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The Effect of Picture and Picture Learning Model on Learning Outcomes of IPAS Subjects of Fourth Grade Students in SDN 3 Rajabasa Bandar Lampung

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Abstract: This study was motivated by the problem of low student learning outcomes, lack of student interest in learning and the lack of teachers in utilizing learning models. The research was conducted at SD Negeri 3 Rajabasa Bandar Lampung with a research focus on class IV. The aim of the research is to analyze whether or not there is an influence if applying the Picture and Picture learning model to students of SD Negeri 3 Rajabasa Bandar Lampung. The sampling technique in this study used random sampling. The method used in this study is an experiment with a type of quantitative research and the design used is one group pre-test and post-test. The data collection technique used in this study was to use a test. The results of this study based on hypothesis testing using paired t test, namely, obtained t_{count} = 3.522 at a significant level of 5% which is 1.761. Thus, $t_{count} > t_{table}$ (3.522> 1.761). Based on the results of the hypothesis, Ha is accepted and H0 is rejected, meaning that there is an effect of the application of the Picture and Picture learning model on student learning outcomes in Natural and Social Sciences subjects in grade IV students of SD Negeri 3 Rajabasa.

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Introduction

The world of education is very important for society, especially for the next generation of the nation, because education has a role in the progress of a person or society obtained through the learning process. In this process humans can find out things that they did not know before. Education has two different perspectives such as education as a process and education as a result. Education as a process is defined by community activities with the surrounding environment. Meanwhile, education as a result is a form of change that has been produced by humans through interaction with their environment (Ahmadi, 2014). Someone is said to be successful in education when they cannot be separated from the various knowledge that is in school or in the surrounding environment. The learning process is not only in the classroom or school environment, but learning can be done outside of school such as home, library, and other places. However, learning at school has an important role because the learning process is planned and uses measuring instruments to determine student learning outcomes. Learning should be student-centered, by developing student creativity and providing various learning experiences.

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Learning is a reciprocal stage carried out by the teacher together with students with the environment and learning resources. In the process of learning activities there is mutual communication that must be carried out between teachers and students. Learning activities carried out by teachers should be interesting, so that they can attract students' attention and they will focus on the material presented by the teacher (Windarti, 2021). Teachers have an important role as facilitators. Teachers must have an understanding of students through learning process activities and have competence in addressing individual student differences. Teacher as a facilitator is defined as a person who has a role in providing assistance to students, in order to facilitate them during learning activities (Sulistriani, Santoso, & Octaviani, 2021). In the learning process, learning outcomes as a benchmark for students in their success. Learning outcomes are the results that students have obtained after participating in learning activities. The learning outcomes that will be achieved by students can be in the form of abilities, both in terms of knowledge, attitudes, or skills possessed by students when they have received the material presented (Rahman, 2021). Students can produce satisfactory learning outcomes, one of which is by using innovative and various learning models in order to attract students' attention so that students become more active during the learning process, students can also deepen the material, and make it easier for teachers to convey the material to be presented. The job of a teacher is to educate students who do not know to know. When learning, the teacher must use the right learning model so that students are interested in learning.

In the independent curriculum, several subjects have changed, one of which is Natural and Social Sciences (IPAS). The subject is a subject that is integrated by Natural Sciences (IPA) and Social Sciences (IPS) into Natural and Social Sciences (IPAS). Natural and Social Science subjects study environmental problems on earth by connecting them with community or social life around humans. Thus, students can learn through real experiences that have happened in their lives or will happen. However, if the teacher conveys the material monotonously and lacks creativity, students are not interested and ignore the material being conveyed. Therefore, it is necessary for teachers to utilize learning models that are currently developing, especially cooperative learning models. If teachers do not utilize innovative and creative learning models, it will also have an impact on student learning outcomes. The learning outcomes obtained by students are low, because they are less interested in the discussion of the material being delivered by the teacher. This problem is happening at State Elementary School 3 Rajabasa Bandar Lampung, especially in class IV B. At the time of conducting pre-research, it shows that teachers in class IV are lacking in utilizing learning models, especially in class IV B. During the learning process, the teacher presents the material without the teacher's involvement. During the learning process, the teacher conveys the material without any student student relationship with the teacher. While the subjects of Natural and Social Sciences (IPAS) require more learning models or learning media so that students can be interested in learning. If you do not utilize the learning model, students are less active and not interested in learning.

