

## Effect of Learning Media on Science Learning Achievement In Elementary School Students Class IV

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### Abstract

*Because by using learning media effectively, it is hoped that students will be able to understand well the theory lessons being taught. The purpose of this research is (a) to determine the level of science learning performance of class IV students who were taught using and not using learning media (on the science learning performance of class IV A students in the previous control group and B) to find out whether there is a positive influence on the use of learning media on the science learning performance of class IV students. This research uses an experimental approach with a comparative design. The population and sample were 80 class IV students. Data collection uses documentation and test techniques, while the data analysis techniques used are descriptive statistical analysis and inferential statistical analysis with the t-test formula. The results of research conducted in class IV of SD Negeri Mangkura III Makassar which consisted of the top 2 groups, namely the control group (class IV.A) and the experimental group (class IV.B) showed that there were differences in learning performance, especially after learning was carried out, where the group The controls were taught science learning in 4 meetings without using the same learning media once, while the experimental group was taught using learning media even though the characteristics were still very simple. There is also a positive impact of using learning media on student performance, where groups of students who are taught using media are more likely to show increased learning performance compared to groups of students who are taught not using learning media.*

**Keywords:** *Learning Media, Learning Performance, Science.*

### 1. Introduction

In education national , students always demanded for increase performance learn practice is description ability students at school , either in aspect cognitive , affective nor psychomotor (Puspitarini & Hanif, 2019). because that 's achievement study always Becomes issue education that is actual , interesting and important for researched , fine from circles educator nor observer education from all element society (Syakur, 2020). Problem performance study interesting , actual and important for researched like stated by Abdullah (in Manurung & Rohmah, 2021), because of achievement data study are : (a) indicators quality and quantity, (b) symbol fulfillment curiosity (curiosity), (c) as internal criteria (height low predictability school and so criteria external tall low ability for success to in society , (d) to be stimulant and lure or pusher and puller in enhancement knowledge and technology , and (e) to be indicator power absorption and intelligence (Fidan & Tuncel, 2019; Sahin & Yilmaz, 2020).

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If connected with institution formal education, then performance achieved learning students at school could made indicator success study students , success system education and teaching in schools , and predictions success students in society that will come (Saputra et al., 2018;Firdaus et al., 2019). However thus, in effort enhancement performance study student, then various component education very define, fine aspects of teachers, students, curriculum, facilities learning , no except factor completeness of appropriate learning media with demands curriculum (Jarke & Breiter, 2019;( et al., 2019).

Use of learning media is one very aspect important and necessary noticed by the teacher To do activity learning (Liao et al., 2019). Because with use of learning media in a manner effective, hopefully student could understand in a manner good Theory lessons taught (Rahmawati et al., 2020). Learning media used and often also seen outside school will make student could more understand Interesting and taught material interest student for learn (Widodo, 2018;Fuady & Mutalib, 2018).

Based on observation writer, the learning media used, namely environmental media. Whereas according to assumption writer that completeness of learning media is one condition absolute in create a learning process optimal teaching (Udayani et al., 2021;Mandailina et al., 2019). In other words, learning media is tools used in the learning process , optimal or not the learning process very determined by complete whether or not the learning media used and the ability of learning media interesting interest study student. this in accordance opinion Achsin (in Kelana, 2018) that " learning media could drag and zoom attention student to Theory teaching presented ”.

Based on opinion above , clear that student or taught class with no using learning media of course will make condition different learning with student or taught class with using learning media (Arifin et al., 2021). this means student or taught class with using learning media, students will have opportunity for dominate Theory lessons taught by science teachers are compared with student or taught class with no using learning media (Utomo et al., 2021;Suarsana et al., 2019). In relation with Thing such , then should every teacher should capable using learning media in accordance with demands curriculum , eg case in the field science studies at school basic , and if the learning media in accordance with demands curriculum, like case in the field science studies at school basic , and if the learning media no could provided by the school , then the field teacher studies could make it alone with simple form in accordance ability student in accept Theory lesson related with the learning media used this very important for field science studies as one field laden study with the media used (Nugroho & Surjono, 2019), so that the learning process could going on smoothly and maximally, in particular student class IV SD Negeri Mangkura III Makassar school still basic see level ability low in understand the media.

