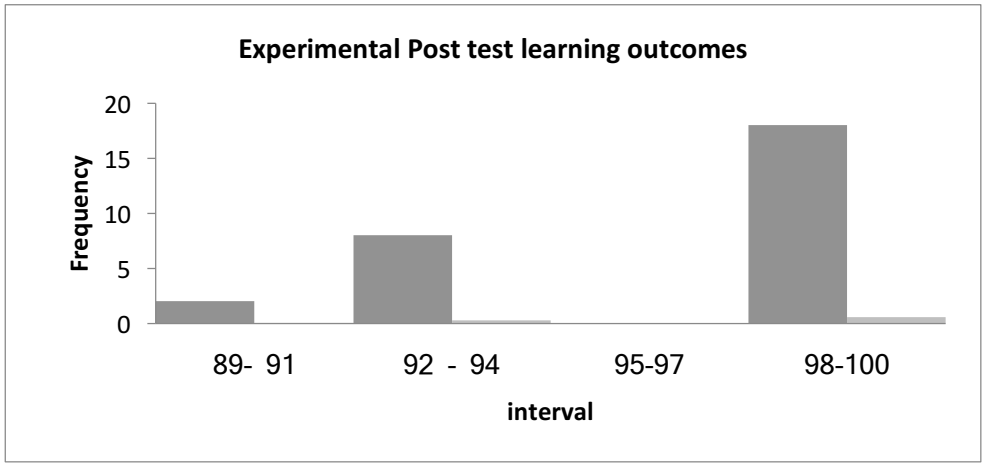


Based on the picture above, it can be concluded that the results of the post test control group with a score of 65-69 the number of students 10, a score of 70-74 the number of students 13, the total score 75-79

Table 4.4 Frequency Distribution of Experimental Posttest

interval	Frequency	Percent
86- 88	2	6.66%
89- 91	2	6.7%
92 – 94	8	26.7%
95-97	0	0%
98-100	18	60.00%
Total	30	100.0%

Based on the post test results obtained in the experimental class, it can be described in the following graph:



Based on the histogram above, it can be concluded that the post test results of the experimental group with a score of 86-88 the number of students 2, a score of 88-91 the number of students 2, a score of 92-94 the number of students 8, a score of 98-100 the number of students 18.

Supporting Theory Based on Research Results

This is also in accordance with the opinion of Liza Yunita (2017: 17) regarding the function of video media, namely increasing motivation, effectiveness and efficiency of delivering information, can generate enthusiasm, passion, prevent boredom of students to learn, provide more concrete experiences for things that may be abstract and provide stimulus and encourage student response. Motivation is needed to improve learning outcomes. The teaching and learning process in schools will not be effective if there is no readiness in students to learn. Readiness to learn including the motivation to learn in students, so that all the lessons given can be well received. This media is also combined with animation in the form of food products that have been processed from the mouth which has become simpler than the original form, so that students can see how the process is and how the food can be absorbed by the body which is digested in the intestine. This is what makes students interested in paying attention to videos that present images, not only still images but also moving and sound or also known as audio-visual media.

Supporting Theory Based on Research Results

This is also the same as previous research regarding the use of video media studied by Syaila (2014), in his research said that students seemed interested in paying attention to animated video media because the media used was audio-visual media that could represent the learning styles of all students, so that if students whose learning style is visual, students must get visual learning stimuli, as well as students whose learning styles are auditive must get auditory learning stimuli. Well here by using animated video media has represented both.

Supporting Theory Based on Research Results

According to Limbong and Simarmata (2020) animated video is a learning media that comes from a collection of various objects that are arranged so that they move according to a predetermined path at every count of time. Through these media, students in learning will not fantasize and float about the material being taught and with the presence of this media can make students active and get complete grades in learning. This is in line with research conducted by Astuti and Mustadi (2014) which results that animated video media is able to help achieve the desired learning outcomes. Therefore, animated videos can be used as an effective and innovative technology-based learning media in learning to write in the classroom.

Conclusion

1. Student Creativity Level Using Animation Video at SDN 067256 Medan Marelan District. Based on the results of statistical tests, it is known that the average Pre-test is 66.87 after the Post-test is 96.23 so that an increase of 29.36, then based on the t-test, the t-count value is 17.515, the t-table value with df 28 at a significant level of 5% is 1.699 by Therefore, t count > t table (17.515 > 1.699) and the significance value is smaller than 0.05 (0.000 < 0.05) so it can be stated that there is a significant increase in student learning outcomes scores in the experimental group or those given Animated Video Media.

2. Level of Student Creativity using Conventional Media at SDN 067256 Medan Marelan District. Based on the results of statistical tests, it is known that the average pre-test was 68.43 at the time of the post-test increased to 70.37 so that the increase was 1.94. Then, based on the t-test, it was found that the t-count was 17.515 with a significance of 0.000, the t-table value at db 28 with a level of 5% significance is 1.699 so the value of t count > t table (17.515 > 1.699) and the significance value is less than 0.05 (p= 0.000 < 0.05) from the data above it can be concluded that an increase of 1.94 is significant or there is a significant increase significant on the score of student learning outcomes in the control group.
3. The Effect of Animated Video Media on the Creativity of Class V Students at SDN 067256, Medan Marelan District. Based on the t-test Post Test, it is known that the average experimental learning outcomes are 96.23 and the control class learning outcomes are 70.37, so it can be concluded that the experimental class's average learning outcomes are 25.86 greater than the control class. . From the table, it is known that the t count is 17.515 with a significance of 0.000. The t table of 58 db at a significant level of 5% is 1.671. So the value of t count> t table (17.515> 1.671) and the significance value is less than 0.05 (p = 0.000 < 0.05). It can be concluded that there are significant differences in learning outcomes in the experimental class and the control class.

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