

**PENGUATAN KOGNISI SISWA PADA MATA PELAJARAN SAINS DI
SEKOLAH DASAR DENGAN MENGGUNAKAN
MEDIA POP UP BOOK**

***STRENGTHENING STUDENTS' COGNITION IN SCIENCE SUBJECTS IN
ELEMENTARY SCHOOL BY USING
POP UP BOOK MEDIA***

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ABSTRACT

This research is a study that uses a quantitative approach with a type of experimental research that aims to find out (1) an overview of the use of pop up book media towards strengthening the cognition of students of science students in class V SDN 36 Lasiai, Sinjai Regency, (2) knowing the picture of strengthening the cognition of students of science subjects class V SDN 36 Lasiai Sinjai Regency, (3) To find out the influence of the use of pop up book media in strengthening the cognition of students of science subjects class V SDN 36 Lasiai Sinjai District. Sampling using perposive sampling techniques with VA (experiment) classes and VB (control) classes, with a total of 29 students. Data collection techniques consist of tests, observations and documentation. Data were collected from the administration of the test and then analyzed statistically descriptively and inferentially statistically using the Independent sample T-Test. The results of the research conducted, it was concluded that: (1) The learning process increased through the activities of students and teachers, (2) Strengthening student cognition after being given treatment showed an increase, (3) The results of inferential statistical analysis obtained probability values in the posttests of both groups, namely $P = 0.002$ smaller than $\alpha = 0.05$. It can be concluded that the use of pop up book media has an influence on strengthening students' cognition in science class V subjects at SDN 36 Lasiai, East Sinjai District, Sinjai Regency.

Keywords: *Learning media, 3D media, Pop up book media, Strengthening cognitive, Learning science*

INTRODUCTION

Education is the most important thing, not just teaching but educating and shaping the personality of students.

In improving the quality of education through government programs, namely the implementation of national assessments, all aspects of education need to be improved, including the learning process. The right learning process will have an impact on the quality of learning. one of them can be seen in the study of IPA.

When it comes to science learning, most teachers don't give concrete things to students. Students will quickly feel bored and it will be difficult to understand the explanations given by teachers who rely solely on textbooks. This causes the condition of students' cognition to be very weak due to students who are not directly involved in learning. To make it easier for students to learn and understand abstract things can be used media. Media is believed to be able to help teachers in facilitating and overcoming problems experienced by teachers when providing material.

This problem can be overcome by using learning media because it can support the learning process because the media is able to stimulate the student's thinking process. The existence of learning media can help teachers and students in the learning process. Through the media, not only does it provide benefits for teachers in the teaching and learning process, but students will also be helped in thinking about concrete things.

Thus, teachers need to utilize and develop media in accordance with the material to be given, so that it can improve the quality of student learning, deliver material that can be understood and achieved as expected, and slowly change ordinary learning patterns into fun and enjoyable learning.

According Arip & Aswat, (2021) Learning media is everything that is used by teachers as teaching aids to assist in teaching and learning activities so that learning objectives can be achieved. Thus, the media can be used to assist teachers in overcoming problems faced during the science learning process. One of the media that can stimulate the mind and attract students' attention in science learning is the pop up book media.

Pop-up book media is a book that has 3-dimensional elements and can move when the pages are opened one by one, has an attractive appearance in the form of beautiful images and has uprightable images, and can develop student creativity and stimulate imagination.

Khoiraton in Putri et al., (2019) Pop-up book learning media is considered to have its own charm for students because it is able to present visualizations with shapes made by folding, moving and appearing so as to provide surprise and admiration for students when opening each page. The advantage media Pop-up book is it provides a special experience for students because it involves students such as panning, opening, and folding the Pop-up book section. Setyawan in Putriet al., (2019) This will make a special impression on the reader so that it will be easier to enter the memory when using pop up book media.

It is hoped that the use of pop up book learning media can strengthen students' cognition in the learning process.

Based on the description above, researchers are interested in researching about strengthening students' cognition in science subjects in elementary school by using pop up book media.