## **2. Methods and Materials:**

Study this use approach experiment with design comparative. That is , research this study comparison performance study eye student science lessons for class IV SD Negeri Mangkura III Makassar, good student group experiment nor group control , fine before nor after learning (treatment ). design I mode study this as following : design I mode study this as following:

E        X1 x X2

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K        Y1 x Y2

Where:

E        = Group experiment

Pool    = Group control

X1 and Y1 = Presets values

X2 and Y2 = Posttest scores

The population of this study was all class IV students at SD Negeri Mangkura III Makassar consisting of classes IV.A and IV.B, 40 people each (80 people). Considering that this research is a comparative study with a limited population, it was determined that no sampling was carried out. The determination of classes into control and experimental groups was carried out using the lottery method, and from the lottery results it turned out that class IV.A was designated as the control group and class IV.B was assigned as the experimental group. The data analysis techniques used are descriptive statistical analysis and inferential statistical analysis (Puspitarini et al., 2018).

**Analysis Statistics Descriptive**

Analysis descriptive intended for describe level performance study students in the field group science study control and group experiment, fine results pretest nor posttest . For interest such, then made table distribution frequency and percentage, then conducted calculation average for measure level performance study student before and after treatment, fine group control nor group experiment.

**Analysis Statistics Inferential**

Analysis statistics inferential intended for test hypothesis with using the t-test namely compare performance study student group control and group experiment, with the formula put forward by Arikunto (in Muslim et al., 2018), namely :

$$t = \frac{M_x - M_y}{\sqrt{\left[ \frac{\sum X^2 + \sum Y^2}{N_x + N_y - 2} \right] \left[ \frac{1}{N_x} + \frac{1}{N_y} \right]}}$$

Where:

M = The average value of the results change group

N = Amount subject

x = Deviation every the value of X1 and X2

y = Deviation every the value of Y1 and Y2

Criteria testing is received null hypothesis (Ho) if t count more small than t table on level significance of 5% with a certain dk or received hypothesis alternative (H1) if t value count more big or same with t table on level 5% significance with a certain dk .

**3. Results /Findings:**

**Performance Study Group Control**

Following this performance data is presented study student group control before and after learning in students class IV SD Negeri Mangkura III Makassar in form table distribution frequency and percentage , with based on outcome data research , which is shared into five categories, namely : less of < 5 with category flop , 5.50-6.49 with category not enough well , 6.50-7.99 with category enough well , 8.00-8.99 with category well , and 9.00-10.00 with category very ok.

Table 1. Achievements Group science study Control Before and After Learning

intervals	Learning achievement	Pretest		Posttest	
		F	%	F	%
9.00 – 10.00	Very good	0	0	0	0
8.00 – 8.99	Well	3	7.50	4	10.00

6.50 – 7.99	Pretty good	10	25.00	12	30.00
5.50 – 6.99	Not good	20	50.00	21	52.50
< 5.50	Not good	7	17.50	3	7.50
	Amount	40	100.00	40	100.00

