



CHILDREN'S LEARNING IN SCIENCE (CLIS) LEARNING MODEL IN SCIENCE LEARNING IN PRIMARY SCHOOL

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Abstract: The formulation of the problem in this study is whether there is an influence of the Children Learning In Science (CLIS) learning model on the results of learning science for fifth grade students at SD Negeri Junti 3. The purpose of this study was to determine the effect of the Children's Learning in Science (CLIS) model on the science learning outcomes of fifth grade students at SD Negeri Junti 3. The type of research to be used was quantitative research using pre-experimental methods. With the type of One Group Pretest- Posttests design. The sampling technique is the total sampling technique. Data collection techniques in this study are observation, testing and documentation. Data analysis techniques were tested using statistical tests. Based on the results of the research that has been done and the discussion that has been described, it can be concluded that there is an influence of the Children's Learning in Science (CLIS) learning model on the science learning outcomes of grade V students. This can be seen from the sig 2 tailed hypothesis test which obtained $0.000 < 0.05$ at the 5% significance level. Therefore, it can be concluded that there is an influence of the Children's Learning in Science (CLIS) model on the science learning outcomes of class V SD Negeri junti 3 which is acceptable.

Keywords: *Science, CLIS, Primary School*

Abstrak: Rumusan masalah dalam penelitian ini yaitu apakah terdapat pengaruh model pembelajaran Children Learning In Science (CLIS) terhadap Hasil belajar IPA siswa kelas V SD Negeri Junti 3. Tujuan penelitian ini yaitu untuk mengetahui pengaruh model Children's Learning In Science (CLIS) Terhadap hasil belajar IPA siswa kelas V SD Negeri Junti 3. Jenis penelitian yang akan digunakan adalah penelitian kuantitatif dengan menggunakan metode pre eksperimental. Dengan jenis desain One Group Pretest-Posttests. Teknik pengambilan sampel yaitu teknik total sampling. Teknik pengumpulan data dalam penelitian ini yaitu observasi, tes dan dokumentasi. Teknik analisis data di uji dengan menggunakan uji statistik. Berdasarkan hasil penelitian yang telah dilakukan serta pembahasan yang telah diuraikan, dapat disimpulkan bahwa terdapat pengaruh model pembelajaran Children's Learning In Science (CLIS) terhadap hasil belajar IPA siswa kelas V. hal ini dapat dilihat dari uji hipotesis sig 2 tailed yang diperoleh $0,000 < 0,05$ pada taraf signifikansi 5%. Oleh karena itu dapat disimpulkan bahwa terdapat pengaruh model Children's Learning In Science (CLIS) terhadap hasil belajar IPA siswa kelas V SD Negeri junti 3 dapat diterima.

Kata Kunci: *IPA, CLIS, Pendidikan Dasar*

INTRODUCTION

Thematic learning can be interpreted as a learning activity that integrates material from several subjects into one theme or topic of discussion. Sutirjo and Mamik Sri Istuti state that thematic learning is an effort to integrate knowledge, skills, values or learning attitudes, as well as creative thinking using themes (Ananda, 2018). In every learning process, students are expected to obtain good learning outcomes. However, in reality the learning outcomes obtained by students are not always good and according to expectations. As is the standard for whether learning outcomes are good or not based on the KKM which has been set as a benchmark for the success of the learning process. This must be a matter

of attention and evaluation material in the learning process. Student learning outcomes that are not good are one of the problems in education.

Student learning outcomes show the abilities and qualities of students as a result of the learning process they have gone through. Melton stated that learning outcomes are actions and performances that contain and reflect the competence of students who successfully use content, information, ideas and tools in learning. Therefore, learning outcomes can be defined as the competencies and skills that students have after the learning period. There are many factors that can influence learning outcomes, one of which is the learning model used by the teacher (Nurhasanah, 2016).

Teachers are the key to learning. Students' success in learning is determined by the teacher's role in processing teaching and learning activities (Sulistiani, 2018). Apart from that, the teacher is also a manager in the class, meaning that the learning process carried out in the class is very dependent on the teacher's ability to manage learning. The teacher's ability to combine various learning models and optimize various existing media can make the learning process interesting and meaningful for students. The teacher's skill in adjusting the learning model and media used according to the material presented also influences the expected learning achievements (Adim, 2020).

