
THE EFFECT OF USING PROJECT BASED LEARNING TOWARDS THE COLLABORATIVE ABILITY AND CREATIVE THINKING SKILL OF CLASS IV STUDENTS

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Abstract

The objectives of this research were to analyze the effect of using *Project Based Learning* towards the class IV students' collaborating of Elementary school Tema Cita-citaku and to analyze the effect of Project Based Learning towards the creative thinking skill of class IV students of Elementary School Tema Cita-citaku. The subject of this research were class IV D students' of Al-Hikmah Surabaya as a control class and class IV F Al-hikmah Surabaya as an experimental class. This research was conducted at the second semester in academic year 2017/2018. This research used *Pretest-Posttest Control Group Design*. The result of the research were as follows: There was no difference of students' collaborative skill between the experimental class and control class in pre-test. It can be referred by score of $t_{hitung} (0.699) < t_{tabel} (1.686)$. Whereas the students ability of collaborating in post-test, there was a difference with control class. It can be referred by score of $t_{hitung} (6.747) > t_{tabel} (1.686)$. Thus, there was an effect of using Project Based Learning towards the students' collaborative skill. Then, the second hypothesis testing referred that the students' creative thinking skill in post-test, there was no difference with the control class. It can be referred by score of $t_{hitung} (0.086) < t_{tabel} (1.686)$. Whereas the result of students' creative thinking skill in post- test, there was a difference between experimental class and control class. It can be referred by score of $t_{hitung} (17.556) > t_{tabel} (1.686)$. Thus, there was an effect of using *Project Based Learning* towards students' creative thinking skill. Based on the data analysis, it can be inferred that the use of *Project Based Learning* has an effect towards the collaborative and creative thinking skill students of class IV of Elementary School Theme of My Ideals significantly.

Keywords: The Use of Project Based Learning, Collaborative Skill, Creative Thinking Skill.

INTRODUCTION

Efforts to develop human beings are never separated from the world of education. The world of education plays an important role in advancing human life (Made Pidarta, 2007: 1). It is only through the right education that this nation can free itself from the shackles of a prolonged multidimensional crisis. Through education, this nation frees people from poverty and destruction. Through education also, this nation develops human resources that have the confidence to compete with other nations in the world, even in the era of global chaos (Mulyasa, 2005.: 4).

Understanding the opinions of some experts, it is necessary that education can produce capable human resources and advancement to constantly improve the quality that is owned continuously and sustainable This is very important, especially when associated with Law No.20 of 2003 which states that "education is conscious effort and planned to create

an atmosphere of learning so that learners actively develop their potential to have spiritual, self-control, personality, intelligence, noble character, as well as skills needed him, society, nation and state.

However, reality in the elementary school teaching still emphasizes the change in basic thinking skills yet maximizes students' high-order thinking skills. Seen There are still many teachers monopolizing learning activities. There are still many teachers who actually take over the learners. In fact, if it can be done by students such as explaining, telling, discussing, experimenting and practicing learning then the teacher does not need to do that activity (Thamrin and Rahman, 2012: 12).

The conditions that have been described often occur in the learning process in elementary school especially on thematic learning. Thematic learning is one of the integrated learning that is applied in elementary school today. Thematic learning terminology is an integrated learning model that

uses themes to link some subjects so as to provide meaningful experiences to students according to the Ministry of National Education (Trianto, 2010: 79).

Teachers in teaching thematic lessons have not provided meaningful experiences to students. Students are still shackled by the use of conventional learning provided by teachers. Teachers rarely never even use innovative models or approaches in learning. As a result, learning is ineffective and does not provide meaningful experience to students.

This is supported by Shoimin (2013: 18) who says that “admittedly or not in this modern age, some teachers are teaching using a traditional teaching methodology that makes the student an object not a subject”.

Based on the results of interviews with the Principal of SD Al Hikmah Surabaya, the students’ creative thinking ability is still very low, marked by several things: (1) the lack of active participation in the learning process especially collaborative learning seems only a few active students (2) my ideals in everyday life (4) students when working on the problems that require the ability to think creatively it seems students are still difficult to write down ideas or provide solutions faced. Similarly, collaborative learning is characterized by several things: (1) When students are given group work, students seem to have difficulty communicating with their group mates (2) Only a few students are actively working on the assigned task (3) difficulty generating ideas.

This is supported by data of the result of study of student of class IV semester 1 of academic year 2016/2017 show low result of study of fourth grade of elementary school seen at final result of semester result result have not reached value above KKM that is 70. From 20 students only 8 students (40%) who got a score above the KKM while the remaining 12 (60%) students still score below KKM.