Due to the problems that occur, so the author is interested in conducting research on the right learning model to be used during the learning process. The cooperative learning model with Picture and Picture type was chosen by the author as research that students can be more interested in learning. Picture and Picture learning model is a learning model that utilizes picture media during the learning process. The picture media is randomized and will be arranged to form a logical sequence by students in groups. The Picture and Picture model was chosen because the author wanted to know the learning outcomes of students with the picture

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media. Learning outcomes are used as a result of changes in behavior, knowledge and abilities gained by students after carrying out the learning process.

This is in line with research (Astuti, 2022) namely the effect of Picture and Picture learning model on student learning outcomes. This study uses a quasy experiment approach with a nonequivalent control group design. The results of the study prove that there is an effect of the Picture and Picture model on students, namely, with a post-test value of class III A (experimental) 80.25 and post-test control class 71.30. While the research conducted by (Dewi, Kristiantri, & Ganing, 2019) namely, analyzing the Picture and Picture learning model assisted by audio visual on Indonesian writing skills. In this study using non-equivalent control group design with random sampling technique. This study found that there was an effect when using the Picture and Picture model on students' skills and learning outcomes.

The findings of several previous researchers have proven that if using the Picture and Picture learning model, student learning outcomes will increase. However, from some of these studies, there is still no one who uses Natural and Social Sciences (IPAS) lessons, because these lessons are lessons that have just been initiated in the independent curriculum and in previous studies still used low grades as samples. In addition, this study will use the material of Natural and Social Sciences (IPAS) with the sample used in the high class, namely, class IV. This study aims to determine the effect of the Picture and Picture learning model on the learning outcomes of Natural and Social Sciences (IPAS) subjects of grade IV elementary school students. So, with the application of learning models can add views of learning models that can be used in the classroom and can be used as a reference source for further research related to the Picture and Picture learning model.

Research Methods

This research uses quantitative research with experimental methods. Quantitative method is a method of collecting data, processing, analyzing based on objects to solve a problem that occurs. (Duli, 2019). The experimental method is a method used with the aim of finding out a certain cause and effect. In this study, the authors used a one group post-test and pre-test research design, where the pre-test is a test that will be conducted before learning. While the post-test is a test conducted after learning.

$$O_1 \; x \; O_2$$

Figure 1: One Group Pre-test and Post-Test Research Design

The sample used in the study was fourth grade students of SD Negeri 3 Rajabasa Bandar Lampung. The sample was taken using random sampling technique. The data collection technique used in this study was a test. Data collection technique is a method used to collect information or facts in the field (Ramdhan, 2021). Data collection techniques using tests are techniques by working on test questions to students with the material they have learned, this aims to measure the ability of students. (Nizamuddin et al., 2021). The tests used in this study are in the form of description questions with Higher Order Thinking Skill (HOTS) levels that have been validated by validators. The first thing to do is, the pre-test is an initial test to determine the learning outcomes that occur in class IV students with water cycle material. After that, the Picture and Picture learning model was applied and students were formed into groups. Then the final test is carried out, namely, the post-test is a test conducted to determine the learning outcomes of students after being given the Picture and Picture model treatment.

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Before the question instrument is given to students, the question is tested first with other students who are not part of the sample. The test used to determine whether the instrument question can be used or not, namely, the validity test is the expertise of the measuring instrument in measuring an object. In measuring the validity of attention is aimed at the content and usefulness of the instrument (Darma, 2021). Reliability test is a result that is measured relatively and consistently. The instrument can be said to be reliable if the score has a high correlation with the actual score (Ovan & Saputra, 2020). The difficulty test is a test that shows the difficulty or ease of a problem. The probability of answering a question correctly at a certain ability level is usually expressed by the index (Magdalena, 2022). The test of differential power is a number that can show the ability of items to distinguish between easy groups and difficult groups of questions. (Yusrizal, 2015).

The data analysis test used in this study is the normality test and homogeneity test. Normality testing is carried out to determine whether a data distribution is normal or not. (Salasi & Maidiyah, 2017). Homogeneity testing is a test conducted to determine whether two or more groups come from the same population. (Nurhaswinda et al., 2023). After testing normality and homogeneity, the next step is to test the statistical hypothesis. Analyzing the data that has been collected by comparing the pre-test and post-test scores. the value is compared by seeing if there is a difference in the pre-test value and the post-test value. Statistical hypothesis testing using the paired t test. This test is used to compare the means of two variables in a single sample group. If the distribution is not normal then use a non-parametric test, namely, the Wilcoxon test.

