



Application of Picture and Picture Type for Increasing Students' Creativity in Science Subjects

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Abstract

This research aims to find out whether using the picture and picture learning type in science subjects in class IV elementary school 13/1 Muara Bulian can increase students' creativity in learning. This type of research is Classroom Action Research which is carried out in cycle III. Each cycle has 2 meetings attended by 25 students which is carried out in class IV of elementary school 13/1 Muara Bulian. Data collection techniques in this research are observation and questionnaires. From the research results obtained, the average value of student creativity in cycles I (60), cycles II (79) and III (84), we can see that students' creativity continues to increase each cycle by using the picture and picture learning type. So it can be concluded that using the picture and picture type cooperative learning model can increase students' creativity in learning. The author suggests using a learning model in the learning process that is appropriate to the material being taught.

Keywords: creativity; science

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INTRODUCTION

Education is an effort or activity carried out deliberately, regularly and planned with the intention of changing or developing desired behavior. Schools as formal institutions are a means of achieving educational goals (Dani et al., 2019; Lase, 2019). Through school, students can learn various things. In formal education, learning shows positive changes so that at the final stage new skills, abilities and knowledge will be obtained (Ariyana et al., 2018; Rintakorpi & Reunamo, 2017). The learning process that occurs in individuals is indeed something important, because through learning individuals get to know their environment and adapt to the environment around them (Istiqomah et al., 2016; Wahyuningsih, 2019).

Learning is being able to do something by practicing so that the person concerned changes. By studying, students can realize their expected goals. Learning will produce changes in a person. To find out to what extent the changes have occurred, an assessment is needed (Hendarawan et al., 2020). Likewise, what happens to a student who takes part in an education course is that an assessment of their learning results is always carried out (Mandriosa, 2020). Assessment of a student's learning outcomes to determine the extent to which they have achieved learning targets is what is called learning achievement (Risman, 2020). Education is an effort to improve development of children's potential and abilities so that they are beneficial for the interests of their lives that education is a conscious and

planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble character and skills (Neldawati, 2020). which is needed by oneself, the community, the nation and the state. Education is accepted and appreciated as a very valuable and truly productive wealth, because productive work today is work that is based on the mind, not the hands (Asro, 2020). The formation of educated people is the most important capital for a nation (Lasmita, 2020). Therefore, almost all countries place education as something important and primary in the context of nation and state development.

The aim of science subjects is to equip students with adequate intellectual knowledge and skills as well as practical experience so that they have competence and effectiveness in participating (Rahayu & Romadona, 2020). Apart from that, to support the achievement of the objectives of science subjects, teachers must create a conducive learning climate and classroom atmosphere, so that students are comfortable and easily accept the lesson material presented (Purwono et al., 2014; Qoryana, 2020). A conducive learning atmosphere is also supported by the role of teachers in selecting and using learning models, methods and media in learning (Juita, 2020). One of the steps in selecting and using learning models, methods and media is that teachers must master the learning material.

The reality that exists among students is that students have not played an active and creative role in the process of learning activities (Mas'ud et al., 2019). According to the author, this happens because in implementing the learning process in class the teacher does not use varied learning models. However, teachers still tend to give lots of assignments during the learning process. takes place, so that students do not directly play a role in the learning process. This is also because the teacher's mastery of the existing learning models is very poor (Azahara, 2020). And because of this, students are not active and creative in accepting learning process activities. For this reason, the teacher's mastery of the models. Learning models are important and very necessary in order to improve teacher abilities and increase student creativity at elementary school 13/1 Muara Bulian. Based on the results of these observations, it was obtained that the low creativity of 10 students in science learning was due to the learning process being less interesting for the students and the teacher only using the lecture method. The material on heat energy is one of the materials related to student creativity (Rusliani, 2020). The interesting thing about this material is that this material is often encountered by students in everyday life (Wulandari, 2020). So that students can understand this material well, students must be taught in the right way so that learning becomes meaningful. learning is not meaningful if the teaching is rote because students only accept or imitate what is taught. teaching will be more meaningful if students as learning subjects are given the opportunity to play an active role in learning activities (Ibrahim, 2020).

