

THE INFLUENCE OF FLASHCARD MEDIA ON SCIENCE LEARNING OUTCOMES FOR ISLAMIC ELEMENTARY SCHOOL GRADE

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Abstract

This study starts from the researchers' interest in the use of flashcard media for the elementary school level because seeing the facts in the field that students are only monotonous while in the classroom caused of teacher-centered learning. This research is quantitative research with an experimental approach conducted at MI NU 56 Krajangkulon Kendal with the aim to find out the effect of flashcard media on science learning outcomes for fifth-grade students of MI NU 56 Krajangkulon Kendal. The population in this study were all fifth-grade students, totaling 126 students. From this population, the researchers used a simple random sampling technique to take the sample of this study. As a result, the chosen class to be the experimental class is the fifth B grade, consisting of 32 students, and the control class is the fifth A grade, consisting of 32 students. The data used in this research are primary data and secondary data. Primary data was obtained through questionnaires which were shared with fifth-grade students, while the secondary data is in the form of supporting literature on flashcard media and science learning outcomes. The data collection was conducted using multiple-choice tests and documentation. The data analysis technique is descriptive statistics, and the hypothesis test used is the T-test. And the results of the hypothesis test showed that the calculated t value is $4.067 > 1.669$ with a significance level of 0.000 with the $df = (n-1)$ of 63; therefore the t table value is at a significant level of 0.05. thus the t count $>$ the t table or $4.067 > 1.669$ then it can be stated that H_0 is rejected and H_a is accepted. In conclusion, there is an influence between the use of flashcard media on science learning outcomes.

Keywords

Flashcard Media, Learning Outcomes, MI NU 56 Krajangkulon, Natural Science Lesson



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INTRODUCTION

Learning is a system that is formed in a complex way, and its success of it can be known from two main aspects from the form of product aspects and process aspects (Harsiwi & Arini, 2020). Subsequently, to see how far the success of learning can be seen from the product aspect itself which is the presence of students' success in the form of learning outcomes obtained. The success of learning in terms of results tends to be more visible, and the criteria can be determined, but it can reduce the results of the meaning of the learning process, which is a process that has elements of education (Alwi, 2015).

As one of the complex systems, learning can certainly be influenced by several elements in it or the former itself (Wahyuni, 2020). Some of the elements that form the learning process are students, teachers, librarians, school principals, learning materials (books, modules, leaflets, magazines, video or audio recordings, and similar materials), and various sources to facilitate learning, such as overhead projectors, audio and video tape recorders, radio, computers, television, laboratory libraries, learning resource centers, and others (Maswar et al., 2020).

Afterward, in terms of applying learning media, a teacher should pay attention to the suitability of learning media for the subject because it cannot be denied that all media cannot be used as a good way to deliver the subject matter to students (Safitri & others, 2021). Therefore, the expected learning objectives cannot be achieved properly because of the inappropriate use of learning media. Aside from adjusting the learning materials, the use of learning media should pay attention to aspects of the objectives of learning, the number of students in it, and the infrastructure used in the school (Novianti et al., 2018).

One of the main subjects at the Islamic elementary school level is IPA (Natural Science). Seeing that the material is very complex, in order to support good learning outcomes in science subjects is conduciveness in the learning process (Mairina et al., 2021). This means that these learning activities should be active, effective, innovative, creative, and fun. Maka dari itu, peran guru disini sangat penting karena pemilihan media yang digunakan secara tepat dapat menyebabkan adanya suasana belajar yang kondusif didalamnya (Azhima et al., 2021). Not only that but choosing the right media can also achieve optimal and maximum learning goals. Hence, if the goals of a lesson are achieved, it will affect the learning outcomes of the students themselves (Fartdillah et al., 2020).

For now, one of the subjects that students find difficult to understand is Natural Science (Prosedur et al., 2016). This is due to the fact that science learning in schools does not use proper learning media while learning, there are even those who never teach using the media. The impact is the student learning outcomes fall into the low category. Then, the problem found is that there are teachers who are unable to choose the right learning media for their students, so the monotony is only the teacher lecturing, taking notes, and only using student books and teacher books and, in the end only teacher centered learning. Even though what happened in the field was that students looked focused on listening to the teacher's explanation, and the material could not be understood optimally because the way to deliver the materials was less interesting and tended to be boring for a student (Hidayah et al., 2014).