RESEARCH METHODS

The type of research used is quasi-experimental research, quasi-experimental is an experiment that uses treatment or treatment at the time of the study. Researchers use quasi-experimental research that involves two classes in research, namely the experimental class and the control class. The time used in carrying out this research from the date of issuance of the research permit in brackets is approximately 1 month. This research was conducted at SDN 36 Lasiai, East Sinjai District, Sinjai Regency.

This study used experimental classes and control classes (treatment) by providing pretests to determine initial abilities before being given treatment. Then the treatment is given and ends by giving a posttest to each of these classes to find out the student's learning outcomes after getting treatment.

Tabel 3.1 Nonequivalent Control Group Research Design

Group	Pretest	Treatment	Post Test
Eksperimen	O ₁	X	O ₂
Kontrol	O ₃	-	O ₄

Information:

- O₁ = Pretest cognition reinforcement before learning using pop up book
- O₂ = Postest reinforcement of cognition after learning using pop up book
- X = Treatment using pop up book media
- O₃ = Pretest of strengthening cognition before learning without using pop up book media
- O₄ = Postest reinforcement of cognition after learning Without using pop up book mediaTreatment

In simple terms the population is the entirety of the object of study. The population of this study was the total class V students of SDN 36 Asiai, East Sinjai District, Sinjai Regency, which amounted to 29 students. Class V has 2 study groups, one class will be an experimental class the other will class be a control class. Sampling technique the used this study is probability sampling. Sampling technique is a random sampling technique, which means a random sampling technique or element, where each element or member of the population has an equal chance of being selected as a sample. The samples in the study were the VA class of 15 students as an experimental class and the VB class of 14 students as a control class.

In the preparatory stage, the researcher makes preliminary observations with the school that will be occupied by the research with the aim of licensing to carry out the research. Furthermore, researchers provide the tools needed in the implementation of research such as Learning Implementation Designs (RPP), learning resources and media, pretest and posttest questions, observation sheets and other needs that support the implementation of research.

In the implementation stage, researchers will carry out research for 4 meetings in each experimental class and control class. For the experimental class, namely the provision of an initial test (pretest) followed by the provision of treatment (use media pop up book), and the provision of a final test (Posttest). For the control

class, a meeting was held, namely the provision of an initial test of treatment with conventional learning. The third meeting, the provision of treatment using conventional learning was then continued with the provision of the final test (posttest). The meeting is conducted with a time allocation of 2x35 minutes.

In the final stage, researchers collect all research data and then manage and analyze the research data, so that they can draw conclusions from the research results, namely whether or not there is an influence before and after using pop up book media on strengthening students' science cognition.

The observation sheets used in this study are related to use media PopUp Book. On this observation sheet, there are teacher and student activities related to learning media steps.

$$\text{Indicator Severity} = \frac{\text{gain score}}{\text{Maximum score}} \times 100$$

Note:

If the descriptor is done well	3
If the descriptor is done poorly	2
If the descriptor is done very poorly	1

Table 1. 3 The Implementation Of The Learning Process

Skor	kategori
90% - 100%	Excellent
80% - 89%	Good
70% - 79%	Enough
60% - 69%	Less
0% - 59%	Very Less

RESULTS AND DISCUSSION

Result

The results of the study describe the research objectives that have been applied, the purpose of the study is to find out an overview of the use of PopUp Book media in strengthening student cognition in science subjects class V SDN 36 Lasiyai Sinjai Regency, knowing the picture of strengthening student cognition in science subjects class V SDN 36 Lasiyai Sinjai Regency, knowing the influence of the use of pop up book media in strengthening student cognition in science subjects class V SDN 36 Lasiyai Regency Sinjai.

Student cognition reinforcement is

obtained through the use of instruments in the form of multiple choice tests that use the range of values in each category to measure the difference in cognition reinforcement of experimental class students using media Pop Up Book and control classes that do not use Pop Up Book learning media but use images. This test is used during pretest and posttest to see and measure changes in cognition reinforcement that have occurred in students in the experimental class and in the control class. The subjects used in this study were in the experimental class of 15 students and in the control class, which was 14 students.

