



The Effect of Picture and Picture Type Cooperative Learning Model on Participation and Learning Outcomes of Grade IV Elementary School Students

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Abstract

This research is motivated by the participation and learning outcomes of fourth-grade students at SDN 15 Kapalokoto Kec. Sungaipua is still low. This can be seen that many students are less enthusiastic about learning. The research aims to determine the influence of the Picture and Picture Cooperative Learning Model on the Participation and Learning Outcomes of Class IV Elementary School Students. This research was conducted on fourth-grade students of SDN 15 Kapalokoto Kec. Sungaipua for the 2021/2022 academic year. The experimental research design used was a randomized control group-only design. Participation test data were obtained through student participation questionnaires. The results showed that: (1) There was an effect of student participation being taught a cooperative model of picture and picture type, (2) there was an effect of student learning outcomes taught a cooperative model of picture and picture type.

Keywords: Cooperative learning, learning participation, learning outcomes

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Introduction

Mobilizing Schools are schools that have implemented an independent learning curriculum. The independent learning curriculum is a curriculum that prioritizes understanding, skills, and character education, where students are required to understand the material, actively participate in

discussions and presentations, and have high manners and discipline (Agustinus & Dadi, 2021; Halimah et al. al., 2020). An independent learning curriculum needs to be prepared optimally, a variety of activities using various learning models (Fatimah et al., 2016; Montessori & Indrawadi, 2019), and learning strategies serve as guidelines for teachers in carrying out the learning process. Independent learning emphasizes more on student involvement in the learning process or directs students to participate in the learning process (Alman, 2014; Bentri et al., 2014; Nurmallasari et al., 2016). Supposedly the teacher must be able to carry out learning and provide work opportunities for students so that they can influence the interaction of student participation so that learning objectives are achieved optimally.

Freedom to learn at the Elementary School (SD) level which also demands learning that is in accordance with the creative, brain and physical development of children, who are still experiencing changes towards a more mature quality called growth (Dudung, 2018; Lina, 2016; Nurmallasari et al., 2016). In order to make the teaching process more interesting and there is collaboration with students, it is necessary to change learning from the old paradigm which uses the 2013 Curriculum where learning only uses a lecture model and is focused on the teacher while the new paradigm uses an independent learning curriculum that focuses on students, learning is more creative and innovative so that can affect the creativity of students in thinking, activeness, and enthusiasm of students in learning. The one-way learning process is changed to two directions or many directions so that students can be directly involved (Ardipal, 2018; Husada et al., 2020; Noviati et al., 2020).

Based on the results of observations and videos shown by the teacher in the elementary school class where the learning process on social studies material in class IV SDN 15 Kapalokoto Kec.Sungaipua. Religion, is obtained as an illustration that many student learning processes do not respond to actively participate in asking and answering questions from teachers in class and because there are still teachers who are not biased in using learning models and many teachers are found to be lazy to use videos to support active participation, only once -every time the teacher uses video, in the learning process the teacher does not involve students in the process that there is less participation in class IV seen during observation and from the teacher's explanation in class so that student learning outcomes are low seen from student semester exams. It can be seen that when the teacher shows a video about the colonial period, it can be seen that the students are just silent and there is no response to the interaction between the teacher and students, there is no question-and-answer process about the video. The research aims to determine the influence of the Picture and Picture Cooperative Learning Model on the Participation and Learning Outcomes of Class IV Elementary School Students.

Methodology

This research was conducted at SDN 15 Kapalokoto Kec. Sungaipua. Religion in the 2013 curriculum focuses on social studies material. This research will be carried out in the even semester of the new school year 2021/2022. This research was carried out by following the schedule determined by the school. The population in this study is class IV of SDN 15 Kapalokoto Kec. Sungaipua for the 2021/2022 academic year. The number of population subjects is 40 students.

Results

This research was conducted according to experimental research procedures. In principle, the experimental research that the researchers conducted aimed to look at the participation and learning outcomes of students who were taught using the Picture and Picture Cooperative Learning model and students who were taught using a conventional approach. This research activity was carried out by class IV SDN 15 Kapalokoto Kec. Sungaipua. Data on student participation in this study were obtained from a study participation questionnaire. The learning participation questionnaire consists of four indicators which are broken down into 20 statement items. This questionnaire was given to the experimental and control classes before and after learning was carried out.

This learning participation test was given before the learning process was carried out in the two sample classes. This data aims to see and compare students' initial participation in learning in both class samples. The data can be seen in the following table:

Table 1: Participation Before Learning

Class	<i>Pretest</i>	
	Average	Percentage
Eksperimen	62.3	42.176%
Control	57.5	43.488%

Based on Table 1 above, it can be seen that the average student participation in the experimental class is higher than the average student participation in the control class. The average student participation in the experimental class before learning was carried out using the Picture and Picture cooperative learning model was 62.3 with a percentage of 42.176% in the low category. Furthermore, the average data on student participation obtained in the control class before learning was carried out was 57.5 with a percentage of 43.488% in the low category.