In Indonesia, research has found that students tend to be more active, creative, and fun with difficult subjects if these lessons can be innovated by using media in their learning methods. This is the answer, along with the loopholes for teachers who have to upgrade teaching and learning methods to get more effective and ensure the learning objectives are well achieved (Husna, n.d.).

According to (Utami et al., 2021), Flashcard learning media is a form of creative and educative media, especially targeting children because children like games and, on average, they, spend a lot of time playing. Thus the use of flashcard media is the right way. The strong reason is that it contains pictures and words contained in one card, which is deliberately designed to improve several aspects, namely: 1) developing memory; 2) training a children's independence; 3) having a wider vocabulary in children's brain (Yani et al., 2018). in his opinion also revealed that, on the other hand, flashcard media has advantages in the form of a strong association between the front and back brain and the fulfillment of effective management principles, especially in the brain. Besides that, it can also strengthen a child's memory and understanding specifically, there is high mobility and flexibility because it can be taken anywhere.

Flashcard image media is also one of the educative learning media in the form of cards containing pictures, writing which can be made as a game so that there is a chance that a student will be interested in learning while understanding the material presented (Rozali et al., 2022). In other words, the existence of learning media in the form of flashcards provides students with the atmosphere to learn while playing. So as to provide opportunities for a student to learn in a pleasant atmosphere (Jaliyah et al., 2022). This flashcard media is used in a random way. Students do not know what is behind the chosen cards randomly. The card can contain pictures followed by

questions.

Based on the results of observations made at MI NU 56 Krajangkulon Kendal, it was shown that they did not really understand the description of ruminants and could not distinguish the organs of ruminants. It can be seen that many students are less enthusiastic about participating in learning, sleepy, and less enthusiastic about asking questions. Some assumptions on the lack of students' interest in the teacher's learning process because it prohibits less variety in applying learning media. But in its practice, flashcard learning media has not been used optimally due to the lack of teacher creativity and productivity in developing learning media. The deficiency in using technology in education is proven by the lack of learning media products developed. This is proven by the still limited learning media used.

According to (Muslimin et al., 2021), The finding of this study is that flashcard media has a significant effect on the mathematics learning outcomes of set material. The similarities are that both use the experimental method, while the difference is that there is a different object, which is the results of learning science using flashcard media. Then, in research conducted by (Nurhasanah, 2021) Then, in the research conducted by Anik, it was found that learning media in the form of flashcards can improve the optimality of a child learning in the class because they assume that they are playing, not studying, even though the essence of flashcard media itself is to lead children learn while playing. Then, research conducted by (Putra et al., 2018) got the result that the children did not seem interested in the delivery of learning delivered by the teacher. The journal describes that the development of multimedia flashcards has a better impact on improving the quality of learning in the classroom. The similarity is that they both discuss flashcard media to improve learning outcomes. While the difference lies in this study is flashcard media is used as a way to improve listening skills on student learning outcomes, while this study discusses the effect of flashcard media on science learning outcomes, Flashcard media improves the quality of teaching in the classroom and also supports students to carry out learning in the classroom. The next research conducted by (Nurhasanah, 2021) concluded that flashcard media can affect the quality of learning in the classroom. The similarities are that both discuss the effect of flashcard media on student learning outcomes, while the difference lies in the first variable, which in this study discusses the effect of learning media, whereas in this study, namely the effect of flashcard media on student learning outcomes which is clearer in object to be studied. Then, the research by (Fani Yantik, et al., 2022) sum up that this flashcard media is very supportive to be used as learning media. The similarities in

this study are that they both discuss flashcard learning media, while the difference is in the discussion, namely discussing the Teams Achievement Division (STAD) strategy while in this study discusses the effect of flashcard media on student learning outcomes in science learning.

Therefore, based on the problems above, the researcher is interested in raising the title "The Influence of Flashcard Media on Science Learning Outcomes of Fifth Grade Students at MI NU 56 KrajanKulon". The aim of this study is to determine the effect of flashcard media on the learning outcomes of fifth grade science students at MI NU 56 Krajankulon.

METHOD

This research is a quantitative study with an experimental design that was carried out from 16 February to 20 February 2023 at MI NU 56 Krajankulon Kendal Academic Year 2023/2024. The population in this study were all fifth grade students consisting of VA, VB, VC, and VD classes, totaling 126 students. From this population, samples were taken from this study using a simple random sampling technique so that the selected class to be the experimental class is the VB class, consisting of 32 students, and the control class is the VA class, consisting of 32 students.

