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The Effect Of Picture Stories On The Recall Memory Ability Of Elementary School Students

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Abstrak

Penelitian ini bertujuan untuk mengetahui pengaruh cerita bergambar terhadap kemampuan recall memory siswa sekolah dasar. Populasi dan sampel dalam penelitian ini adalah seluruh siswa kelas IV SD X yang berjumlah 36 siswa. Penelitian ini adalah penelitian quasi eksperimen yakni penelitian yang membandingkan dua kelompok sasaran penelitian, satu kelompok perlakuan (eksperimen) dan satu kelompok kontrol. Desain penelitian yang digunakan dalam penelitian ini adalah "non-equivalent control group design", yaitu desain penelitian dengan dua kelompok yang dipilih secara tidak acak (random) yaitu kelompok perlakuan (eksperimen) dan kelompok kontrol. Keduanya memperoleh pretest dan posttest. Untuk menganalisis data kemampuan recall memory dilakukan dengan menggunakan analisa statistik dengan menggunakan rumus Uji- T berpasangan (Paired Sample T-Test). Berdasarkan hasil analisis, diketahui bahwa nilai rata-rata kelas eksperimen sebesar 71,44 dan nilai rata-rata kelas kontrol sebesar 62,47. Terdapat selisih rerata dari posttest kelas eksperimen dan kelas kontrol sebesar 8,97. Dan nilai sig. (2-tailed) sebesar 0,000 < 0,05. Disimpulkan bahwa terdapat pengaruh cerita bergambar terhadap kemampuan recall memory siswa.

Abstract

This study aimed to determine the effect of picture stories on the recall memory ability of elementary school students. This study's population and sample were all SD X's fourth-grade students, totaling 36 students. This quasi-experimental research compares two groups of research targets, one treatment group (experimental) and one control group. The research design used in this study was a "non-equivalent control group design," which is a research design with two groups selected non-randomly (random), namely the treatment group (experimental) and the control group. Both obtained pretest and post-test. Statistical analysis was carried out using the Paired Sample T-Test formula to analyze data on recall memory ability. Based on the results of the analysis, it is known that the average value of the experimental class is 71.44, and the average value of the control class is 62.47. There is an average difference between the post-test of the experimental class and the control class of 8.97. And the sig value. (2-tailed) of 0.000 <0.05. It is concluded that there is an effect of picture stories on students' recall memory ability.

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INTRODUCTION

An integral part of human existence is memory. Humans know what exists in this world not only from birth knowledge but mostly from experiences stored in memory. Humans know the names of beaches, cities, and others because they have been part of life experiences which are then stored in memory. You can't imagine what humans would be like if they couldn't remember the past, store what they've just heard, and remember what they will do tomorrow.

Learning activities carried out cannot be separated from the process of remembering (Djamarah, 2011). In childhood, the process of memory development and the ability to remember are very rapid. Learning activities carried out today cannot be separated from the role of existing education. The existence of increasingly advanced education can improve human memory. The ability to remember shows that humans can accept, feel, process, store, respond, and re-evoke the experiences they experience (Bimo Walgito, 2010). Students' activities to retrieve or recall knowledge and information learned from the past are known as recall memory. Recall memory is the process of evoking memories, verbally or in real comparisons, about an experience in the past (Chusurrur, M., Hidayat, T. & Agustin, 2011). So it can be said that recall memory is a process to restore existing memories, by verbal means, about an experience that occurred in the past.

In general, the ability to recall memory plays a very important role when a learning evaluation test is held. Students can carry out this test at the end of the semester exam. The test requires a reasonably high recall memory ability. The purpose of conducting a learning evaluation test is to determine the ability of students to recall the subject matter they have learned.

In this modern life, it is a common belief that education is a significant thing in the course of human life (Fakhruddin, 2011). Education provides not only knowledge, but also skills that will be an essential tool for entering the world of work. Education consists of two kinds; formal and informal. Formal education is what the majority of Indonesians choose to seek knowledge. Formal education in Indonesia is in the form of schools starting from kindergarten (TK), elementary school (SD), junior high school (SMP), to senior high school (SMA).

Jean Piaget said there are stages of cognitive development that take place. The first is the sensorimotor stage (0-2 years), the second is the preoperational thinking stage (2-7 years), the third is the concrete operations stage (7-12 years) and the fourth is the formal operations stage (12-15 years) (Olson, B. H., & Hergenhahn, 2008). In the settings of formal education in Indonesia, kindergarten is included in the second stage of preoperational thinking (2-7 years), primary school is included in the third stage of concrete operations (7-12 years), and junior high school is included in the fourth stage of formal procedures (12-15 years).