Furthermore, this learning participation test was given after the learning process was carried out in the two sample classes. This data aims to see and compare student participation in learning in the two sample classes after the treatment was carried out, namely the Picture and Picture cooperative learning model in the experimental class and conventional learning in the control class. The data can be seen in the following table:

Table 2: Learning Participation After Learning

Class	<i>Posttest</i>	
	Average	Percentage
Eksperimen	90.4	64.18
Control	82.8	61.42

Based on table 2 above, it is known that the average student participation in the experimental class after learning using the Picture and Picture cooperative learning method was 90.4 with a percentage of 64.18% in the high category. This shows that student learning participation in this experimental class has increased when compared to the experimental class before being given treatment. Furthermore, the average student participation in the control class after learning was 82.8 with a percentage of 61.42% in the medium category. This also shows that student participation in the control class has also increased when compared to before being given treatment.

The following describes the data on student learning outcomes in the experimental and control classes before learning is carried out or before being given treatment. This data aims to see and compare the cognitive learning outcomes of students in the two sample classes before the implementation of the treatment, namely the Picture and Picture cooperative learning model in the experimental class and conventional learning in the control class. The data can be seen in the following table:

Table 3. Learning Outcomes Before Learning

Class	N	$\bar{x}$	x min	x max	S
Eksperimen	20	66.40	52	80.00	9.12
Kontrol	20	72.20	52	84.00	8.75

Based on table 3 above, it can be seen that the average cognitive learning outcomes of the experimental class students are lower than the average cognitive learning outcomes of the control class students. It can be seen that the average pretest of student learning outcomes in the experimental class was 66.4 in the less category and the average pretest of student learning outcomes in the control class was 72.2 in the less category.

In the pretest, the maximum score obtained by students in the control class was 84.00 with the score obtained by students in the experimental class, which was 80.00. The minimum score obtained by experimental class students is 52 and the minimum value obtained by students in the control class is 52. This means that the cognitive learning outcomes of experimental class students are lower than those of control class students. Student learning outcomes after receiving treatment can be explained in the table following.

Table 4. Learning Outcomes After Learning

Class	N	$\bar{x}$	x min	x max	S
Eksperimen	20	90.4	76.00	100	6.92
Control	20	82.80	68.00	100	9.18

Based on Table 4 it is known that the average post-test of student learning outcomes taught using the Picture and Picture cooperative learning model is 90.4 with a very good category and the average post-test of student learning outcomes taught by conventional learning is 82.80 with a good category. The posttest average of student learning outcomes in the experimental class using the Picture and Picture cooperative learning model is higher than the posttest average of student learning outcomes in the control class which is taught using conventional learning because there are different treatments in learning activities.

The maximum score of students in the experimental class is the same as that of the control class, which is 100. Meanwhile, the minimum score of students in the experimental class is also higher than that of the control class. In the experimental class, the minimum student score was 76.8 and in the control class, the student's minimum score was 68.00.

Normality calculations were carried out on study participation for the experimental and control classes before treatment using the Liliefors test formula. Details can be presented in the following data tabulation form.

Table 5. Normality test of student participation in experimental and control classes before treatment

Sample	A	L _h	L _t	Information
Experimental Class learning participation normality test before treatment	0.05	0.158	0.190	Normal
Test for normality of study participation Control class before treatment	0.05	0.117	0.190	Normal

Based on table 5 above, it shows that for the experimental class before treatment the value obtained by L_h was 0.158. While L_t at level α (0.05) for a sample of 20 people is 0.190. Because L_h is smaller than L_t, it can be concluded that the data is normally distributed. Meanwhile, for the control class, L_h was 0.117. While L_t at level α (0.05) for a sample of 20 people is 0.190. Because L_h is smaller than L_t, it can be concluded that the data is normally distributed

Normality calculations were carried out on study participation for the experimental and control classes after treatment using the Liliefors test formula. Details can be presented in the following data tabulation form.

Table 6. Normality test of student participation in the experimental and control class after treatment

Sample	A	L _h	L _t	Information
Experimental Class Learning Participation Normality Test After Treatment	0.05	0.147	0,190	Normal
Normality test of study participation Control class after treatment	0.05	0.121	0,190	Normal

Based on table 6 above, it shows that for the experimental class after treatment, the value obtained by L_h is 0.147. While L_t at level α (0.05) for a sample of 20 people is 0.190. Because L₀ is smaller than L_t, it can be concluded that the data is normally distributed. Meanwhile, for the control class, L_h was 0.121. While L_t at level α (0.05) for a sample of 20 people is 0.190. Because L_h is smaller than L_t, it can be concluded that the data is normally distributed.