The research design in this study used the Posttest Only Control Group Design design. This design was carried out to see the effect of learning outcomes before being treated using flashcard media and after being treated using flashcards (Apriani et al., 2016). To see the learning outcomes before being given treatment, the researcher took the final science semester exam scores from the experimental class and the control class. For learning outcomes after being given treatment, the researcher uses a post-test. The experimental class will be given treatment using flashcard media, while the control group will be treated without using flashcard media.

The test is used as a measuring tool to determine the results of science learning in the experimental class and control class after being given treatment. Before the test instruments were distributed to the respondents, the instrument was tried out with four tests, which are validity, reliability, level of difficulty, and distinguishing element on the test items. The documentation method is used to obtain student data in the form of student names and documentation during the research (Fadli, 2021).

Data analysis was used to determine whether or not there was an influence of flashcard media on science learning outcomes. Data collection was carried out using multiple choice tests, documentation. The test is used as a measuring tool to determine the results of science learning in

the experimental class and control class after being given treatment. Before the test instruments were distributed to the respondents, the instrument was tried out with four tests, namely validity, reliability, level of difficulty, and distinguishing elements on the test items. The documentation method is used to obtain student data in the form of student names, and documentation during research.

Before entering into the calculation by analyzing the acceptance of the hypothesis or not accepting the hypothesis, a validity test is carried out first to measure the level of validity or the level of validity of an instrument used in the research process. According to (Istiarini & Sukanti, 2012) in their opinion states that validity is a measure that can show the value of the validity of an instrument, because an instrument will be declared valid if it has high validity, and an instrument will be declared invalid if it has low validity. (Zaenal Arifin, 2017) In his book also says that an instrument that is declared valid means that it can be a measuring tool used to obtain valid data and can be used as a measuring tool to measure something that should be measured. Therefore, a valid instrument is the right instrument to measure what will be measured later (Anderha & Maskar, 2020).

Then, for the validity of the flashcard media used, the media validity assessment was used by the media expert validator using a questionnaire with a score of 1-4. The following are the criteria for testing the validity of learning media based on the assessment in the table below:

Table 1. Criteria for Testing the Validity of Learning Media

No	Score	Information
1.	49-76	Very good
2.	39-48	Good
3.	20-38	Pretty good
4.	0-19	Not good

Before carrying out the hypothesis test, the researchers do a prerequisite test first. the prerequisite test is the normality test which is used to see whether it is normal or not to determine whether the sample is normal or not and if the sample is normally distributed (Rezi Ariawan, 2017), then it can be used as a sample for the experimental class and the control class. And the homogeneity test is to find out whether the variation is the same between the two groups, which are the experimental group and the control group (Kesumayanti & Putra, 2016). If the two groups have the same variance, then the two groups are said to be homogeneous groups. Hypothesis testing in this study used the t-test (Simple Paired t-test) with the criteria used to make a decision on the hypothesis with an alpha significance level of 5% (0.05). Ho was rejected if the probability significance (sig) was

<0.05. If the probability significance value (sig) < 0.05, then Ho is rejected. Otherwise, if the significance value (sig) > 0.05, then Ho is accepted (Prosedur et al., 2016).

The hypothesis in this study is:

Ho = There is an influence of flashcard media on science learning outcomes for the Islamic Elementary School level

Ha = There is no effect of flashcard media on science learning outcomes for the Islamic elementary School level

FINDINGS AND DISCUSSION

Findings

After passing the calculations using the SPSS test, these are the following data obtained:

Table 2. Normality Test Results

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		64
Normal Parameters ^{a,b}	Mean	,0000000
	Std. Deviation	5,05331297
	Absolute	,090
Most Extreme Differences	Positive	,090
	Negative	-,070
Kolmogorov-Smirnov Z		,717
Asymp. Sig. (2-tailed)		,682
a. Test distribution is Normal.		
b. Calculated from data.		

Source: Primary Data (Processed), SPSS 2023

Based on the results of the normality test, it is known that the significance value is 0.682 > 0.05, so it can be concluded that the residual values are normally distributed.

The results of media validation by the media expert validator get a score of 69 in the very good category. This shows that the media is very feasible to use.

