



Flashcard Learning Media in Improving Primary School Student Learning Outcomes

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Abstract:

Students have difficulty improving in thematic learning, so we need interesting media for students by using flashcards (picture cards) in learning. The purpose of this study was to determine the effect of flashcard learning media (picture cards) on improving learning outcomes for elementary school students. This type of quasi-experimental research (quasi-experiment). The population in this study were all students in grades VA and VB as many as 36 students. Sampling was carried out using the Saturated Sampling technique and the class selected as the experimental class was VA and the control class was VB. Data collection techniques were carried out by observation, testing and documentation. The data analysis technique was carried out by normality test, homogeneity test, and hypothesis testing using SPSS 26. The research results based on data analysis, obtained that the recount hypothesis test value is greater than a table with a significant level of 5% for N 18 table is 0.468%, then the hypothesis Ha: there is an effect of the use of flashcard learning media (picture cards) on improving learning outcomes for fifth-grade elementary school students by 33.55%.

Keywords: Media Flashcard (picture card), Learning Outcomes, Elementary School

INTRODUCTION

Learning outcomes are changes that occur within students, both regarding cognitive, affective and psychomotor aspects as a result of learning activities. In simple terms, what is meant by learning outcomes are the abilities obtained by students after going through learning activities (Susanto, 2016).

Suryabrata stated that learning outcomes are the final formulation given by educators regarding students' learning progress during a certain period. Hamalik stated that learning outcomes are the results achieved from learning activities, namely the change in behaviour from not knowing to knowing, from not understanding to understanding (Pradana & Gerhni, 2019; Yuniendel dkk., 2023).

In simple terms, what is meant by student learning outcomes are the abilities that students obtain after going through learning activities. Because it is a process of someone trying to obtain a relatively permanent form of behavioural change. Students who are successful in learning are those who succeed in achieving learning goals (Susanto, 2016).

Ngalim Purwanto believes that a person can be said to be successful in learning if there has been a change in his behaviour as a result of training and experience. Learning outcomes are the overall activities achieved by students after carrying out learning activities to achieve the learning objectives that have been set (Faidy & Arsana, 2014).

Many changes occur in a person, both in nature and type, one of the changes that occur is the behaviour that a person experiences when a person begins the learning process by making efforts that will change the nature and behaviour that exists in him (Rahman dkk., 2021; Ulfa, 2020).

Based on the results of initial observations conducted by the author at UPT SDN 09 Labuhan Tanjak Pesisir Selatan on April 11, 2022, for the 2022/2023 academic year, and the results of interviews conducted on April 11, 2022, with the homeroom teacher of class V A, namely Mrs. Noflina S.Pd and the homeroom teacher of class B namely Mrs. Harlina A. Ma. Pd, data was obtained showing that there were students who experienced difficulty in critical thinking. Some students have not completed the subject, where in the learning the students do not understand the material to be studied and there is a lack of student activity in the learning process.

Based on information from class V A and B teachers at UPT SDN 09 Labuhan Tanjak Pesisir Selatan, it was found that the value data regarding learning outcomes was still low. This can be seen in the table of percentage of student completeness in the thematic subjects below:

**Table 1. Average MID-Thematic Exam Score
Class V UPT SDN 09 Labuhan Tanjak Pesisir Selatan Odd Semester FY 2022/2023**

No	Amount	Student				MCC
		T	%	TT	%	
A	18	9	50%	9	50%	75
B	18	12	66,67%	6	33,33%	75

(Source Homeroom Class V A & V B UPT SDN 09 Labuhan Tanjak Pesisir Selatan)

Table 1 shows that the odd semester MID-Thematic exam scores for 18 students out of 36 students in class V are below the Minimum Completeness Criteria (MCC) set by the school, namely 75. This shows that 18 students have not yet reached the Minimum Completeness Criteria (MCC).

The word media comes from the Latin *medius* which means 'middle', 'intermediary' or 'introduction'. According to Aqid, learning media is anything that is used to convey messages and can stimulate the teaching and learning process for students. Media is used to help create good learning (Aghni, 2018).