Looking at the data then the learning process should be improved by applying the appropriate learning model. Similarly, with collaborative skills, students need effective learning methods so that social skills can improve. As globalization develops, collaboration or so-called social skills are the social values that begin to disappear from generation. Social values such as willingness to help, willingness to cooperate, ethics / academic awards and honesty have begun to disappear from the generational personality. For that, collaborative learning is very important to apply in school.

Project Based Learning or project-based learning which is an innovative learning, which emphasizes contextual learning through complex activities. The focus of learning lies in the core concepts and principles of the study discipline,

involving the learner in problem-solving investigations, assigning tasks in groups, active berpilipasi, and teachers not being the only source of information. This means that teachers are not the only ones who provide information because learners will seek out diverse sources and engage in diverse group activities. Meanwhile, (Kemendikbud, 2013) Project Based Learning students feel their own problems as challenges or questions that must be answered, and manage their own time to complete the project so that in the project learning the role of the teacher really as a facilitator.

The reality is in line with research conducted by Hesti Noviyana (2017) entitled “The Influence of Project Based Learning Model on Student Mathematics Thinking Ability”. Show that the result of creative thinking ability of students using Project Based Learning is better than students who use lecture method (expository) in grade VIII students of SMP Negeri 3 Bandar Lampung. In addition, research by Derin Nurfajriyah et al (2016) entitled “The Influence of Problem Based Learning Model on Student Creative Thinking Ability in Simple Aircraft Material” indicates an improved ability of good creative thinking in a class that uses Problem Based Learning rather than a class that uses conventional learning in SDN Sindang 1 and SDN Talun class in Sumedang District. Based on the background that the researchers have described above, the researcher will conduct a research entitled Influence of Project Based Learning Usage on Collaborative Ability and Creative Thinking Skill of fourth Grade Student of Elementary School Theme Of My Ideals.

RESEARCH METHODS

The type of research used in this study is the type of experimental research. The type of quantitative research that will be applied aims to measure the influence of independent variables, namely the use of Project Based Learning (X) on dependent variables, namely collaboration (Y1) and creative thinking (Y2). Form of Design in this study using Pretest-Posttest Control Group Design (Emzir, 2011, : 98).

K	Pretest	Variabel perlakuan	Posttest
E	O1	X	O2
K	O3	-	O4

Source: (Sugiyono, 2016: 76)

In the experimental group learning is done with the use of Project Based Learning while in the control group of learning is done by conventional learning.

In this research, the subject of research is the fourth grade student of F Al Hikmah and the fourth grade student of D Al Hikmah Surabaya. The sample of research used as many as 20 students for the control class and for the experimental class as many as 20 students.

RESEARCH RESULT

Collaborative learning is based on the foundation of social constructivism. To face students on the current world conditions such as knowledge, rapid change and collaborative learning life is indispensable. Group life will foster a sense of security so as to enable confronting various changes together (Suharningsih, 2015: 3).

In this study, the research instruments used in the form of observation capabilities of collaborating students that have been prepared and based on the category of ability to collaborate according to Mustaji (2009: 82) that is (1) communicate between personal, (2) formation / team management, (3) problems in collaboration, (4) managing conflict, (5) reporting and presentation, (6) self-evaluation / reflection. The research instrument in the form of observation skill of collaborative ability of students consists of 29 points indicator from six categories. Before the collaboration ability sheet observation instrument is used, a revision is made to obtain valid questions. The purpose of this instrument is to know the results of the ability of collaborating students by using project based learning and the use of conventional learning.

The results of students' collaborative ability were obtained from the observation sheet data during the learning process taking place in the classroom using project based learning in the experimental class and control class using conventional (expository) learning.

The result of observation analysis of students' ability to collaborate in control class students showed that for the average pretest result of presentation was 47% with low collaboration ability category and for posttest result average presentation was 75% with medium collaboration ability category. Based on the result of observation analysis, the ability of collaborating students of control class for pretest and posttest is only in the low-moderate stage.

Then, for the result of observation analysis, the ability of collaborating students of experimental class showed that the average presentation pretest result was 53.6% with low collaboration ability category and for posttest result of average presentation was 92,95% with high collaboration ability category. Based on the result of observation analysis, the ability of collaborating students of control class for the pretest and posttest in the control class and

experiment class there is the influence of the use of Project Based Learning on the ability of collaborating students because there is a very significant difference.