Table 3. Hypothesis Results

Model		Coefficients ^a			T	Sig.
		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta		
1	(Constant)	40,547	9,730		4,167	,000
	Media Flashcard	,489	,120	,459	4,067	,000

a. Dependent Variable: Hasil Belajar IPA

Source: Primary Data (Processed), SPSS 2023

It is stated that the constant value (a) is 40.547, while the value of science learning outcomes (b or the regression coefficient value) is 0.489, so the equation is:

$$Y = a + bX$$

$$Y = 40,547 + 0,489X$$

This means that the effect of flashcard media on science learning outcomes is 0.489, and for each addition or increase by 1 unit, science learning outcomes increase or increase by 0.489. It is known that the value of the regression coefficient is positive, so it can be interpreted that the direction of the influence of variable X (Media Flashcard) on Y (Science Learning Outcomes) is positive. From these data, it can be interpreted that the higher the level of use of Flashcard media in science learning outcomes, the higher the science learning outcomes.

Based on the table above, the calculated t value is 4.067 with a significant (2-tailed) level of 0.000 with $df = (n-1)$ of 63, so the t table value is 1.699 at a significant level of 0.05. So $t \text{ count} > t \text{ table}$ or $4.067 > 1.699$, then H_0 is rejected, and H_a is accepted, so there is an influence between flashcard media on science learning outcomes.

Discussion

The results of the research data analysis that has been done show that the use of flashcard media can affect student learning outcomes. This is evidenced by an increase in student learning outcomes after the use of flashcard media during the lesson. This study also proves that there is a linkage and strengthens previous research, which states that flashcard media has a significant effect on student learning outcomes.

This can be seen from the magnitude of the calculated t value, which is equal to 4.067 with a significant level (2-tailed) of 0.000 with $df = (n-1)$ of 63 so that the value of t table is equal to 1.699 at a significant level of 0.05. So the calculated t value is greater than the t table, or if it is formulated, $4.067 > 1.699$. So, in other words, H_0 is rejected, and H_a is accepted, so it can be stated that there is an influence of flashcard media on learning outcomes.

The use of learning media in the form of flashcards is an effective alternative for today's children's learning. Because by using flashcards, the students will be able to access information through intelligence with special visual and kinesthetic categories so that learning in the classroom is not monotonous and boring, with the result that a student can understand and understand what the teacher conveys through the learning media in the form of flashcard media (Achmad et al., 2022).

The results of this study can also be said to support the theory that is about the function of media and its benefits in the form of flashcard media which is a tool for an educator in teaching. The use of flashcard media can also make the class atmosphere more fun and conducive, accompanied by high enthusiasm from a student who obtains material through the flashcard media (Saputra, 2019). Not only that, but flashcard media can also affect the quality of learning in class because with the activeness of interactive students, student learning outcomes will be maximized, and the quality will be better than before (Okfia & Jaya, 2021). In addition, students who study using media in the form of flashcards are also able to support future development by educating students to develop their potential in solving life's problems, one of which is problems in education which can be sourced from teachers and can also be sourced from teachers. From students, in addition to media and strategies. The used must be in accordance with the characteristics of students (Novianti et al., 2018).

This is also accompanied by the presence of colorful which is one of the attention of a student's eyes because in addition to attractive colors, images with larger sizes are also one of the attractions for a student to be more enthusiastic in learning because of focus, interest, and this high curiosity of a student is what makes the class lively and active so that learning is not centered only on the teacher. This is, of course, very different from a class that does not use learning media, especially flashcard media. That is, there are still students who are engrossed in chatting alone with their desk mates and think that learning at that time is not interesting. Because of that, the enthusiasm and curiosity of a student are decreasing, and it is still lacking, especially in learning activities in science subjects (Citra & Rosy, 2020).

CONCLUSION

The results of the data analysis in this study indicate that there is an influence of flashcard media on student learning outcomes. This can be seen from the results of the hypothesis testing, which shows that the calculated t value is 4.067 with a significant level (2-tailed) of 0.000 with $df = (n-1)$ of 63 so that the t table value obtained is 1.669 at a significant level of 0.05. So $t \text{ count} > t \text{ table}$ or $4.067 > 1.669$, then H_0 is rejected, and H_a is accepted. So there is an influence of flashcard media on science learning outcomes in fifth grade students at MI NU 56 KrajanKulon Kendal.

Thus it can be concluded that there is a fairly strong influence between flashcard media on the science learning outcomes of fifth grade students at MI NU 56 KrajanKulon Kendal. And this study shows that the learning outcomes of students in science subjects that use flashcard media are

better and increase compared to student learning outcomes without the use of flashcard media.

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