Based on these problems, a learning model is needed that is able to arouse students' enthusiasm to be more active, not embarrassed to ask questions, give opinions, be interested, be creative and encourage the development of their potential, as well as construct knowledge from what they have learned (Farlina & Yusminar, 2020). One learning model that suits these demands is the picture and picture type cooperative learning model. The picture and picture type cooperative learning model is a learning model that uses pictures and is paired/sorted into a logical sequence (Kesuma & Wahyuni, 2020). This learning has the characteristics of being active, innovative, creative and fun. The picture and picture type cooperative learning model is a model that has several advantages, including knowing more about each student's abilities and being able to train students to think more logically and systematically. Based on the background above, the researcher is interested in conducting research with the title "application of the picture and picture type to increase student creativity in learning science subjects for fourth grade students at elementary school 13/I Muara Bulian"

RESEARCH METHODS

Research Design

This research uses the classroom action research method. Classroom action research is one of the efforts of teachers or practitioners in the form of various activities carried out to improve conditions that

are unsatisfactory or unsatisfactory and/or to improve the quality of learning in the classroom (Creswell, 2014). Classroom action research is an activity that is directly related to the duties of teachers or practitioners in the field. In short, classroom action research is practical research that aims to improve existing learning practices.

Research Target/Subject

In this research, the subjects chosen were 25 class IV students at SDN 13/1 Muara Bulian, consisting of 10 boys and 15 girls. It is hoped that the selection of a representative number of subjects from both genders can provide a comprehensive picture of the implementation of the 2013 Curriculum in class IV. Thus, the results of this research can provide deeper insight into the influence of curriculum implementation on students' overall understanding and learning achievement, as well as possible differences that may occur between male and female students in the learning context in the classroom.

Research Procedure

The research carried out is classroom action research which adopts an iterative cycle consisting of four main steps. The first step is planning, where the teacher plans learning activities and strategies. The second step is implementation, where the plan is implemented in the classroom context. The third step is observation, where the teacher observes students' responses and progress during learning. Finally, the fourth step is reflection, where the teacher summarizes the results of observations, formulates conclusions, and plans improvement steps for the next cycle. This method allows teachers to systematically support their teaching practice based on direct experience and in-depth reflection.

Instruments, and Data Collection Techniques

Data collection techniques in this research are observation and questionnaires. In this research, the data collection techniques used include direct observation of the phenomenon under study as well as the use of questionnaires to collect information from respondents regarding their understanding, perceptions and experiences of the research subject. Observation provides the advantage of obtaining data directly from the observed situation, while questionnaires provide the opportunity for participants to convey their views and experiences in writing, providing an additional dimension to the understanding of the phenomenon under study. It is hoped that the combination of these two techniques can provide comprehensive and in-depth data for analysis and interpretation in this research.

1. Observation

This observation activity is carried out during the learning process. The observation is carried out simultaneously with the implementation of the action. Observations were carried out by researchers using observation sheets that had been made before making observations. And the results of this observation are used to determine the type of corrective action in the next cycle.

2. Questionnaire

A questionnaire is a number of written questions used to obtain information from respondents in the sense of reports about their personality or things they know. The questionnaire in this research is a tool to strengthen researchers in managing data. To give the researcher a score, these items can be arranged in four or more. Alternatives that say something like: "always, often, sometimes, rarely, never." Each response is connected to the score value or scale value for each statement by giving a check mark (v) to the answer that is deemed appropriate.