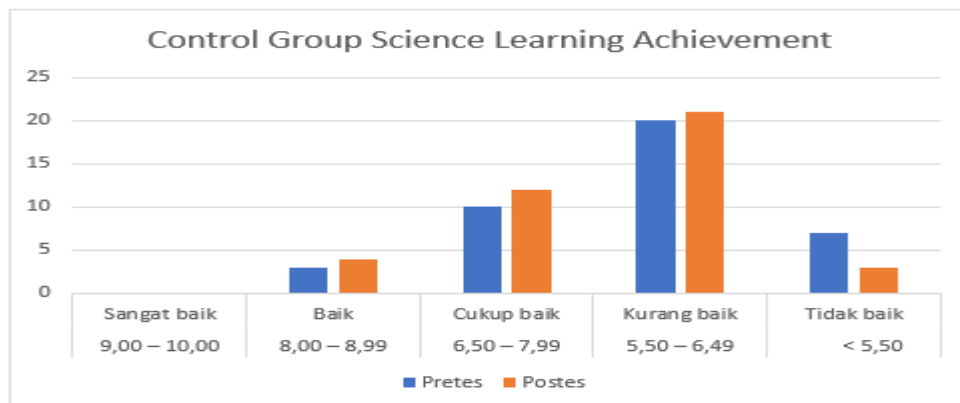


Figure 1. Control group science learning achievement

Performance study student class I V.A ( group control ) pretest and posttest results general are in category not enough ok . Thing that could seen from frequency highest during the pretest as many as 20 respondents or 50.00 percent and then after learning meeting 4 times however no using learning media and the results no show significant improvement .Even there are 7 respondents or 17.50 percent have score pretest in category fail pretest results and 3 respondents or 7.50 percent posttest results . it strengthened with the average value of the pretest results was 6.15 and then the posttest was 6.43 percent , which means on average there is enhancement with deviation 0.28.

#### Performance Study Group Experiment

Following this performance data is presented study student group experiment before and after learning with using learning media on students class IV.B in form table distribution frequency and percentage , which is divided category not enough well , 6.50-7.99 with category enough well, 8.00-8.99 with category well , and 9.00-10.00 with category very ok .

Table 2. Achievements Group Science Study Experiment Before and After Learning.

intervals	Learning achievement	Presets		Posttest	
		F	%	F	%
9.00 – 10.00	Very good	0	0	1	2.50
8.00 – 8.99	Well	2	5.00	7	17.50
6.50 – 7.99	Pretty good	11	27.50	19	47.50
5.50 – 6.49	Not good	21	52.50	12	30.00
< 5.50	Not good	6	15.00	1	2.50
	Amount	40	100.00	40	100.00

Performance study student class IV. B ( group experiment ) pretest and posttest results general show exists meaningful improvement that is less than average good be average enough ok . Thing that could seen from frequency highest moment pretest as many as 21 respondents or 52.50 percent with an average value of 6.20, and so on after learning meeting 4 times with using learning media in the form of learning media and their results show significant improvement because the average posttest results are quite average good (6.88), which means there is deviation of 0.068. Even after the pretest, there is students who have performance study in category very good although new reached 1 respondent or 2.50 percent, meanwhile enough good as many as 7 respondents or 17.50 percent the previous one during the pretest only 2 respondents or 5.00 percent . this also strengthened

score performance study student during the pretest there were 6 respondents stated fail however during the posttest only 1 respondent remained or 2.50 percent who have performance study not enough of 5.50 ( failed ).For more clearly , can noticed chart following.

