



Increasing Student Creativity through Project Based Learning Models in Thematic Learning

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Abstract

This study aims to determine the increase in student creativity after the implementation of learning with the Project based Learning model and to see the interaction between initial abilities and learning to increase student creativity. The type of research used was a quasi-experimental with a sample of 25 students in class 5A in the experimental class and 29 students in class 5B in the control class. The instrument used is the observation sheet of student creativity. The instrument was prepared based on indicators of student creativity as many as 25 statements with four alternative answers. Data were obtained by observing using observation sheets of student creativity for all research samples. The data obtained were analyzed with two-way ANOVA. The results showed that (1) the increase in the creativity of students who received learning using the Project based Learning model was higher than students who received conventional learning in thematic learning (2) There was no interaction between initial abilities and learning towards increasing student creativity in thematic learning.

Keywords: *creativity, project based learning model, thematic learning*

INTRODUCTION

Thematic learning in the 2013 curriculum is integrated learning that links several subjects using themes to develop a skill in students so that they can provide meaningful experiences. Thematic learning involves several basic competencies and indicators from a subject or even several subjects. In thematic learning there are several aspects that will be assessed from students including cognitive, affective and psychomotor aspects.

Thematic learning emphasizes student involvement in learning. According to Octaviani (2017: 94) thematic learning provides positive things to students, namely students want to be involved in learning activities and solve problems and grow creativity in students. This thematic learning requires creative education in providing learning to students and students must also be actively involved later. Therefore, as a teacher, it is very necessary to package or design learning experiences that will affect the meaningfulness of student learning and foster student creativity.

Thematic learning is included in 21st century learning where learning focuses on students (*student center*) with the hope that students must have 21st Century skills namely 4C which stands for *Critical Thinking* or critical thinking, *Collaboration* or the ability to work well together, *Communication* or the ability to communicate, and *Creativity* or creativity, so that in the learning process the teacher must encourage students to have 4C skills.

According to Santrock (in Nurani, et al, 2020: 2) the notion of creativity is the ability to think of something in new and unusual ways, and generate a unique solution to the problems faced. Creativity is very important for someone because it can develop the potential that is inside by issuing new ideas and can create a product or work. In line with that, according to Botty & Handoyo (2018) Creativity is a person's ability to create, combine thoughts and imagination so as to produce something that is original in the form of unique



ideas, activities and performances that can attract the interest of many people or as the ability to provide new ideas in problem solving efforts. Of course, people with high creativity include creative people.

Creativity is an ability, a creative process, considerations that influence behavior and produce novelty. Novelty here can be understood as a new value, whether in the form of products, practical ideas, meaning that in this category of understanding creativity departs from the individual. This is in line with the opinion of Munandar (2004:19) who argues that creativity is the ability to create new combinations based on data, information, or elements that already exist and are known before. It is like all the experience and knowledge gained during his life both in the school, family and community environment.

In creativity there are also 4Ps. According to the 4Ps concept or approach, creativity is an approach that looks at creativity from a personal perspective, the pusher (press), the process and the product of creativity. From a personal perspective, it shows that creativity is owned by everyone, but in different levels. As a pusher (press) means that the environment has a role in providing stimulation so that creativity can be realized. The process is something that is needed, to see how a creative result can be achieved. The product shows that each person's creative results are expected to be enjoyed by the environment and most importantly that a person's creative results must also be meaningful for the person concerned (Munandar, 1999)

Slameto (2019:147) the characteristics of creativity are: (a) a considerable desire for curiosity; (b) Be open to new experiences; (c) resourceful; (d) Desire to discover and research; (e) Tend to prefer heavy and difficult tasks; (e) Tend to seek broad and satisfactory answers; (f) Have passionate dedication and be active in carrying out tasks; (g) Flexible Thinking; (h) Responding to questions asked and tending to give more answers; (i) Ability to make analysis and synthesis; (j) Have a spirit of asking and researching; (k) Having good abstraction power; (l) Have a fairly extensive reading background.

According to Munandar (1999) in (Harisuddin 2019) indicators of creative thinking are *fluency*, *flexibility*, *originality*, and *elaboration*. According to Guilford (Umamah & Andi, 2019) There are five indicators of creative thinking, namely (1) sensitivity (*problem sensitivity*) is the skill of detecting, recognizing and understanding and responding to a statement, situation or problem. (2) Fluency (*fluency*), is the skill to generate many ideas, (3) Flexibility (*flexibility*) is the skill to propose various solutions or approaches to problems, (4) Originality (*originality*) is the skill to spark ideas in ways an original way, not cliché, and rarely given to most people, (5) Elaboration (*elaboration*) is the skill of adding a situation or problem so that it becomes complete, and details it in detail, which includes tables, graphs, pictures, models and words. say.