The test instruments used in the research have been validated first by experts in their fields, namely Dr. Andi Makkasau, M.Si and Mrs. Sitti Raihan, S.Pd., M.Pd. Experts are science lecturers at the Faculty of Education, Makassar State University. After the validation process, the questions that can be used in the study amount to 15 (fifteen) question items. The fifteen multiple-choice questions are then used as instruments in measuring students' understanding of concepts at the beginning and end (pretest & posttest).

The study was conducted for approximately two weeks with four meetings in both the experimental class, the control class. The first meeting in the experimental class on June 20, 2022, students were given a pretest (initial test), after that the next meeting was given classroom learning for two meetings on June 23, 2020 and June 24, 2022 using the PopUp Book learning media, the last meeting in the experimental class was conducted on June 27, 2020 students were given a posttest (final test). Furthermore, at the first meeting of the control class which was held on June 20, 2022, students were given a pretest (initial test), at the next meeting they were given a learning process for two meetings on June 23, 2022 and June 24, 2022 without using Pop Up Book media but using image media, the last meeting in the control class was held on June 27, 2022 students were given a posttest (final test). Posttest administration (final test) in both classes was carried out to find out whether there were differences in cognition strengthening in the two classes studied.

The results of this research process can be based on data obtained and analyzed by researchers. In this study, the data obtained and analyzed included the results of observations of student and teacher activities, as well as pretests and posttests to find out the extent of student cognition strengthening. The results of this study are described as follows.

1. Overview Of The Using Of Pop Up Book Learning Media

The implementation in the experimental class in class V of SDN 36 Lasiai, East Sinjai District, Sinjai Regency, on the material of changing the form of objects took place in four meetings. At the first meeting, students were given pretests in the form of multiple-choice questions. In the second and third meetings, namely treatment treatment using PopUp Book media in the learning process. The fourth meeting was to give posttests to students.

In following the learning process, it can be seen on the observation sheet of student activities. Results of the recap observations on student activities can be found out through the explanation below.

Based on the data obtained, that in the learning process that takes place students who carry out learning with PopUp Book media have experienced many improvements. The increase in student activity gains can be clearly seen from the percentage of first meeting to second meeting by 89% changed to 94%. This factor was stated in the first meeting that students were still shy and students still had difficulty focusing on giving material on changing the form of objects that had been conveyed using the PopUp Book learning media. At meeting 2, the aspects observed in student activities have increased, this is because students have begun to be active and have begun to listen to the teacher's direction and feel unabashed when giving material in class.

The implementation of learning using PopUp Book media carried out by teachers can be known through observations. It can be concluded that the activities carried out by the teacher when the learning process begins in the experimental class have increased. The increase in teacher activity acquisition can be clearly seen from the percentage of meeting one to meeting two, which is 83% to 94%. At meeting 1, there are aspects that are observed in the observation sheet that have not been fulfilled in the implementation process, if you look at the observation sheet attached to the implementation of learning, it can be seen that there is still a stage that is not optimal, this is different from the teacher's activities in the learning process at meeting 2 which are more improved than the previous meeting, so that the total score and percentage obtained at meetings 1 and 2 are different. From the results of student observations and teacher observations in the table, it shows that during the teaching and learning process using PopUp Book media, there was an increase in both students and teachers.

2. An Overview of Cognition Strengthening in Science Subjects

Strengthening the science cognition of students used before treatment, namely pretest and after treatment is measured using posttest. Pretest and posttest are multiple choice questions consisting of 15 questions. Then the learners are asked to do the questions appropriately and each answer is given a score. Based on the results of the analysis listed in the appendix, the statistical summary of strengthening the cognition of SDN 36 Lasiai students in class V A, namely as an experimental class and class V B as a control class as follows:

a. Descriptive Pretest And Posttest Data Of Experimental Class Learners

The experimental class is a class used in conducting treatments in the learning process. The research subject is class V A, which is an experimental class with a subject of fifteen learners.