The formal education pathway with the longest time is elementary school. Primary school starts from grades 1-6. Children entering elementary school are between 6-7 years old. Elementary school children

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enter the third stage of cognitive development, namely concrete operational, where individuals begin to learn from seeing tangible things, such as the shape of an object or picture. The effort that must be taken to improve student memory is that the teacher must prepare learning media as the primary tool to support the success of teaching and develop methods used by utilizing the media. The success of a lesson is very influential on the use of learning media (Amir, 2016). It is in the hands of the teacher that these tools are meant to increase knowledge, skills, and concentration of learning in children. In addition, the teacher has a role as a teacher, educator, trainer, and evaluator. The use of media in the learning process can arouse new interests and curiosity, foster motivation and stimulation of learning activities, and have a psychological influence on learning (Falahudin, 2014).

As a substitute for parents, at school, teachers must be able to control a successful and enjoyable learning situation that requires a lot of learning media. Learning media also functions to facilitate the learning process. The conclusion of various studies on the use of media in learning shows a significant difference between learning without media and learning using media on the process and learning outcomes (Zaman, Badru, M. Pd, 2010).

One of the most effective ways in classroom management to improve student memory is by providing attractive media to children, namely image media. This is in line with the results of research, which states that the use of image media can improve the results of recall memory (Dwi P, R. A., 2013). This picture is an effective visual tool because it can visualize something that will be explained more concretely and realistically. The information conveyed can be understood easily because the results demonstrated are closer to reality through photos shown to children, and the results received by children will be the same. A set of separate images that contain units of images and represent a series of stories is the definition of image media (Godvany, Nilla, I. Gede Nuryana, 2014). Image media is the most commonly used media. This is because students like pictures more than writing, especially if the photos are made and presented according to reasonable requirements, of course, it will increase students' enthusiasm in following the learning process. The use of image media should be adjusted to the maturity of students.

Images that are popular and attract the attention of early childhood are colorful images depicting real situations, large and small distances and sizes between images must be clear (Gusmita, 2018). Low-grade children have a high interest in striking colors. Color is one of the elements that play an important role in stimulating child development (Julianto, I. Nyoman Larry, I. Wayan Agus, Eka Cahyadi, 2019). Meanwhile, through image media in learning, teachers can use image media to foster children's attention, accuracy, and orderliness so that children's learning concentration can increase.

The primary function of learning media is to visualize something that cannot be seen or is difficult to see so that it appears clear and can cause understanding or improve one's perception (Tafonao, 2018). Image media is considered more effective in learning. This is because children now prefer to watch funny and exciting animated films with varied images. Previous research has discussed a lot about image media but is more focused on improving learning outcomes.

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In general, learning assessment is only carried out on student learning outcomes. Student learning outcomes are obtained after going through a series of learning processes. Students who get poor learning outcomes may be caused by a learning process that is not optimal. Based on these considerations, this study aims to determine whether picture story media can improve students' recall memory ability. Through learning picture story media, students are expected to concentrate and easily remember science learning material during the learning process. With the increase in learning concentration and student memory during learning, student learning outcomes are expected to also increase.

METHOD

The approach used in this research is quantitative. The research method used is quasi-experiment. Experimental research is experimental research, namely research that compares two groups of research targets. One group is given a certain treatment, and another group (control group) is controlled in a situation whose influence is used as a comparison. The experimental design used in this study was non-equivalent quasi-experiments. Figure 1 shows the research design.

Experiment Class	O1	X	O2
Control Class	O3		O4

Figure 1. Quasi-experimental design with non-equivalent control group design

There are two groups selected non-randomly (random), namely the treatment (experimental) group and the control group. Both received a pretest and posttest. The difference in results or dependent variables in the experimental group and the control group can show whether or not the treatment (basic services) given to the experimental group is effective.

This study was conducted with the aim of knowing "The effect of picture stories on recall memory ability in science material for grade IV elementary school students". In this study, researchers took grade IV elementary school as an experimental class. The experimental class was given picture media before science learning took place. Researchers set the research site at SDN X because in that school picture media has never been applied and there has never been research related to this learning model. The population and sample in this study were all fourth grade students totaling 36 students.

In connection with the test method, the questions given to see students' ability to remember student science material amounted to 10 description questions with certain scoring provisions and before the instrument was distributed to several respondents (class students who were the research sample) first the instrument went through a series of tests, namely through testing the level of empirical validity and reliability through a trial of 10 respondents. Furthermore, the question was given to the research sample, namely class IV SD X as the experimental class.