According to Oemar Hamalik, learning media are tools, techniques and methods used to make interaction and communication between educators and students more effective in the teaching and education process at school. Suprpto et al. stated that learning media is an effective supporting tool that can be used by educators to achieve the desired goals (Hasan dkk., 2021).

Flashcards are small cards that contain images, text, or symbols that remind or direct students to something related to the image. Flashcards usually measure 8x12 cm, or can be adjusted to suit the size of the existing class. The images referred to here include photos, paintings/drawings, and sketches (line drawings). The main purpose of displaying various types of images is to visualize the concept that you want to convey to students (Anisa & Attamimi, 2023).

METHOD

Research Types and Designs

The type of research used in this research is quantitative research. The research method used is an experimental method with a quasi-experimental design approach. The design used is a pretest-posttest control group design. The pretest-posttest control group design can be seen in Table 2 below:

Table 2. *Pretest-posttest Control Group Design*

Sampel	Pretest	Treatment	Posttest
R	O ₁	X	O ₂
R	O ₃		O ₄

Information:

R = Random sampling

O₂ = Experimental class posttest

X= Treatment in the experimental class

O₃ = Control class pretest

O₁ = Experimental class pretest

O₄ = Control class posttest

Instrument Test Techniques

Validity test

A test consists of questions or tutoring items that cannot be separated because they are a totality, meaning that the validity of a test will be greatly influenced or very dependent on the validity of each item that makes up the test.

The results of the validity search can be seen in the table below:

Table 3. Validity of Question Instruments

Question Category	Question No	Amount
Valid	1,2,3,4,5,6,7,8,9,17,18,19,20,21,22,23,24,25,26,27,31,32,33,34,35	25
Invalid	10,11,12,13,14,15,16,28,29,30	10

(Validity of Attached Question Items)

Reliability

The reliability of a test measure can be trusted to be used as a data collection tool. A test is said to have reliability, namely if the test can provide accurate results even though the times are different. Reliability in objective questions uses reliability using the alpha formula (Sudijono, 2015), as follows:

$$r_{11} = \frac{k}{k-1} \times \left\{ 1 - \frac{\sum S_i}{S_t} \right\}$$

Information:

R₁₁ = Reliability Value

S_t = Total variance

∑S_i = Total score variance

K = Number of items

The criteria used to see test reliability are shown in the table below:

Table 4. Reliability Estimation Criteria

Reliability	Category
>0,80	The high degree of reliability
0,40 - 0,80	Medium degree of reliability
<0,40	Low degree of reliability

(Source: Anas Sudijono, 2011:372)

Question Difficulty Level Index

The question difficulty level index is an indicator that shows whether the question is easy. To find out the difficulty level of the question, the formula is used:

$$p = \frac{B}{JS}$$

Information:

P = Question difficulty index number.

B = The number of testees who were able to answer correctly the item in question.

JS = Number of testees who took the learning outcomes test.

Regarding how to provide an interpretation of the difficulty numbers for the questions, it is explained in the table as follows:

Table 5. Interpretation of Question Difficulty Levels

Difficulty Index	Question Category
< 0,30	Hard
0,30 - 0,70	Medium
> 0,71	Easy

(Source: Suharsimi Arikunto, 2008:210)

The results of the interpretation search in the initial trial for the level of difficulty can be seen in the table below:

Table 6. Interpretation Results of Question Difficulty Level

Question Category	Question Number	Amount
Easy	15,25	2 question
Medium	1,2,3,4,5,7,8,9,10,11,13,14 6,17,18,19,20,21,22,23,24	21 question
Easy	6,12	2 question

Of the 25 questions, 2 questions were declared easy, 21 questions were declared medium and 2 questions were declared difficult.

Question Discriminating Power Index

The discriminating power of an item is the ability of a learning outcomes test item to be able to differentiate between students with high ability and students with low ability. With formula:

$$D = \frac{BA}{JA} - \frac{BB}{JB}$$

Information:

D = Discrimination index number

B_A = The number of upper-group students who answered the questions correctly.

B_B = The number of lower group students who answered the questions correctly.