Based on data obtained the average (mean) pretest of the experimental class was 44.40 from the ideal score of 100 achieved by students with a standard deviation of 14,927. Meanwhile, the average (mean) posttest of the experimental class was 84.07 with a standard deviation of 7.421. This shows that the standard value at the deviation is smaller than the mean value until it can be known that the average value can represent all data. The median value in the pretest was 40.00 while the posttest value was 87.00. The median value of the pretest is smaller than the median value of the posttest of the experimental class. The value of the pretest mode (mode) of the experimental class is 33 while the value of the posttest mode (mode) is 87. The scores achieved by students are spread from the lowest score to the highest pretest score, namely 20 to 67 with a range of values of 47 while the posttest value shows the lowest value of 67 to the highest 93 with a range of values of 26. If the pretest and posttest values of strengthening IPA cognition are grouped into five categories, then a frequency distribution list and presentation of pretest and posttest abilities are obtained as follows.

Based on the data obtained, it is known that in the experimental class pretest, the number of students who obtained the category was very less as many as 8 students with a percentage of 53.3%, the number of students who obtained the less category was 5 students with a percentage of 33.3%, the number of students who had sufficient categories was two students with a percentage of 13.3%. Meanwhile, in the posttest of the

experimental class, students who have excellent categories are nine people with a percentage of 60.0%, the number of students who have a good category is four students with a prentase of 27.7%, the number of students who get a sufficient category is 2 students with a prentase of 13.3%. Based on the results of the completed descriptive analysis, it can be concluded that in the experimental class the pretest results in the low category, this can be observed based on the average (mean) strengthening of science cognition with a total of 44.40. While the posttest results in the experimental class are in the high category, this can be observed based on the average (mean) ability to think critically in mathematics as a whole amounting to 84.07.

b. Descriptive Pretest and Posttest Data Strengthening Science Cognition Class Control

A control class is a class that uses image media in the learning process. The subject of research is class V B used as a control class with the research subjects numbering fourteen learners. The data on the results of the pretest-posttest control are as follows:

Table 4. 4 Description of Data Pretest and Posttest Control Class

	Pretest kelas Kontrol		Posttest kelas Kontrol	
Valid	14		14	
N	0		0	
Mean	48,07		74,29	
Median	47,00		73,00	
Mode	33		73	
Std. Deviation	11,592		7,810	
Variance	134,379		60,989	
Range	34		27	
Minimum	33		60	
Maximum	67		87	
Sum	673		1040	

Sumber: SPSS version 23.0

Table 4.4, the average (mean) pretest in the control class was 48.07 out of an ideal score of 100 achieved by learners with a standard deviation of 11,592. While the average (mean) posttest of the control class was 74.29 with a standard deviation of 7.810.

This shows that the standard deviation value is smaller than the average value (mean) until it can be interpreted that the average value can

represent all data. The median value in the pretest was 47.00 while the posttest value was 73.00. The median value of the pretest is smaller than the median value of the posttest of the experimental class. The value of the pretest mode (mode) of the control class is 33 while the value of the posttest mode (mode) is 73. The scores achieved by students are spread from the lowest score to the highest pretest score, namely 33 to 67 with a range of 34 values while the posttest value shows the lowest value of 60 to the highest 87 with a range of 27 values. If the pretest and posttest values of strengthening IPA cognition are grouped into five categories, then the following frequency distribution list and presentation of pretest and posttest are as follow:

Table 4. 5 Frequency Distribution and Percentage of Pretest and Posttest Results Control class

		Pret est		Postt est	
Value Prone	Catego ry	Sum	Percen tage	Sum	Percen tage
85-100	Excellen t			2	14,3%
75-84	Good			3	21,4%
65-74	Enaugh	2	14,3%	8	57,1%
45-64	Less	7	50,0%	1	7,1%
0-44	Very Less	5	35,7%		
Sum		14	100%	14	100%