The results of a preliminary study at SDN NO 106193 Bakaran Batu, during the learning process it can be seen that the teacher has implemented thematic learning, the learning is not fully student-oriented, the teacher is more dominant in the learning process. Student creativity is still low as can be seen from some of the works displayed by students. From the results of an interview with one of the teachers at SDN NO 106193 Bakaran Batu, it was revealed that during the learning process students paid less attention, students were more engrossed in their own activities than paying attention to their lessons so the teacher often reminded them of their lessons during learning, when given assignments to do difficult or heavy skills, students quickly answer "can't" "difficult" before trying to do it. The researcher also found that students' creativity was still low. This can be seen from the condition of students who are still hesitant and afraid in issuing their ideas and students are still passive during learning. Only a few students responded during the learning process. According to the researchers this happened because the learning that was carried out was still *teacher-centered*. The teaching materials used to support the effectiveness of the learning process are only based on textbooks. From these findings, researchers assess the need for a learning model that can attract students' attention so that the effectiveness of the learning process can be achieved. One way to solve this problem is by using the *Project Based Learning learning model*. The *Project Based Learning model* is a project-based learning



model that involves students in real experiences through problem solving activities so that students can construct their own learning and produce valuable work products.

According to Cocco, in Kokotsaki et al., (2016) argues that Project Based Learning is a learning model that focuses learning on students on three basic constructivist principles: (1) learning is context-specific, (2) student activity in learning, and (3) students can achieve learning goals through social interaction, sharing knowledge and understanding. This means that the learning activities carried out must explore the process of obtaining knowledge and the process of developing skills that are based on the activity of the students themselves. With this *Project Based Learning model*, of course it can increase student creativity, because in this model students are focused on solving real problems involved with the project so that students can express their ideas, find out information and collect as much as possible so that they get solutions to problems and the end result is to make a product that is worth. Learning with the *Project Based Learning model* requires students to be active, highly creative and innovative in the material being taught.

The learning process of the *Project Based Learning model* is expected to be able to reveal the potential that exists within students. The model used by an educator must pay attention to the situation and conditions of the students themselves. In line with this, Kusadi, et al. (2020) found research results that there was an influence of the *Project Based Learning learning model* on students' creative thinking skills. Students' creative thinking skills in learning with the *Project Based Learning model* are higher than conventional learning. Nugroho et al. (2019) found research results that the *Project Based Learning learning model has the potential to increase the competence of students so they can think creatively*. Therefore, researchers are interested in researching with the title "Increasing Student Creativity Through *Project Based Learning Models* in Thematic Learning".

METHOD

The type of research used is quasi-experimental research . Research design as follows:

O ₁	X ₁	O ₂
O ₁		O ₂

In this study, both the experimental and control classes were given pretest and posttest. The research was conducted at SDN NO 106193 Bakaran Batu in the 2022/2023 Academic Year. The VA class was used as an experimental class that received *treatment* in the form of learning with a *Project Based Learning model* and the VB class was used as a control class that received conventional learning.

Research variables exist three types namely independent variables , dependent variables and control variables . The independent variable is the *Project Based Learning model and the conventional learning model* , while the dependent variable is student creativity , and the control variable is initial ability. The instrument used in this study was the student's creativity observation sheet. The instrument was prepared based on indicators of student creativity from Slameto and Munandar, consisting of 25 statements with four alternative answers. The statistical analysis used is a two-way ANOVA. Grouped data were analyzed using two-way ANOVA statistics with the help of SPSS 21.0 software. Before testing the statistical hypothesis with ANOVA, normality and homogeneity tests were carried out first.

RESULTS AND DISCUSSION

Creativity data with learning treatment with the *Project Based Learning model* and conventional learning is described by calculating the mean and standard deviation. The results of the description can be seen in table 1 below

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Table 1 Pretest and Posttest Student Creativity

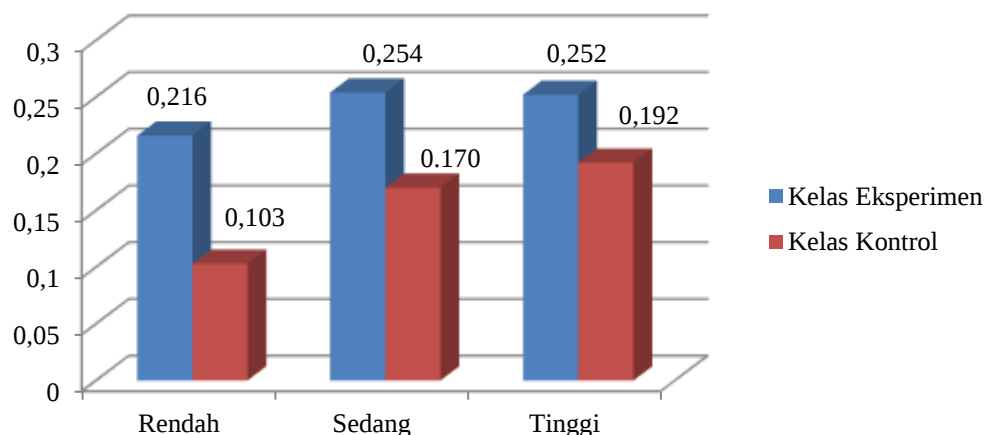
Statistics	Experiment Group		Control Group	
	pretest	post test	pretest	post test
Average	62.5	71.6	62,7	68.8
SD	4.0	3,8	2,7	3,6