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Table 1. Blueprint for Pretest

No.	Science Materials	Number of Questions	Question number
1.	Plant-eating animals (Herbivores)	3 questions	1, 5, and 7
2.	Animals that eat other animals (Carnivores)	3 questions	4, 6 and 8
3.	Animals that eat other animals (Carnivores)	4 questions	2, 3, 9 and 10

Table 2. Blueprint for Post-test

No.	Science Materials	Number of Questions	Question number
1.	Plant-eating animals (Herbivores)	3 questions	2, 4, and 9
2.	Animals that eat other animals (Carnivores)	3 questions	1, 3 and 5
3.	Animals that eat other animals (Carnivores)	4 questions	5, 6, 7, and 8

RESULT AND DISCUSSION

Result

The results of the data obtained during the study in the experimental class and control class will be described in the following table. The data described is the data from the pretest and posttest results from both classes. The research results will be described as follows:

Table 3. Recapitulation of Pretest and Posttest Results of Experimental and Control Classes

Centering and Data Spread	***Pretest***		***Posttest***	
	Experiment Class	**Control Class**	**Experiment Class**	**Control Class**
Lowest Score	26.00	26.00	46.00	36.00
Highest Score	76.00	80.00	96.00	93.00
Average	51.92	62.47	71.44	62.47
Mode	56.00	60.00	70.00	70.00
Median	53.00	56.00	71.50	60.00
Standard Deviation	11.32	16.26	13.44	16.26

Based on Table 3 above, it can be seen that the lowest score of the experimental and control class pretest is the same, which is 26.00. While the highest score of the experimental class pretest was 76.00, lower than the control class, which was 80.00. The mean value of the experimental class pretest of 51.92 was lower than the mean value of the control class pretest of 62.47. The frequently occurring value or mode based on the pretest scores obtained by students is 56.00 for the experimental class and 60.00 for the control class. The middle or median value on the pretest of the experimental class is 53.00. While the control class is 56.00. The standard deviation value of the pretest in the experimental class is 11.32 and the control class is 16.26. The table above shows that the control class did not show any difference in the increase in the average score, but the experimental class experienced an increase in the average score with a pretest and posttest difference of 19.52. This shows that the experimental class which was given treatment in the form

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of learning by using picture stories had a higher increase in recall memory ability than the control class which was given treatment in the form of conventional learning.

After the researcher has successfully collected data, the data is then analyzed. Before data analysis is carried out, there are stages that must be passed, namely the data must first be tested whether it meets the t test prerequisites, namely by using the normality test and homogeneity test.

Table 4. Calculation Results of Pretest and Posttest Data Normality Test for Experimental Classes and Control Classes

Statistics	Pretest		Posttest	
	Experiment Class	**Control Class**	**Experiment Class**	**Control Class**
Df	36	36	36	36
Sig.(2-tailed)	0.368	0.302	0.246	0.302
Significance Level (*a*)	0.05		0.05	
Conclusion	NDD[a]	NDD[a]	NDD[a]	NDD[a]

[a]NDD: Normally Distributed Data

The normality test of the pretest and posttest data in this study used the Shapiro Wilk test with the help of Statistical Product and Service Solutions (SPSS) software. The determination of the distribution of normally distributed data if the sig value. > 0.05 (5%) then H0 is accepted, the data is declared normally distributed.

Based on Table 4 above, it can be seen that the significance value of the Shapiro Wilk test on the pretest results in the experimental class is 0.368 while the control class is 0.302. This shows that the pretest data in the experimental and control classes are normally distributed. The significance value of the Shapiro Wilk test for the experimental class posttest results is 0.246 while the control class remains, namely 0.302. This shows that the posttest data in the experimental and control classes are normally distributed because the significance value of the pretest and posttest data is greater than the significance level of 0.05.

Table 5. Results of Homogeneity Test Calculation of Pretest and Posttest Data of Experimental Classes and Control Classes

Statistics	Pretest of Experimental Class and Control Class	Posttest of Experimental Class and Control Class
Levene Statistic	0.685	0.396
Significance Level (*a*)	0.05	
Conclusion	Both Classes are Homogeneous	Both Classes are Homogeneous

The homogeneity test of pretest and posttest results used the Levene test with the help of Statistical Product and Service Solutions (SPSS) software. Homogeneity test decision making is carried out based on the provisions of homogeneity hypothesis testing, namely if the sig value. ≥ 0.05 then H0 is accepted, the data is declared to have the same variant (Homogeneous).