Table 4.5 above, it can be seen that the pretest class Control the number of students who obtained the category was very less as many as 5 students with a percentage of 35.7%, the number students who obtained category less as many 7 students with a percentage of 50.0%, the number of students was sufficient as many as 2 students with a percentage of 14.3%. Meanwhile, in the control posttest, students who received less categories amounted to 1 student with a percentage of 7.1%, the number of students who had sufficient categories amounted to eight students with a prentase of 57.1%, the number of students who obtained a good category was three people with a percentage of 21.4%, the number of students who had a very good category of two people with a percentage of 14.3%.

The results of the descriptive analysis can be concluded that in the control of pretest results included in the low category, this can be observed based on the average (mean) strengthening of IPA cognition as a whole amounting to 48.7. While the posttest control results in the high category, this can be seen based on the average (mean) strengthening of science cognition with a total of 74.29.

3. The Effect of Using PopUp Book Media on Strengthening the Cognition of Class V Science Subject Students

Inferential statistical analysis to test hypotheses in research using a t-test with a significance level of $\alpha = 0.05$. The conditions that must be achieved in testing are data derived from normally distributed data, so at the time before the hypothesis test, first an assumption test or test of normality and homogeneity is carried out.

a. Data Normality Test

The function of the normality test is to find out the pretest data and posttest normally distributed. Normality test processing remains using SPSS version 23.0. Test normality using shapiro-wilk. The data is said to be normal if the signification obtained > 0.05 . Conversely, if the data does not distort normally when the resulting significance is <0.05 . Meanwhile, the results on the normality test of pretest and posttest data obtained in the experimental class and control class:

Table 4. 6 Pretest and Posttest Data Normality Test Results Experimental Class and Control class

Data	Nilai Probabilitas	keterangan
Pretest kelas eksperimen	0,325	0,325>0,05 = Normal
Pretest control	0,057	0,057>0,05 = Normal
Posttest kelas eksperimen	0,246	0,246>0,05 = Normal
Posttest control	0,354	0,354>0,05 = Normal

Table 4.6 above was obtained through data processed using SPSS Statistics Version 23.0, it displays data from pretest and posttest results in experimental classes and normally distributed control classes. This comes from the results of normality tests in all existing data. The probability value is greater than 0.05. Then the experimental data as well as the controls are normally distributed.

b. Homogeneity Test

The homogeneity test is intended as a way of displaying data sourced from all samples whether it is homogeneous. The homogeneity test in the study certainly used the levene test with SPSS Statistics Version 23.0. Homogeneous when the value in the output of levene statistics is greater than the value of α which is 0.05.

Table 4. 7 Normality Test Results of Pretest and Posttest Data of Experimental Class and Control Class

Data	Probability Value	Information
pretest experimental class and control class	0,159	0,159> 0,05 = Homogen
posttest experimental class and control class	0,922	0,922 > 0,05 = Homogen

Table 4.7 obtained using spss statistics version 23.0 shows the results of the pretest homogeneity test in the experimental class and control class and posttests of the experimental class and the control class is declared homogeneous because the probability value is greater than 0.05.

The next step is a parametric test or t test, the step that is carried out before the t test is that all existing data groups must be normal and homogeneous distribution.

c. Hypothesis Test

1) Independent Sampel T-Test Pretest Kelas Eksperimen Dan Kelas Kontrol

The analysis was obtained through testing the results of experimental pretests as well as control pretests with the SPSS Statistics Version 23.0 program. The data is declared significant if the value on the probability is less than 0.05. The analysis aims to find out whether there are differences in learning outcomes in the experimental class and the control class before the treatment is applied as shown in the table below.