J_A = The number of students included in the upper group.

J_B = The number of students included in the lower group.

Table 7. Interpretation of Discriminating Power

Index Number	Criteria
< 0,20	Criteria
0,20 - 0,40	Currently
0,40 - 0,70	Good
0,70 - 1,00	Very well

(Source: Suharsimi Arikunto, 2008:210)

The results of the search for the interpretation of differentiating power in the initial test can be seen in the table below:

Table 8. Results of Interpretation of Differentiating Power of Questions

Question Category	Question Number	Amount
Bad	-	-
Currently	2,9,21,22,23,24,25	7 question
Good	1,3,4,5,6,8,10,11,12,13,14 15,16,17,18,19,20	17 question
Very well	7	1 question

Of the 25 questions, 7 questions were declared moderate, 17 questions were declared good, and 1 question was declared very good.

RESULT

Normality test

This normality test aims to find out whether the learning outcomes of the sample class are normally distributed or not. Data is said to be normally distributed if the significance value is > 0.05. This test was carried out using SPSS version 26. The results of the data normality test can be seen in the following table:

Table 9. Normality Test for Experimental Class and Control Class

Tests of Normality							
Class		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	Df	Sig.	Statistic	df	Sig.
Pretest ks		.188	18	.091	.947	18	.382
Posttest eks		.196	18	.067	.903	18	.066
Control pretest		.205	18	.044	.882	18	.028
Control posttest		.210	18	.034	.890	18	.039

From the data above, it shows that the significance value is > 0.05 for both the experimental class and the control class. In the experimental class, it can be seen that it is significant at $0.067 > 0.05$, and in the control class, it is significant at $0.034 > 0.05$. This means that the sample class comes from both sample classes with a normal distribution.

Homogeneity Test

This homogeneity test aims to determine whether the post-test data has the same variance or not. This test was carried out because it was known that the data was normally distributed based on normality testing. Data is said to be homogeneous if it has a significance value > 0.05 . The following is an analysis of the homogeneity test using SPSS 26.

Table 10. Data Homogeneity Test for Experimental Class and Control Class

Test of Homogeneity of Variance					
		Levene Statistic	df1	df2	Sig.
LEARNING OUTCOMES	Based on Mean	1.783	3	68	.159
	Based on Median	1.107	3	68	.352
	Based on the Median and with adjusted df	1.107	3	56.602	.354

Test of Homogeneity of Variance

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	Based on the Median and with adjusted df	1.107	3	56.602	.354
	Based on trimmed mean	1.810	3	68	.154

Based on Table 10 above, a significance value > 0.05 is obtained, meaning that the two sample classes are homogeneous with a confidence level of 95%.

Hypothesis testing

The results of the normality test and homogeneity test of the two variances of the learning outcomes test data for the two research samples came from a population with a normal distribution and homogeneous variance, so to test the hypothesis using the t-test which is useful for seeing whether there are differences in the learning outcomes of students who apply flashcard learning media. (picture cards) is better than one that does not use flashcard media (picture cards). Where if the significance value (2-tailed) is < 0.05 then H_0 is rejected and H_1 is accepted, whereas if the significance value (2-tailed) is > 0.05 then H_0 is accepted and H_1 is rejected. By Analyze-Compare Means - Independent Samples Test using SPSS 26.

Table 11. Independent Sample Test Hypothesis 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
4.558	.040	-13.319	34	.000	-33.556	2.519	-38.675	-28.436
		-13.319	28.121	.000	-33.556	2.519	-38.715	-28.396

From the results of calculations via SPSS, sig is obtained. (2-tiled) of 0.000 when compared to the sig level. $(\alpha) = 0.05$ then sig. (2-tiled) = $0.000 < 0.05$ with a confidence level of 95%. So H_0 is rejected and H_1 is accepted. So it is concluded that students' learning outcomes are better in thematic learning using flashcard media (picture cards).