One learning model that can be used for the problems above is using the Children's Learning in Science (CLIS) learning model. According to Cosgrove, et al (1985) the Children's Learning in Science (CLIS) learning model is a learning model that seeks to develop students' ideas or ideas about a particular problem in learning, as well as reconstructing ideas or ideas based on the results of observations or experiments. Apart from that, the Children's Learning in science (CLIS) learning model is a learning model that has characteristics that are based on a constructivist paradigm by paying attention to students' prior knowledge (Rositayani, 2019).

Meanwhile, the aim of this learning model is that students are given the opportunity to express various ideas about the topics discussed in the lesson. Express ideas and compare ideas with other students' ideas and

discuss them to equalize perceptions. Next, students are given the opportunity to reconstruct the idea after comparing the idea with the results of experiments, observations or the results of looking closely at the textbook. In addition, students also apply the results of reconstructed ideas in new situations. The Children's Learning In science (CLIS) learning model is a learning model whose strategy is oriented towards constructivism (Wibawa, 2020).

Learning outcomes consist of two words, namely results and learning, these two words have different meanings. Results have several meanings, namely something obtained by effort, income or gain, and fruit (Andylah, 2022). Meanwhile, learning according to (Rahman, 2022) is the most basic activity in the entire educational process at school. Whether it's successful or not achieving educational goals depends on how learning activities are experienced by students as students. Learning is a change that occurs within a person after carrying out certain activities.

According to Baharuddin and Esa (2009) in (Simaremare, 2021) learning is a human process to achieve various kinds of competencies, skills and attitudes. Learning begins from the time humans are born until the end of life. According to Oemar Hamalik (2001) learning is the modification or strengthening of behavior through experience (learning is defined as the modification or strengthening of behavior through experiencing). According to this understanding, learning is a process, an activity and not a result or goal. Learning is not just remembering, but broader than that, namely experiencing. Learning outcomes are not mastery of training results but rather changes in behavior.

The aim of this research is to find out whether there is an influence of the Children's Learning In science (CLIS) learning model on grade V science learning outcomes. And to find out how the Children's Learning In science (CLIS) learning model influences grade V science learning outcomes.

It is hoped that this research will provide benefits both theoretically and practically. The theoretical benefit of this research is that it can provide information regarding the Children's Learning In science (CLIS)

learning model in class V science learning. And it can be a reference for teachers and other researchers in implementing the Children's Learning In science (CLIS) learning model in science subjects. It is hoped that the practical benefits of this research will provide benefits for teachers, students, schools and researchers.

METHOD

This research was carried out at UPT SD Negeri Junti 3, Jawilan District, Serang Regency in class V with a total of 36 students. This research was carried out in the even semester in April 2023 academic year. The method in this research uses an experimental method with a quantitative approach, namely a research method based on the philosophy of positivism, used to research certain populations or samples, data collection using research instruments, quantitative or statistical data analysis, with the aim of describing and testing hypotheses that have been determined (Sugiyono, 2022). Meanwhile, the experimental method is a quantitative research method used to determine the effect of the independent variable (treatment) on the dependent variable (outcome) under controlled conditions.

The type of experimental research used in this research is Pre-Experimental Designs with a one group pretest-posttest design type so that the effect of treatment can be calculated by comparing the posttest scores with the pretest. If the posttest score is greater than the pretest, then the treatment has a positive effect. The population in this study were all class V students at UPT SD Negeri Junti 3, Jawilan District, Serang Regency, consisting of 1 class, namely 36 students. The sample is part of the number and characteristics of the population. In accordance with the problem studied and the research methods used, the sample in this study was class V, totaling 36 people. Sampling was carried out using total sampling technique.

In essence, research is taking measurements, so there must be good measuring instruments. Measuring tools in research are usually called research instruments. According to Sugiyono (2022) a research

instrument is a tool used to measure observed natural and social phenomena. Specifically, this phenomenon is called a research variable.

RESULTS AND DISCUSSION

Researchers conducted instrument trials, namely by conducting validity, reliability tests and different power tests. Validity tests are carried out to measure the extent to which the measuring instrument used is able to measure what it wants to measure. The validity of this research test instrument uses content validity and product moment correlation using the IBM SPSS Statistics 21 application. From the content validity test which consists of 20 questions, 10 questions become valid.