Results and Discussion

Learning outcomes owned by students can increase if teachers use creative and innovative learning models. However, if the teacher only conveys the material with a conventional learning model, students will not be interested in the teacher's explanation in front of the class, so that the learning outcomes produced by students will decrease. The problems contained in this study are the low learning outcomes of Natural and Social Sciences (IPAS), the lack of teachers in utilizing learning models and students lack of interest in the learning process. The problem can be solved by using a varied learning model, so that students can be interested and motivated to learn. In this study, the data used came from the results of tests that had been conducted on one class IV consisting of 15 students. The sample class was given conventional learning and then took a pre-test, after which the picture and picture learning model was applied and then given a post-test. After conducting research using the Picture and Picture model, the data obtained by class IV B before being treated with the pre-test results were an average of 55. While after being treated, the average post-test of class IV B is 77.

Table 1. Pre-test and Post-test results in class IV

Data	**Result *Pre-test***	**Result *Post-test***
Minimum	25	25
Maximum	80	100
Average	55	75
Standard Deviation	13	21
Complated	1	11
Not Complate	14	3

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The table above shows data on the results of the initial test and final test scores on the IV B class sample of 15 students. The pre-test results show that there are still many students whose scores are not complete because the Picture and Picture learning model has not been applied. Meanwhile, after being treated by applying the Picture and Picture learning model, the post-test results showed an increase in class IV students compared to the previous test. The learning outcomes obtained by many students exceed the KKM limit. After the test results have been done by students, the next step in the research is to find out whether the hypothesis is rejected or accepted. Before testing the hypothesis, the first thing to do is find out whether the data is normally distributed or not using the Shapiro Wilk normality test. Normality testing is carried out in order to determine whether the data distribution is normal or not. Parametric statistical tests require normally distributed data. If the distribution is not normal, it is recommended that a non-parametric statistical test be used (Salasi & Maidiyah, 2017). The following below are the results of the normality test using SPSS 25 For Windows.

Table 1. Normality Test of Pre-Test and Post-Test

Statistik	***Pre-test***		***Post-test***
Sig (2-tailed)	0,162		0,056
Significant Level		0,05	
Conclusion	Normal		Normal

Based on the normality test requirements, it is normally distributed if the significance> 0.05, while if the data is not normally distributed, the significance <0.05. The data above proves that the sig (2-tailed) pre-test value is 0.162> 0.05, which means the data is normally distributed. In the post-test value sig (2-tailed) 0.056 > 0.05, then the post-test is normally distributed.

After doing the normality test, the next thing to do is to find out whether the data is homogeneous or not. Homogeneity testing is a test conducted to determine that two or more groups come from the same population. The following below are the results of the homogeneity test using SPSS 25 For Windows.

Table 2. Homogeneity Test Pre-Test and Post-Test

Statistik	***Pre-test***		***Post-test***
Sig	0,110		0,110
Significant Level		0,05	
Conclusion	Homogeneous		Homogeneous

The results of the homogeneous data prerequisite test if sig > 0.05 then the group variance is homogeneous, while if sig < 0.05 then the data group variance is not homogeneous. The homogeneity value shows that the data is 0.110> 0.05, meaning that the data is homogeneous or comes from the same group. Data testing with normality and homogeneity has been carried out and states that the data is normally distributed and homogeneous. The next step is done to find out whether the data has an effect or not, by testing the hypothesis. A hypothesis is an opinion or temporary answer to a problem that is proposed, the truth needs to be proven. Determining whether a hypothesis can be rejected or not is the purpose of hypothesis testing (Hermawan, 2019).

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Table 3. Statistical Hypothesis Test of Pre-Test and Post-Test

Statistik	Paired T Test
Sig	0,003
Significant Level	0,05
Conclusion	H_0 is rejected and H_a is accepted

Hypothesis conclusion is taken through the conditions, namely, if the amount of sig <0.05, then H0 is rejected and Ha is accepted, while if sig > 0.05, then H_0 is accepted and H_a is rejected. The data above states that the hypothesis result is, sig 0.003 < 0.05.