Table 2. Response Values in the Instrument

Mark	Category
5	Always
4	Often
3	Sometimes
2	Seldom
1	Never

Table 3. Grid of research instruments regarding student creativity in the learning process

No	Indicator	Descriptor	No item	Amount
1	Have great curiosity	Always looking for information	1,2,3,4	4
2	Have your own opinion and not easily influenced	Not cheating	5,7	2
3	Have broad interests	Passionate about learning	8,10	2
4	Dare to take risks	Dare to express your opinion	12,14	2
5	Be self-confident and independent	Always get new ideas	6,11,13,18,20	6
6	Persevering and not easily bored	Diligent	9,15,16,17,19	5
Amount				20

Data analysis technique

Data analysis in this research includes the stages of initial data collection, data processing during action implementation, and evaluation of final results to assess the effectiveness of learning strategies. In the analysis process, observations were made of changes in students' creativity levels before and after implementing the Picture and Picture method, by paying attention to creativity indicators such as the ability to formulate questions, produce innovative solutions, and apply science concepts creatively in everyday contexts. Apart from that, the data was also analyzed quantitatively through statistical tests to measure the significance of differences between pre-test and post-test results, as well as conducting qualitative analysis of student responses to the learning methods applied (Sugiyono, 2017). With a comprehensive analytical approach, this research aims to provide an in-depth picture of the impact of implementing the Picture and Picture learning type on increasing student creativity in science learning.

RESULTS AND DISCUSSION

This research is classroom action research. The following is a recapitulation of student creativity observation results per cycle I, II, III indicators.

Table 4. Recapitulation of Observation Results of Student Creativity Perindicator for Cycles I, II, III

No	Indicators of student creativity	Percentage		
		Cycle I	Cycle II	Cycle III
1.	Have great curiosity	50	78	83
2.	Have your own opinion and not easily influenced	35	67	79
3.	Has broad interests	41	67	81
4.	Dare to take risks	45	70	78
5.	Confident and independent	44	77	84
6.	Persevering and not easily bored	34	64	75

Table 5. Student Creativity per Individual cycles I, II, III

No.	Student Name	Percentage		
		Cycle I	Cycle II	Cycle III
1.	Azzra L	43	73	89
2.	Aldi B	52	73	82

3.	Alan N	37	71	91
4.	Arya A	48	76	89
5.	Clara	41	66	95
6.	Dinda F	60	85	95
7.	Difa Rice	41	71	68
8.	Diev Marsa	50	60	93
9.	Dinda K	53	82	82
10.	Ema Yulia	35	73	91
11.	Heri yanto	46	71	91
12.	Haikal W	71	79	87
13.	Yureki Leo	43	69	85
14.	Youel Marc	52	82	84
15.	Nanda M	37	78	94
16.	Marwa S	61	73	87
17.	Muhamiti	43	79	87
18.	M.Rosyd	57	60	64
19.	M. Ridwan	64	86	94
20.	M. Reyhan	48	75	94
21.	M. Aldry	43	73	88
22.	M. Rizky	43	75	82
23.	Mutia R	60	84	89
24.	Reyhan P	41	75	88
25.	Teti M	44	75	82

Based on tables 4 and 5 regarding the analysis of the results of observations and student creativity questionnaires, it shows that students' creativity in the cycle increases gradually. With the research results that have been obtained, it has been proven that the use of the picture and picture learning model in science subjects can increase students' creativity in learning.

CONCLUSION

Based on the research results, it can be concluded that the results of observations carried out in cycle I showed that student creativity reached 64% and there were 14 students who completed it with a percentage of 56%, in cycle II there was an increase, student creativity reached 68% and there were 23 students who completed with a total percentage of 92% and in cycle III there was an increase again, student creativity reached 81% and all students had achieved the expected completion criteria. Thus, the research has met the success criteria that have been set, namely it has reached a percentage of 70%. This shows that using the picture and picture learning model can increase students' creativity in learning. Based on the results of research on increasing student learning creativity in using the picture and picture model in science subjects in class IV elementary school 13/1 Muara Bulian, the author suggests that teachers in schools use the picture and picture learning model. It is recommended that this learning model not only be tried in class IV, but also implemented in other classes that are appropriate to the material being studied.

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