Based on the results of calculating the validity of the questions, there were 20 questions that were tested, there were 10 questions that were invalid because the r_{count} value was $< r_{table}$. The questions are 1,2,5,9,10,11,12,13,14. Meanwhile, the question items are valid because the $r_{count} > r_{table}$ value is number 3,4,6,7,8,15,16,17,18, and 19. This means that these 10 valid questions can be used to measure student learning outcomes tests.

After the question items are tested for validity, the question items are then tested for reliability. The aim is to determine the consistency of the instrument as a measuring tool, so that the measurement results can be trusted. Based on the reliability test using IBM SPSS Statistics 21, the following results were obtained.

Table 1. Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded	0	.0
	Total	30	100.0

Table 2. Reliability Statistics

Based on the results of the reliability test, it is known that the Cronbach's Alpha value is $0.791 > 0.361$, so it can be concluded that the instrument is reliable. residual values are normally distributed.

After the test items have been tested for reliability, the level of difficulty is tested on the items. The difficulty level test is intended to find out whether the question is easy or difficult. Based on the results of the test, the level of difficulty revealed that 12 questions were medium, 3 were easy, 2 were very easy, and 3 were difficult. Based on the results of the different test questions, it was found that 8 questions had sufficient qualifications, 8 were good, 2 test questions had poor qualifications, and 2 were very good.

The initial test learning results for the experimental class were based on the results of calculations using IBM SPSS Statistics 21. In the initial test, the average score was 56.67, the median score was 60.00, the minimum score was 10 and the maximum score was 90.

Based on the frequency distribution table, the initial test results can be depicted in the histogram below.

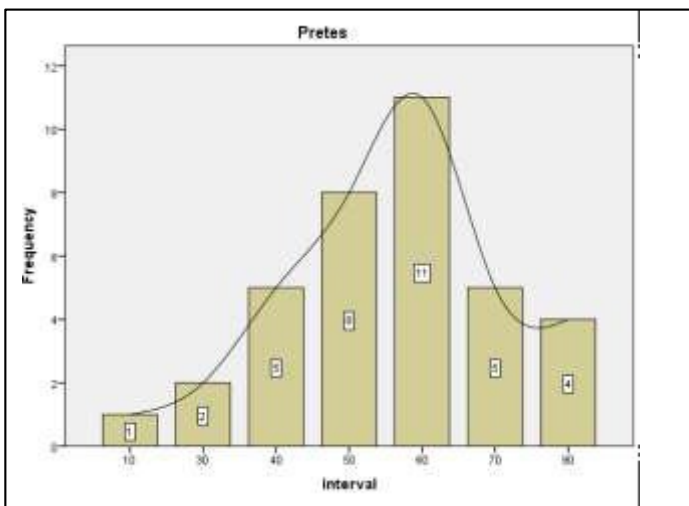


Figure 1. Initial Test Results Data Frequency

Based on the table and histogram above, the majority of pretest frequencies are in the 50 interval for 8 students (22.2%) and 60 for 11 students (30.6%).

Learning results for the final test of the experimental class. Based on the results of calculations using IBM SPSS Statistics 21 on the final

test data, the average value was 68.61, the median value was 70.00, the minimum value was 40 and the maximum value was 90.

Table 4. Final Test Data Frequency

Posttest					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	40	1	2.8	2.8	2.8
	50	7	19.4	19.4	22.2
	60	5	13.9	13.9	36.1
	70	11	30.6	30.6	66.7
	80	7	19.4	19.4	86.1
	90	5	13.9	13.9	100.0
	Total	36	100.0	100.0	

Based on the frequency distribution table of the final test data, it can be depicted in the pie chart below:

Figure 2. Frequency of Final Test Results

Based on the table and diagram above, the majority of final test data frequencies lie in the interval 50 for 7 students (19.4%) and 70 for 11 students (30.6%). Testing of analysis prerequisites is carried out before carrying out data analysis. The requirements used in this research are the normality test, homogeneity test.

The normality test is carried out to test whether the data is normally distributed or not. The normality test refers to the Shapiro Wilk model in calculations using the IBM SPSS Statistics 21 program. To find out whether it is normal or not, if $\text{sig} > 0.05$ it is normal, and if $\text{sig} < 0.05$ it can be said to be abnormal. The calculation results obtained are as follows.

**Table 5
Tests of Normality**

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Pretest	.175	36	.007	.937	36	.042
Posttest	.178	36	.005	.924	36	.017

a. Lilliefors Significance Correction

Based on the normality test results above, it is known that the significance value of each test is greater than 0.05. So it can be concluded that the values are normally distributed.