DISCUSSION

The discussion in this research is about the use of flashcard media (picture cards) to improve the learning outcomes of class V students in thematic learning theme 1 subtheme 1. This sample consists of two classes, namely the experimental class (VA) with a total of 18 students and the control class (VB) with a total of 18 students. The experimental class is the class that receives treatment using flashcard media (picture cards), while the control class is the class that uses the group discussion learning model. It is hoped that the different treatments given to the two classes will have an impact on improving learning outcomes.

Learning media is any person, material, tool, or event that can create conditions that allow students to receive knowledge, skills, and attitudes. The existence of learning media can support and make it easier for students to understand learning material, and can improve the quality of educators' teaching which has an impact on student learning outcomes (Audie, 2019; Shafa dkk., 2022).

This research was conducted on class VA students as the experimental group and class VB students as the control group. Before treatment is carried out, each class is given a pre-test sheet in the form of objective questions consisting of 25 questions that have been tested. A pre-test sheet is given to determine students' initial abilities. After distributing the pre-test sheets, treatment was then given to the experimental class using flashcard media (picture cards). After applying the treatment, the writer gave a post-test sheet in the form of questions consisting of 25 questions. Post-test sheets were given to determine the effect of using flashcard media (picture cards) after being given treatment in the experimental class.

The influence of using flashcard media (picture cards) is due to differences in treatment. By learning using flashcard media (picture cards), students can participate in learning enthusiastically. Elementary school-age children tend to still enjoy playing,

at the concrete operational stage children enjoy feeling or doing things directly. Students enjoy playing, moving and working in groups (Desmita, 2012).

Based on research data conducted by the author, the author plays a direct role as an educator to teach and apply the media that the author researched in thematic learning theme 1 in-class VA and class VB on the material of animal and human movement organs to improve student learning outcomes. In class VA, treatment is given using flashcard media (picture cards) and class VB uses image media in the theme book.

As for knowing the students' learning outcomes, the author further gave 25 questions to the experimental class. The results show that from 25 questions for 18 students, 87.77% stated that learning outcomes had improved.

Flashcard media (picture cards) influences the initial reading learning outcomes of class V students. This is shown based on the results of research conducted on class V students at UPT SDN 09 Labuhan Tanjak Pesisir Selatan.

Based on the explanation above, it can be concluded that learning using flashcard media (picture cards) has an influence on the learning outcomes of class V students at UPT SDN 09 Labuhan Tanjak Pesisir Selatan as proven by the percentage of completeness achieved in the post-test which is 87.77%.

The results of data analysis to determine student learning outcomes in thematic learning theme 1 subtheme 1, the average student learning outcomes in the experimental class posttest were 87.77 and the control class 80.44. If we look at the Minimum Completeness Criteria (MCC) used at UPT SDN 09 Labuhan Tanjak Pesisir Selatan, namely 75, then in the experimental class the students who got a score above the KKM were as many as students (100%). There was 1 student in the control class who got a score above the MCC (95%), while 1 student who got a score below the MCC was 5%.

Based on the results of the data analysis, the results of the t-test on the posttest on student learning outcomes were 0.000 ($0.000 > 0.05$), so it can be stated that there is an influence in the use of flashcard media (picture cards) on improving student learning outcomes.

CONCLUSION

Based on research conducted in class V UPT SDN 09 Labuhan Tanjak Pesisir Selatan, it can be concluded that student learning outcomes increase by using flashcard media (picture cards). Judging from the average score of the experimental class using flashcard media (picture cards) increased from 54.22% to 87.77% while the control class used image media in theme books increased from 62.88% to 80.44%.

The difference in learning outcomes for the experimental class and the control class after research was conducted on class V students of UPT SDN 09 Labuhan Tanjak Pesisir Selatan, based on hypothesis testing or t-test with SPSS version 26, was found to be significant α obtained Sig $\alpha < 0.05$, namely 0.000 meaning $0.000 < 0.05$, then H_0 is accepted and H_1 is rejected and $T_{count} > T_{table}$, namely $3.964 > 2.015368$, meaning that H_0 says there is an influence on learning outcomes with flashcard media (picture cards) and H_0 is rejected. So the conclusion is that there is an influence on learning outcomes using flashcard media (picture cards) with those using image media in theme books.

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