Table 4. 8 Independent Test Results T-Test Pretest Sample Experimental class and Control Class

Data	T	D f	Probabili ty Value	Informati on
pretest experiment a 1 class and control class	- 0,7 3	27	0,468	0,468 > 0,05 = no difference

Table 4.8 was obtained by using SPSS Statistics Version 23.0 which displays a probability value greater than 0.05, which has no significant difference from the learning outcomes contained in the experimental class and control class at the time before treatment. If the value of t counts - 0.736 while the table value is 2.052 obtained with

a value of $\alpha = 5\%$ and $df = 27$, then the thitung has a value smaller than the ttabel ($-0.736 < 2.052$). It can be concluded that the calculation of the $< ttabel$ means that the pretest data obtained has no significant difference.

2) Independent test sample t-test posttest experimental class and control class

Independent t-test samples are used to test two samples that are not freely interconnected. This analysis was performed by testing posttests on experimental classes and control classes. Decision making on hypothesis testing of this study is based on a comparison of data probability values. If the value of Sig. (2-tailed) $< \alpha 0.05$ then H_0 is rejected and H_a is accepted. Whereas if the value of Sig. (2-tailed) $> \alpha 0.05$ then H_0 is accepted and H_a is rejected.

The results of the independent test of the posttest t-test sample in the experimental class and control class are shown in the table below:

Table 4. 9 Independent Test Results Sample T-Test Posttest Experimental class and Control Class

Data	T	D f	Probabilit y Value	Informatio n
Posttest experiment al class and control class	3,45 8	27	0,002	0,002 < 0.05 = there ar e differences

Sumber: IMB SPSS Statistics Version 23.0

Table 4.9 obtained using SPSS Statistics Version 23.0 shows a probability value smaller than 0.05. Which shows that there is a significant difference in learning outcomes between classes that follow learning by applying PopUp Book learning media and classes that follow learning without applying Pop Up Book learning media. If the calculated value of 3.458 is compared to the ttabel value of 2.052 obtained through the table by looking at the value of $\alpha = 5\%$ and $df = 27$, then the calculation has a value greater than the ttabel ($3.458 > 2.052$). Thus it can be concluded that the calculation $> ttabel$ which shows that the posttest data obtained has a very large difference.

Discussion

Based on the results of the study, the data analysis technique in this study was carried out with descriptive statistical analysis and inferential statistical analysis. Descriptive statistical analysis as a means of distributing the

frequency of respondent scores and or describing Strengthening the cognition of students of science subjects in experimental and control classes before and after being given treatment. Furthermore, the processing of inferential statistical analysis, such results will produce a research hypothesis that has been completed. At the time before conducting a hypothesis test, a prerequisite data test is first carried out, namely the normality test and the homogeneity test.

1. PopUp Book Media Overview of Strengthening Cognition of Science Subject Students in Class V SDN 36 Lasiai, East Sinjai District, Sinjai Regency

In the descriptive statistical analysis, the strengthening of students' cognition in the experimental class at the time before applying treatment use PopUp Book media was in the less category and after being given treatment using Pop Up Book media, the strengthening of students' science cognition increased and was in the very good category. This is due to the use of learning media provided by the teacher during treatment which makes students understand more about the material provided by the teacher. Furthermore, in the control class before being given treatment is also at less and after being given treatment by using or showing pictures, strengthening students' science cognition is included in the good category. In the control class, there are still some students who do not understand the lessons given well. In line with Mubarok opinion in Ningtiyas et al., (2019) Mubarok Teaching will increasingly attract attention and can foster students' learning encouragement if the media used is an interesting and fun medium and in sync with students, not only using oral contact through the pronunciation of words by the teacher, so that students do not become weary and then the teacher must consume a lot of energy. In class, control the learning process carried out is by using pictures. In contrast to the learning process in the experimental class which uses Pop Up Book learning media so that in the experimental class it is faster to understand the material presented because they see interesting media and they can touch and use it to understand the material being taught. This unique book can attract interest, stimulate imagination and establish students' interest in learning because the images displayed on this media have the privilege that images can move, be enforced and folded so that this media can invite students to play an active role and be able to make students imagine.