Based on Table 5 above, it can be seen that the significance value of the pretest results of the experimental class and control class is 0.685, while the posttest results of the experimental class and control

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class are 0.398. This shows that the pretest and posttest results have a sig. ≥ the significance level (*a*). This can be interpreted that both classes have homogeneous abilities. The data obtained during the pretest and posttest of the experimental and control classes have the same variance or homogeneous.

Table 6. Hypothesis Test of Pretest and Posttest Data of Experimental and Control Classes

Statistics	Pretest	Posttest
Sig. (2-tailed)	0.168	0.001
Significance Level (*a*)	0.05	
Conclusion	Ho accepted	Ha accepted

Based on Table 6 above, it can be seen that the pretest results before being given treatment have a Sig. (2-tailed) > the significance level (*a*) of 0.05, then the null hypothesis (Ho) is accepted or (Ha) is rejected. So with the acceptance of the null hypothesis (Ho), it can be concluded that there is no effect of picture stories on students' recall memory ability. That is, at the time of the pretest the two classes had not been given treatment, so there was no effect. The posttest results have a Sig. (2-tailed) < the significance level (*a*) of 0.05, then the null hypothesis (Ho) is rejected and the alternative hypothesis (Ha) is accepted. So with the acceptance of the alternative hypothesis (Ha), it can be concluded that there is an effect of picture stories on students' recall memory ability.

Discussion

This study was conducted to determine the effect of picture story media on students' recall memory ability in science learning. Based on the results of the study, information was obtained that students' recall memory ability was relatively low. It can be seen from the achievement of the average pretest score for the experimental class of 51.92 and the control class of 62.47. Some factors that cause low student recall memory are teaching and learning activities with a teacher-centered approach so that students do not play an active role and do not generate many ideas. During this time, the science learning process in the classroom tends to be less than optimal. This results in low student recall memory.

The results of recall memory increased after being given different treatments in each class. The increase can be seen in the average posttest score obtained. In the experimental class given treatment in the form of learning media using picture stories obtained an average value of 71.44. While in the control class there was no change in the average increase in value or the same as the average pretest value of 62.47. Based on this data, it can be concluded that the learning outcomes of the experimental class using picture story media are superior to those of the control class.

Based on the results of observations made by researchers at SDN X, it was found that the situation of the learning process carried out by several teachers was still not carried out optimally, the most basic problem in the learning process carried out by teachers is low student interest in learning, which can be seen from the learning process, students get bored quickly, bored, and find it difficult to accept lessons delivered by the teacher. Bored students will experience boredom and in the end they lose attention during

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the learning process. If the teacher still uses the old learning paradigm in the sense that communication in learning tends to take place in one direction generally from teacher to student, the teacher dominates learning without using media as a tool in conveying messages from learning materials, then learning tends to be monotonous resulting in students feeling bored and boring. Therefore, in teaching various subjects to students, teachers should prefer a variety of approaches, strategies, methods and media that are appropriate to the situation so that the planned learning objectives will be achieved. It should be noted that whether or not a learning media selection will depend on the learning objectives, suitability with learning materials, the level of development of students, the ability of educators (teachers) in managing learning and optimizing existing learning resources. One of the most effective ways to manage the class to improve students' recall memory ability in science learning is by providing interesting media for students, namely image media.

Learning by using picture story media has several advantages compared to conventional learning approaches, so that it can optimize students' recall memory ability. This is because picture stories are concrete, pictures more realistically show the subject matter compared to verbal media alone, picture stories can overcome space and time and can overcome observation limitations, and picture stories can clarify problems in any field and for any age level. Learning by using picture story media has enormous benefits for elementary school students, namely providing opportunities for students to further develop their abilities and examine each learning object provided. This is because in learning activities, students are required to be more active in learning through direct learning activities.

CONCLUSION

Research related to the effect of picture stories on the recall memory ability of elementary school students has been successfully conducted. From the research conducted, it can be concluded that there are differences in students' recall memory abilities in science learning materials between students who use picture story media and students who use conventional media. The difference amounted to 8.97. The average ability of recall memory of the experimental class using picture story media is 71.44 and the average ability of recall memory of the control class using conventional media is 62.47. Then there was also an increase in students' recall memory ability between before using picture story media and after using picture story media. The increase that occurred was indicated by the pretest average value of 51.92, after being given treatment with picture story media, the posttest average value increased to 71.44. The magnitude of this increase is significant after a significance test using the t test, at a 5% error rate.

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