Table 1. In the table above it can be seen that the average pretest scores in the experimental class and control class are the same, but different at the time of the posttest. The post-test results of students' creativity in the experimental group were higher than the average post-test results in the control class. The average increase in student creativity in the experimental class was 9.1 while in the control class it was 6.1. Table 1 also shows the standard deviation, which indicates that the standard deviation in the experimental group is higher than the standard deviation in the control group. This shows that there are differences in posttest between the experimental class and the control class due to differences in treatment. Based on the two average increases in student creativity, it appears that the average increase in the experimental class is higher than the average increase in the control class. Knowing the increase in student creativity through the pre-test and post-test given both in the experimental class and in the control class, the gain index calculation is carried out. The results of calculating the gain index can be seen in table 2 below.

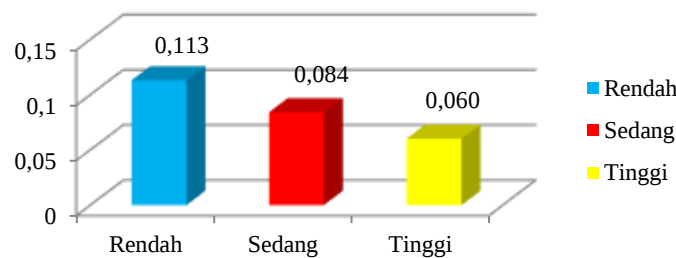
Table 2 Statistical Student Creativity Gain Index

Initial ability	Student Creativity			
	Ex. Experiment		Kel. Kontrol	
	Average	SD	Average	SD
Low	0.216	0.05	0.103	0.033
Currently	0.254	0.064	0.17	0.08
Tall	0.252	0.136	0.192	0.089

Based on table 2 above, it is found that the increase in the creativity of students who are given learning with the *Project Based Learning model* has an average value and standard deviation (SD) for the low group of 0.216 and 0.050, medium 0.254 and 0.064, high 0.252 and 0.136. As for the increased creativity of students who were given conventional learning, namely the low group 0.103 and 0.033, the medium 0.170 and 0.080, the high 0.192 and 0.089. The calculation results are presented in the following graph 1.

**Graph 1.** Average and Gain Index of Students' creativity based on Initial Ability

Based on graph 1 above, it can be seen that the average increase in the normalized gain in the creativity of students in the low, medium and high groups who were given learning with the *Project Based Learning model* higher than creativity low, medium and high group students who were given conventional learning.



Graph 2. Difference in Average Gain of Student Creativity

Based on Graph 2 above, it is obtained that the difference in the average gain of creativity of students who are given learning using the *Project Based Learning model* with students who are given conventional learning is: low 0.113 , medium 0.084 , and high 0.060.

Hypothesis test were carried out using a predetermined statistical analysis technique, namely the two-way ANOVA. The results of testing the second statistical hypothesis using *two-way ANOVA* through SPSS 21.00 are presented in Table 3

Table 3 . Hypothesis Test Results for Increased Creativity

F _{count}	F _{table}	Sig.	α
10, 293	4.06	0.0 3	0.05

Based on table 3 it is known that the results of the hypothesis test show that F_{count} is 10, 293 and sig. 0.0 3 is smaller than 0.05 so that H₀ is rejected and H_a is accepted. Thus increasing the creativity of students who use learning with the *Project Based Learning model* higher than the increase in the creativity of students who use ordinary learning .

second statistical hypothesis was carried out to test whether there was an interaction between initial abilities and learning on student creativity . In this case too, the initial ability is divided into three categories , namely low, medium and high . The results of testing the fourth statistical hypothesis using *two-way ANOVA* through SPSS 21.0 are presented in Table 4.

Table 4. Initial Ability and Interaction Hypothesis Test Results Learning on Increasing Student Creativity

F _{count}	F _{table}	Sig.	α
0.267 _	4.06	0.767 _	0.05

Based on table 4. it is known that the results of the hypothesis testing obtained F_{count} 0.267 and Sig 0.767 is greater than 0.05 , so that H₀ is accepted and H_a is rejected. Thus there is no interaction between initial abilities and learning to increase student creativity . It can be concluded that increased creativity is influenced by learning that is applied in class, namely learning with *Project Based Learning* models and ordinary (conventional) learning .

The Learning Model has a significant influence on increasing student creativity. During learning by applying the *Project Based Learning model* , students are involved in group discussions or interacting with fellow students and with the teacher. Activities carried out as a project can increase student creativity, develop the potential that exists within themselves by issuing new ideas, being able to answer every problem well, being able to develop their reasoning power and being able to create a product or work.

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CONCLUSION

Based on the results of the research and discussion, it can be concluded that the increased creativity of students who received learning using the *Project Based Learning model* was higher than students who received conventional learning and there was no interaction between initial abilities and learning towards increasing student creativity

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