Normality calculations were carried out on learning outcomes for the experimental and control classes before treatment using the Liliefors test formula. Details can be presented in the following data tabulation form.

Table 7. Normality test of student learning outcomes in the experimental and control classes before treatment

Sample	α	L _h	L _t	Information
Test the normality of experimental class learning outcomes before treatment	0.05	0.109	0.190	Normal
Test the normality of learning outcomes Control class before treatment	0.05	0.136	0.190	Normal

Based on table 7 above, it shows that for the experimental class before treatment, the value obtained by L_h was 0.109. While L_t at level α (0.05) for a sample of 20 people is 0.190. Because L₀ is smaller than L_t, it can be concluded that the data is normally distributed. Meanwhile, for the control class, L_h was 0.136. While L_t at level α (0.05) for a sample of 20 people is 0.190. Because L_h is smaller than L_t, it can be concluded that the data is normally distributed.

Normality calculations were carried out on learning outcomes for the experimental and control classes after treatment using the Liliefors test formula. Details can be presented in the following data tabulation form.

Table 8. Test for normality of student learning outcomes in the experimental and control class after treatment

Sample	A	L _h	L _t	Information
Test the normality of experimental class learning outcomes after treatment	0.05	0.136	0.190	Normal
Test the normality of learning outcomes Control class after treatment	0.05	0.120	0.190	Normal

Based on table 8 above, it shows that for the experimental class after treatment the value obtained by L_h is 0.136. While L_t at level α (0.05) for a sample of 20 people is 0.190. Because L_h is smaller than L_t , it can be concluded that the data is normally distributed. Meanwhile, for the control class, L_h was 0.120. Whereas L_t at level α (0.05) for a sample of 20 people is 0.190. Because L_h is smaller than L_t , it can be concluded that the data is normally distributed. Testing the first hypothesis in this study using the t-test. The t-test was performed on the pretest and posttest data. The t-test on the pretest aims to further ensure that the experimental class and the control class have the same initial learning participation. The t-test on the posttest aims to show differences in student participation in the experimental class taught using the influence of the Picture and Picture Type Cooperative Learning model compared to the control class taught using conventional learning. If $t_{count} < t_{table}$ means there is no significant difference and vice versa if $t_{count} > t_{table}$ means there is a significant difference between the experimental class and the control class. The results of the hypothesis testing carried out can be seen in the following table.

Table 9. Hypothesis Test 1

	Class	N	S_{gab}	α	dk	$T_{account}$	T_{table}	Information
Pretest	Experiment	20	15.5	0.05	38	-1,476	2.168	Accept H_0
	Control	20	08					
Posttest	Experiment	20	38.3	0.05	38	1.042	2.168	Accept H_1
	Control	20	55					

Table 9 above shows that at the pretest for the significance level $\alpha = 0.05$ and $dk = 38$, the T_{count} value is -1.476, while $T_{table} = 2.168$. It can be concluded that H_0 is accepted because $t_{count} < t_{table}$. Thus it can be concluded that there is no significant difference in students' early learning participation before being treated in the experimental class and the control class. Furthermore, based on the results of the t test on the posttest results shown in table 4.13, the t_{count} is 2.4130, while $t_{table} = 2.0244$. It can be concluded that H_1 is accepted because $t_{count} > t_{table}$. Thus it can be concluded that there is a difference between student learning activities after being taught with the Picture and Picture Type Cooperative Learning model in the experimental class and student learning participation taught by conventional learning in the control class.

Testing the second hypothesis in this study also uses a t-test. The t-test was performed on the pretest and posttest data. The t-test on the pretest aims to be more certain that the experimental class and the control class have the same initial learning outcomes. The t-test in the post-test aims to show that there are differences in student learning outcomes in the experimental class taught using the Picture and Picture Type Cooperative Learning model compared to the control class taught using conventional learning. If $t_{count} < t_{table}$ means there is no significant difference and vice versa if $t_{count} > t_{table}$ means there is a significant difference between the experimental class and the control class. The results of the hypothesis testing carried out can be seen in the following table.

The table below shows that at the pretest for the significance level $\alpha = 0.05$ and $dk = 38$, the T_{count} value is -1.385, while $T_{table} = 2.0244$. It can be concluded that H_0 is accepted because $t_{count} < t_{table}$. Thus it can be concluded that there is no significant difference in the initial learning outcomes of students before being treated in the experimental class and the control class.

Table 10. Hypothesis Test 2

	Class	N	S_c	α	dk	$T_{account}$	T_{table}	Ket
Pretest	Experiment	20	130,41	0,05	38	-1,385	2,024 4	Accept H_0
	Control	20						
Posttest	Experiment	20	31,814	0,05	38	3,418	2,024 4	Accept H_1
	Control	20						

Furthermore, based on the results of the t-test on the post-test results shown by the table, the price of count is 3.418, while table = 2.0244 It can be concluded that H1 is accepted because $t_{count} > t_{table}$. Thus it can be concluded that there are differences in student learning outcomes after being taught with the Picture and Picture Type Cooperative Learning model in the experimental class and the learning outcomes of students taught with conventional learning in the control class.