Based on the results of the study obtained that, Ha is accepted, namely that there is an influence on the application of the Picture and Picture model on student learning outcomes. It is known in the results of table 1 analysis, that the initial ability of students is still relatively low in the first step, namely the pre-test. The pre-test is given to students first using a test instrument of 5 questions of description questions. After that, students are given a post-test using a 5-number description test question. The results of the pre-test data study in table 1 show that the minimum student score is 25 and the maximum is 80, with a total of 1 student whose score is complete. While the post-test data in table 1 shows that the minimum student score is 25 and the maximum is 100, with a total of 11 students who get a complete score. This situation shows that before being given treatment using the Picture and Picture model, student scores were lower than after being given the Picture and Picture learning model, so student scores increased.

The increase in student learning outcomes shows that learning activities using the Picture and Picture learning model help students think based on the view of a subject and can develop students' enthusiasm for learning. (Fadjarajani et al., 2020). Picture and Picture learning model is a model using random pictures that will be sorted by students. The pictures used in learning are in accordance with the learning objectives and have three requirements, which must be authentic, simple, and have artistic value. In the learning stages of the Picture and Picture model, students are strived to be able to be responsible for something that has been done with their group. In addition, students must be able to unite their opinions with the results that have been done with their group in order to have a common goal (Wahyuningsih, 2022). Picture and Picture learning model is learning that focuses on pictures as the main media. The picture presented becomes the main thing in the learning stage. Using pictures that have been scrambled expects that students can learn to understand concepts and facts by describing the pictures given to them based on ideas and notions (Praseptia & Zulherman, 2021).

The stages carried out using the Picture and Picture learning model are, first, providing learning outcomes for Natural and Social Sciences (IPAS) subjects with water cycle material. Second, present the water cycle material as an introduction. Third, the teacher provides random images related to the water cycle with the aim that students can be actively involved in presenting the material by analyzing the images. Fourth, the teacher calls students in turn to put up the random pictures. Fifth, the teacher asks students if there is a reason for the results they have done. Sixth, the teacher begins to convey material in accordance with the

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achievement indicators. Seventh, the teacher forms groups, so that students can conduct discussions related to random images. Eighth, students are invited to conclude the material that has been delivered (Octavia, 2020).

This learning model involves students in thinking because in learning using picture media that has been scrambled. There are several advantages of the Picture and Picture model such as, teachers can find out the ability of students, train students to think realistically, support students in the learning process by giving freedom in thinking, develop students' enthusiasm in learning, and involve students in planning and managing the class. So it can be concluded that students can better understand and be interested in learning if by using the Picture and Picture learning model. In the learning process, students arrange the pictures that have been randomized, where students are asked to be responsible for arranging the pictures logically. (Fadjarajani et al., 2020). The images used in learning should be simple and interesting, so that students are interested in the learning process. (Wahyuningsih, 2022). As for the weaknesses of the Picture and Picture model, namely, it uses a lot of time, the teacher is worried that there will be differences of opinion that cannot be resolved, many students are not happy to be invited to cooperate with each other and it is difficult to find pictures that are in accordance with the reasoning owned (Octavia A, 2020).

This research is in line with what has been done by (Ayuni & Adriyani, 2022) bahwa Picture and Picture learning model affects student learning outcomes at SMP Negeri 02 Bengkulu City. The study used quasy experiments with sample techniques, namely, purposive sampling. Based on the results obtained, the Picture and Picture model affects student learning outcomes at SMP Negeri 02 Bengkulu City. Other research, namely, research conducted by (Sirait et al., 2022) is the use of Picture and Picture type cooperative learning model on student learning in grade V students of SD Negeri 124405 Pematangsiantar. This research uses pre-experimental with the results of the study there are changes in students who are taught with the Picture and Picture model, namely students are more active in thinking and learning to identify material presented in the form of pictures.

Conclusion

Based on the results of the analysis that has been done, the authors can conclude that there is an effect of the Picture and Picture model on the learning outcomes of IPAS subjects of grade IV students of SD Negeri 3 Rajabasa. In class IV B, the average pre-test score is 55, while the post-test is 77. This is evidenced by the paired t test with the results obtained t_{count} 3.522> t_{table} 1.761 with a significance of 2 tailed 0.003 <0.05 so that H_a is accepted H_0 is rejected. It can be concluded that, the learning outcomes of Natural and Social Sciences (IPAS) class IV B taught using the picture and picture learning model have an effect on increasing student learning.

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Suggestion

The research that has been conducted is expected to be able to provide assistance from various parties as useful information for future progress. The parties include, 1) for class teachers to use various learning methods to increase student interest in the learning process. 2) For future writers, this research can be used as a reference in subsequent research related to the Picture and Picture learning model and can continue the research more optimally with the delivery of more interesting material.

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