After knowing the level of normality of the data, a homogeneity test is then carried out. The homogeneity test is used to determine that two or more groups of sample data come from populations that have a similar level of variance. To accept or reject the hypothesis by comparing the sig level on the statistical levene with $\text{sig} > 0.05$. The homogeneity test results can be seen in the following table.

Table 6.

Test of Homogeneity of Variances			
Pretes			
Levene Statistic	df1	df2	Sig.
.690	4	30	.605

Based on the results of the homogeneity test, it is known that the significance value is $0.605 > 0.05$, so it can be concluded that the data in this study has a homogeneous variance.

Table 7. Hypothesis Test Results Paired Samples Test

	Paired Differences				T	df	Sig. (2-tailed)	
	Mean	Std. Deviation	Std. Error Mean	5% Confidence Interval of the Difference				
				Lower				Upper
Pretes - Postest	-11.944	15.273	2.545	-12.105	-11.784	-4.692	35	.000

Based on the table above, the analysis results for the t-test show that the 2 tailed sig value is $0.000 < 0.05$ with a significance

level of 5%, so it can be stated that the alternative hypothesis (H_a) is accepted and (H_o) is rejected. This means that there is an influence of the Children's Learning In Science (CLIS) learning model on the science learning outcomes of fifth grade students at SD Negeri Junti 3. So, it can be concluded that the use of the CLIS learning model on science learning outcomes has proven to be effective in improving science learning outcomes.

Discussion

Based on the results of the research and data analysis that has been carried out, it can be seen that the Children's Learning in Science (CLIS) learning model has an influence on the science learning outcomes of fifth grade students at SD Negeri Junti 3. This influence occurs because in the experimental class students are required to be more active in the learning process. Each student is required to express ideas about the material to be discussed according to their respective knowledge. Then each student competes with each other about the phenomenon being discussed. After that, students are divided into several groups and discuss the worksheet given by the teacher. Once finished, students demonstrate the results of the discussion in front of the class. The results of the discussion are then compiled into notes and the teacher provides feedback to students regarding the material they have studied.

The explanation above can be proven by comparing the scores from the initial test and final test. Based on the initial test results, an average of 56.67 was obtained. This shows that students' initial abilities are still not optimal because students have not studied them. After being given treatment in the form of applying the Children's Learning In Science (CLIS) learning model, namely providing Posttest questions and an average score of 68.61 was obtained. There was an increase of 11.94 between the Pretest and Posttest results. There was an increase in the results of this test, because students answered questions based on the knowledges they had learned from the learning treatment that had been given. So, it can be concluded

that the CLIS model influences the science learning outcomes of class V at SD Negeri Junti 3.

Based on the results of research conducted by the author, it can be seen that there is an influence of the Children's Learning In Science (CLIS) learning model on the learning outcomes of class V students at SD Negeri Junti 3. This can be seen from the normality test, it is known that the significance value of each test shows more greater than 0.05, the homogeneity test results show a significance value of $0.605 > 0.05$ and hypothesis testing with 2-tailed significant results of $0.000 < 0.05$ with a significance level of 5%, thus the working hypothesis states that there is an influence of the CLIS learning model on students' science learning outcomes Class V of SD Negeri Junti 3 is acceptable.

CONCLUSION

Based on the results of the research and data analysis that has been carried out, it can be concluded that the Children's Learning In Science (CLIS) learning model has an influence on the science learning outcomes of fifth grade students at SD Negeri Junti 3. This can be proven through a comparison of the results of the initial test and final test. Based on the initial test results, an average of 56.67 was obtained. This shows that students' initial abilities are still not optimal because students have not studied them. After being given treatment in the form of applying the Children's Learning In Science (CLIS) learning model, namely providing Posttest questions and an average score of 68.61 was obtained. There was an increase of 11.94 between the Pretest and Posttest results.

Based on the results of research conducted by the author, it can be concluded that there is an influence of the CLIS model on the learning outcomes of class V students at SD Negeri Junti 3. This can be seen from the 2-tailed significance of $0.000 < 0.05$ with a significance level of 5%, thus the research hypothesis states that there is an

influence of the CLIS learning model on the science learning outcomes of class V students at SD Negeri Junti 3 which is acceptable.

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