The test of creative thinking skills in the control class aims to measure the students' creative thinking skills toward the use of conventional (expository) learning. The result of students' creative thinking skill in the control class shows that for the average pretest result of presentation is 40,55% with less creative category and for posttest result of average presentation is 74,9% with creative enough category. Based on the results of the observational analysis of creative thinking skills control class for pretest and posttest is only at the stage of less creative and creative enough. In this case has not shown good results.

The test of creative thinking skills aims to measure the results of students' creative thinking skills on the use of project based learning in the experimental class. The test of creative thinking skills will be done after learning by using project based learning. The result of acquisition of students' creativity thinking skill by using project based learning shows that the average pretest result of presentation is 45,95% with less creative category and for posttest result average student presentation 94% with very creative category. Based on the results of data acquisition of creative thinking skills of students to pretest and posttest on the class of dick and experimental class there is the influence of the use of Project Based Learning on the creative thinking skills of students because there are differences significantly.

Based on the observation that the two classes that have been tested are classes that use project based learning and the class using conventional learning, obtained the value of the result of significant level of normality test of each two groups.

Data on student collaboration ability at (pretest) in control class 0,857 and in experimental class 0,866 whereas, at time (posttest) in control class equal to 0,766 and in experiment class equal to 0,724. Since the two classes that have been tested have a significance value of > 0.05 , it can be concluded that the students' collaborating ability data is normally distributed in both groups or variance.

Based on the result of observation, the result of significance level of homogeneity test of students' collaboration ability on (pretest) is 0,264 and at (posttest) is 0,146. Thus, it can be concluded that, both sample variance is homogeneous because of the significance value > 0.05 . Then, the mean score indicates students' collaboration ability at the time of (pretest) of 46,750 class control and 58,400 class experiments. While the analysis of data that has been calculated t one party test with Independent Sample T-Test on the influence of the use of project based

learning on the ability of collaborating students (pretest) obtained the result $t_{\text{count}} (0.699) < t_{\text{tabel}} (1.686)$ with $df.38$ at the level significance of 0.05 . Because of the significance level of < 0.05 then H_0 is accepted and H_a is rejected. Thus, it shows that there is no difference in the ability of collaborating students in the control class and in the experimental class at the time (pretest) because there is no difference in the ability of early collaboration of students in the control class as well as in the experimental class.

The mean value of the students' collaboration ability at the time (posttest) is 74.350 in the control class and the experimental class is $92,950$. For the test result t one party with the Independent Sample T-Test technique about the influence of the use of project based learning on the ability of collaborating students (posttest) obtained the result $t_{\text{count}} (6.747) > t_{\text{table}} (1.686)$ with $df.38$ at the level of significance 0.05 . Because the level of significance is > 0.05 then H_0 is rejected and H_a is accepted. So, it shows that there are differences in the ability of collaborating students in the control class and in the experimental class at the time (posttest) because in the experimental class there is treatment (treatment) that is by using project based learning at the time of learning and in the control class there is no treatment (treatment) which are given.

Based on the results obtained it can be disimpulkan that the ability to collaborate students who use project based learning is significantly higher than the ability to collaborate students who use conventional learning. From the results of this study obtained that the ability to collaborate students higher by using project based learning. The results of this study in accordance with previous research has been done by Linda (2016) said that the ability to collaborate students will increase if students use instruction learning project based learning.

However, in this study there is a difference with previous research that is doing the development of innovative learning collaboration that menumbuhkan attitude cooperation, willingness to help, responsible for the task, and mutual respect for differences of opinion. If the ability to collaborate students have mastered then later when the student is adult then will be able to adjust to the environment well.

Various discussions on the use of project based learning on the ability to collaborate, then the students will establish good communication among friends, share opinions among friends, and together construct his own knowledge because of a task that is jointly dikejakan to achieve goals. With this in mind, students will be trained from an early age to train and develop a much needed collaboration attitude in the

future. Therefore, it can be concluded that the use of project based learning has an effect on the ability of collaborating fourth grade students of elementary school.

The ability to think is a very decisive ability and support for human survival therefore the ability to think is necessary in life. According to Susanto (2012: 10) creative thinking is to define difficulties, find solutions, guess, create alternatives and test it so as to bring someone to go through various problem-solving process. Furthermore, the creative thinking skills test instruments used in this study are structured and based on Guilford's category of creative thinking skills (in Munandar, 2012: 10) that focus on creativity dimensions including (1) fluency, (2) flexibility (flexibility), and (3) originality. The research instrument in the form of students' creative thinking skill test consists of five items from three predetermined categories. Before the test instrument of creative thinking skills is used, firstly done several revisions to obtain a valid question. Validity is a measure that indicates the level of validity of a test (Yatim Riyanto. 2011: 78).