2. An Overview of Strengthening Students' Cognition in Science Subjects Class V SDN 36 Lasiai, Sinjai Regency.

The results of the descriptive analysis test certainly provide an overview of the pretest and posttest results of strengthening the cognition of students in classes that use the PopUp Book learning media treatment and classes that use images in the learning process. This is also in line with the results research conducted Hasanah, (2019) which shows that by using PopUp book learning media students are able to follow science learning well and can facilitate and improve student cognition. Furthermore, the percentage of each indicator obtained the average percentage of posttest results on each indicator for the experimental class was higher than the average percentage obtained in the control class.

The next analysis is carried out inferential statistical analysis, namely data prerequisite tests or normality tests and homogeneity tests. The pretest and posttest normality tests on strengthening science cognition in the control class and experimental class used the Kolmogorof-Smirnov test with the results of all normally distributed data due to the acquisition of probability values greater than 0.05. furthermore, homogeneity tests were given between pretests in the control class and in the experimental class, as well as posttests in the control class and experimental class using Levene's test with the results of both groups of data can be declared homogeneous, because the probability value is higher than 0.05.

The hypothesis test is applied by using independent sample T_Test test to see if there are any differences in the control class pretest and the experimental class pretest and to find out whether there is a difference between the control class posttest and the experimental class posttest. From the results of the hypothesis test using the independent sample T-Test test, the results showed that there was no difference between the control class pretest and the experimental class pretest and there was a difference between the control class posttest and the experimental class posttest. This shows that if the PopUp Book learning media is used during treatment treatment in the learning process, it will have an influence on strengthening students' cognition in science subjects, so that there is a difference between the posttest of the control class and the experimental class.

3. The Effect of Using PopUp Book Media in Strengthening Student Cognition in Science Class V Subjects at SDN 36 Lasiai, East Sinjai District, Sinjai Regency.

Based on inferential statistical tests, data prerequisite tests and hypothesis tests show that there is a significant influence on strengthening students' cognition in science subjects after the use of PopUp Book media. There are two ways to see the results of hypothesis testing with a comparison of ttables and calculation and comparison of probability values. Statistical results using an independent sample T-test that has been applied using SPSS Statistical Version 2.0 obtained a ttable value with $df(27) = 2,052$ while the calculation of student test answer results was 3,458, $t_{hitung} (3,458) > t_{tabel} (2,052)$ so H_0 was rejected and H_a was accepted. Meanwhile, how to compare the probability values, the probability value of the posttest results of the control class and the experimental class was obtained as much as 0.05 so that the probability value of $0.002 < 0.05$ means that H_0 was rejected and H_a was accepted. So when the PopUp Book learning media is used in science learning, it has differences in the posttest results of the control class and the experimental class. Therefore, based in the results research carried out by researchers that media PopUp Book can have an influence on strengthening cognition in science subjects, it can be concluded that there is an influence on the use of Pop Up Book media on strengthening the cognition of science subject students in class V SDN 36 Lasiai, SINjai Timur District, Kcamatan Sinjai.

CONCLUSION

Conclusion

Based on the results of the research that has been carried out, there are conclusions, including:

1. The results obtained from the observation sheet show that there is an increase in the activities carried out by teachers and students.
2. The strengthening of the cognition of the students of the experimental class science subjects is better compared to the control class.
3. There is an influence on the use of PopUp Book learning media on strengthening students' cognition in science subjects.

Suggestion

The suggestions proposed by researchers for several parties are as followst:

1. For teachers, to make it easier for students to understand the material provided, especially in science subjects and of course can use and develop Pop Up Book learning media as an alternative that can help the learning process in the classroom.
2. For students, they can follow and understand the learning process cheerfully, actively and more enthusiastically in receiving the material provided.
3. For schools, to pay more attention to teachers in the use and development of media in the learning process. The school should provide a separate budget so that the provision of media in the classrooms can help teachers and students.
4. For other researchers, this research can be used as a reference to carry out research, especially related to the use and development of PopUp Book learning media, and researchers hope to conduct broader research so that the latest research results can be born and there are updates from existing research.

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