The effect of the Picture and Picture Cooperative Learning model on Learning Participation

Activities that lead to the learning process, such as asking questions, submitting opinions, doing assignments, and answering teacher questions properly. Student learning participation is influenced by many factors. One of them is the learning model used by the teacher during the learning process. This is supported by the opinion (Setiana, 2016) which also reveals that one of the factors that influence student learning participation is the teaching method/model used by the teacher in the learning process.

Evidence that student learning participation can be influenced by the learning methods used by teachers in the learning process is also evidenced by the results of research that researchers have conducted (Bamba, 2018; Irianto, 2016; Wijayanti et al., 2016). Researchers used two classes as a sample to compare the effect of the model on student participation. The first class as the experimental class was given treatment using the picture and picture type cooperative learning model and the second class as the control class was not given any treatment or used conventional methods. Based on the results of this study, it can be seen that the learning participation of the experimental class students who were taught using the picture and picture type cooperative learning model was higher than the learning participation of the control class students who were taught by conventional learning (M & K, 2004; Rismawaty, 2021; Thepsatitporn & Pichitpornchai, 2016). This can be seen from the mean participation test results for students taught using the picture and picture cooperative learning model which is 85.75 or higher than the average participation test results for students taught using the conventional approach with an average of 81 ,5.

The results of data analysis were also strengthened by the results of testing the first hypothesis using the t test, the combined variance of the two samples was 26.22 for a significant level $\alpha = 0.05$ dk 38, so the resulting t_{count} was 2.4130. While the t_{table} obtained is 2.0244. Because t_{count} is greater than t_{table} , H_0 is rejected and H_1 is accepted. This means that the learning participation of students who are taught with the cooperative learning model of the picture and picture type is better than the learning participation of students who are taught with the conventional approach.

This study has revealed that the picture and picture type cooperative learning model has a positive influence on student learning participation. The application of the picture and picture cooperative learning model in real learning, the researcher saw that students' interest in learning could be raised and students' attention to the learning given by the teacher also looked good. Students are also more active in learning, and student cooperation also looks good in group work.

2. The effect of the Picture and Picture Cooperative Learning model on learning outcomes

Learning outcomes will only be obtained by someone after carrying out learning participation. In line with Snelbeker, Lapono also makes changes in behavior an indicator of whether a person gets learning outcomes or not. Learning outcomes are measured based on whether or not a change in behavior occurs in someone who has carried out the learning process (Desvianti et al., 2020; Irianto, 2016; Tarmili, 2016). Student learning outcomes are student achievements after experiencing learning activities. In this study, the effect of the picture and picture type cooperative learning model on student learning outcomes was determined from a comparison of the average scores of student learning outcomes in the experimental class and the control class, as well as the increase in student learning outcomes after participating in learning activities with the picture and picture type cooperative

learning model in experimental class and conventional learning in the control class (Santos & Castro, 2021; Wibowo, 2016; Wilda Ashofa & Muhammad Widda Djuhan, 2021).

The results of testing the second hypothesis revealed that the learning outcomes of the experimental class students who were taught using the picture and picture cooperative learning model were higher than the learning outcomes of the control class students who were taught by conventional learning. This can be seen from the average learning outcomes of students who are taught with the cooperative learning model type picture and picture which is 90.4 or higher than the average learning outcomes of students who are taught with a conventional approach with an average of 82.8

The results of data analysis were also strengthened by the results of testing the first hypothesis using the t test, the combined variance of the two samples was 31.8145 for a significant level $\alpha = 0.05$ dk 38, so the resulting tcount was 3.418. While the ttable obtained is 2.0244. Because tcount is greater than ttable, H0 is rejected and H1 is accepted. This means that the learning outcomes of students who are taught with the cooperative learning model of picture and picture type are better than the learning outcomes of students who are taught with a conventional approach.

This study has revealed that the picture and picture type of cooperative learning model has succeeded in influencing student learning outcomes. This success is because this method has learning steps that can involve students actively in learning both individually and in groups (Irianto, 2016). This method is in the implementation of research and makes a product design as its trademark in creating fun learning for students.

Conclusion

Based on the results of the research that has been put forward, it can be concluded that there are differences in the participation and learning outcomes of students using conventional learning models with the participation and learning outcomes of students who are taught using the picture and picture cooperative learning model in Class IV SDN 15 Kapalakoto Kec. Sungaipua. By using the cooperative learning model type picture and picture students can be more involved in active learning because it can help students understand the media that has been used.

Conflicts of Interest

The authors declare no conflict of interest

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