Based on the result of the observation, the result of the significance level of the normality test of the students' creative thinking skill at pretest in the control class is $0,377$ and the experimental class is $0,727$ whereas at the posttest in control class $0,759$ and in the experimental class is $0,563$. Because the two classes that have been tested have a significance value of > 0.05 then it can be concluded that the data creative thinking skills of students declared normal distribution in each group.

Based on the result of observation, the result of significance level of homogeneity test of students' creative thinking skill at (pretest) is $0,179$ and at (posttest) is $0,183$. Thus, it can be concluded that, both sample variance is homogeneous because of the significance value > 0.05 . Then, the result of the analysis shows that the mean value of students' creative thinking skill at the time of (pretest) is $40,500$ in control class and experiment class is $45,950$. for the test result t one party with the technique of Independent Sample T-Test about the influence of the use of project based learning to the creative thinking skill of students (pretest) obtained by $t_{\text{count}} (0.086) < t_{\text{tabel}} (1.686)$ with $df.38$ at significance level $0, 05$. Because of the significance level of < 0.05 then H_0 is accepted and H_a is rejected. Thus, it shows that there is no difference in the result of students' creative thinking skills in the control class and in the experimental class at (pretest) because there is no difference in the ability of early collaboration of students in the control class as well as in the experimental class.

The mean value of students' creative thinking skill at posttest is 3,325 in control class and experiment class is 3,553. While for the test result of one party with the Independent Sample T-Test technique about the influence of project based learning on students creative thinking skill (posttest), the result $t_{(count)} (17.556) > t_{table} (1.686)$ with $df.38$ at significance level $0,05$. Because the level of significance is > 0.05 then H_0 is rejected and H_a is accepted. Thus, it shows that there are differences in students' creative thinking skills in the control class and in the experimental class at the time (posttest) because in the experimental class there is treatment (treatment) that is by using project based learning at the time of learning and in the control class there is no treatment (treatment) given. Based on the results obtained it can be concluded that the results of creative thinking skills using project based learning is significantly higher than the results of creative thinking skills of students who use conventional learning (expository).

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The results of this study indicate that the results of students' creative thinking skills high by using project based learning in the process of learning in the classroom. This is in accordance with Guilford's opinion (in Munandar, 201: 31) who says that creative thinking is the ability to think and shape new ways, change the old ways of being creative and see the possibility of solving a problem.

Therefore, the students are expected to be able to achieve the main goal in education which has been contained in Law no. 20 of 2003 on the National Education System is the development of the potential of learners to become human beings who believe and piety to God Almighty, morality, healthy, knowledgeable, capable, creative, independent

and become a democratic and responsible citizens. The results of this study are in accordance with previous researches undertaken by Vienna (2015) entitled "The Influence of Learning-Based Learning Model on Geography Learning Outcomes" that the result of creative thinking skills using project based learning is better when compared with the use of conventional learning. Thus, this study is in accordance with previous research that the results of students' creative thinking skills will be higher by using project based learning compared with the use of conventional learning. So, it can be concluded that the use of project based learning has an effect on creative thinking skill of fourth grade students of elementary school.

CONCLUSIONS AND SUGGESTIONS

Based on the discussion of research results that have been described above, it can be concluded that:

1. The result of the ability of collaborating students after being given the treatment, obtained posttest with the result $t_{(count)} (6.747) > t_{(table)} (1.686)$ with $df.38$ at the level of significance 0.05 it can be concluded that the use of Project Based Learning affect the ability of collaborating students class IV theme of my dreams in Primary School.
2. The result of the students' creative thinking ability after the treatment, obtained posttest with the result $t_{(counting)} (17.556) > t_{(table)} (1.686)$ with $df.38$ at the 0.05 significance level it can be concluded that the use of Project Based Learning influences the thinking skill creative fourth grader theme my dream in elementary school.

Based on the conclusions that have been described above and the experience of researchers during the study, the suggestions that can be given are as follows:

1. The use of project based learning in learning, can be used as a reference and an alternative for teachers or educators to improve the ability to collaborate and creative thinking skills so that students create active learning, effective and fun for students.
2. In this study, researchers only examine the effect of project based learning on the ability to collaborate and creative thinking skills of students. For researchers who want to research further with the same variables, it is expected that the material used is different so that other materials used can be seen the results of analysis with the variables used, especially the

ability of collaboration and creative thinking skills of students in Primary School.

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