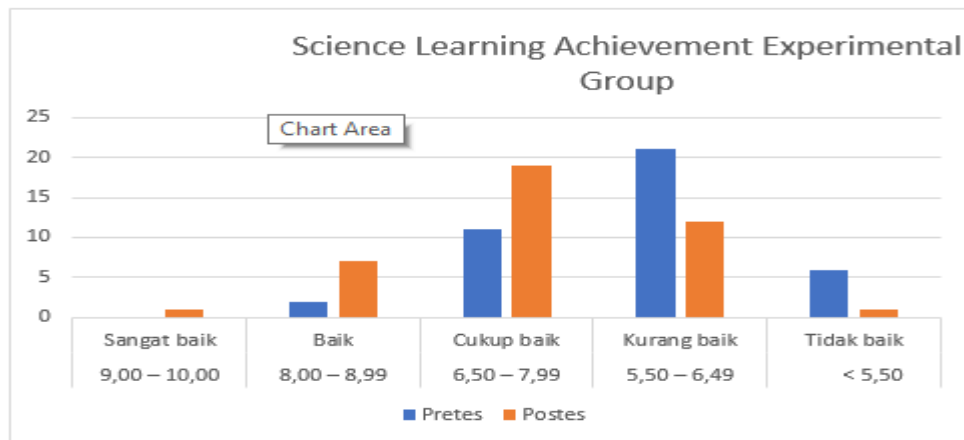


Figure 2. Science Learning Achievement Experimental Group

#### Testing hypothesis

hypothesis (Ho) of the study this is “ no there is impact positive use of learning media to performance study students in the field science studies class IV SD Negeri Mangkura III Makassar”. Based on results calculation by t-test, obtained t value count of 2.86 meanwhile t table value with dk = 78 at the level 5 percent significance , then obtained t value count of 2,000. Because the value of t count more big than the t table value , then null hypothesis (Ho) namely " no there is impact positive use of learning media to performance study students in the field science studies class IV SD Negeri Mangkura III Makassar” stated rejected, and as consequences on the hypothesis alternative (H1) namely " there is impact positive use of learning media to performance study students in the field science studies class IV SD Negeri Mangkura III Makassar” stated accepted. this show that for taught students with using learning media possible have more opportunities many for obtain level ability in understand Theory lesson so that impact on improvement performance study , compared with taught students however no using learning media.

#### 4. Discussion:

Performance study achieved students after conducted test or evaluation is something reflection from level the success of the learning process carried out by the teacher against his students. because that, use knowing level success of the learning process , then the teacher always must To do test or evaluation , where test the no only intended for knowing level performance study student, however could Becomes input for internal teachers activity learning next.

The results of research conducted in class IV of SD Negeri Mangkura III Makassar which consisted of 2 top groups, namely the control group (class IVA) and the experimental group (class IV.B) showed that there were differences in learning performance, especially after learning was carried out. where the control group was taught science learning in 4 meetings without using the same learning media once, while the experimental group was taught using learning media even though the characteristics were still very simple.

The learning achievement scores of the control group were less than good on average at pretest, and after learning without the use of learning media generally did not show a significant improvement or remained in the poor category. This shows active learning without being supported by learning media that is able to motivate or stimulate students'

thinking power, it is difficult to achieve maximum learning results. This is different with students or groups teaching students using learning media so that students can stimulate their thinking power and at the same time attract students' interest in learning optimally, and the results show significant improvement. This is proven by the level of student learning achievement during the pretest with a poor average, but after learning using learning media, then being given a test (posttest), the results show a high average score.

If analyzed from difference in average performance study student Among group controls that don't experience enhancement whereas group experiment show increase in average performance learn, then real that there is impact positive internal media use activity learning even though the media still simple , will but very useful for optimizing the learning process . this strengthened with received hypothesis research shows exists impact positive use of learning media to performance study eye student class IV science lesson at SD Negeri Mangkura III Makassar. Proof hypothesis above very relevant with opinion Achsin (1993: 23) about learning media that can drag and zoom attention student to Theory learning presented by the teacher at the time teach.

The results of the study above prove the need for a teacher always using learning media although its nature customized simple with ability student in understand the learning media used, such as case student class IV SD Negeri Mangkura III Makassar.

## **5. Conclusions:**

Research results about impact of learning media to performance study eye student science lessons for class IV SD Negeri Mangkura III Makassar, concluded as following : Achievement level study student class IV SD Negeri Mangkura III Makassar for group taught control with no using learning media before and after learning in a manner general in category not enough well , meanwhile group taught experiment with using learning media before learning in a manner general in category not enough well and after learning increase Becomes very ok. There is an impact positive use of learning media to performance study eye student science lessons for class IV SD Negeri Mangkura III Makassar, because group given student learning with use more media tend show enhancement performance study compared taught students with no using learning media.

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