



Project-Based Learning Using Virtual Group in Implementation of Geography Learning Strategy at Curriculum 2013

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ABSTRACT

Project based learning is one method that guides pedagogical technology to interactive learning that includes the preparation and presentation of projects. The contribution of project based learning has been widely acknowledged for the development of competence of learners. In Indonesia, the appropriate learning model in Curriculum 2013 is based on constructivist learning theory. In learning, geography tends to be still centered on the teacher (teacher centered) so that learning does not run optimally. Project based learning using a virtual group is expected to provide solutions in generating meaningful and synchronous learning activities toward the curriculum 2013.

This study aims to test the model of project based learning by using a virtual group on the results of learning geography of high school students. The subjects of this study were students of Class X Senior High School 1 Lumajang even semester of academic year 2016/2017 consisting 2 classes. The X-IIS 1 class is set as the experiment class and the X-IIS 2 class as the control class. This is because students in both classes have the same or equivalent abilities based on middle test scores. This research is a quasi-experiment research with Non-Equivalent Control Group Design design. Instrument assessment of learning outcomes using essay tests. Assessment results data that are then analyzed using test-test with the help of SPSS 16.0 for Windows program.

The results of this study indicate that there is a significant effect of project-based learning model using the virtual group to the students' geography learning outcomes. Based on pretest and post test differences shows that the mean score of the experimental class gain score (45,63) is higher than control class (30,02). The result of data analysis using independent sample t test showed that project based learning model obtained probability score (p-level) smaller than 0.05 with sign 0,00. The conclusion in this study that the learning model of project-based learning using the virtual group on the results of learning geography of high school students.

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INTRODUCTION

Education in Indonesia is very vital to be addressed and developed. Because education is benchmark in assessing the progress of a nation. Indonesia currently uses the 2013 curriculum that emphasizes the focus on students as a whole. The 2013 curriculum-based learning in addition to being smart is also cognitively good in practice in the field (real world) as a realization of the lessons learned in the class.

In the execution of geography learning, learning materials can not use theory but by combining with field learning (real practice) so that it can construct students' knowledge by spatial, regional and environmental analysis. Sumarmi (2012) argues that geography learning is difficult to discuss theoretically but needs to be combined with environmental conditions.

The core problem of geography learning so far is that students can not combine science theory with real life (field practice) and real life. The learning that is currently implemented most teachers convey the material conventionally with the form of methods that are usually used lecturing and assignment methods. Lecture and assignment method is not a bad method but the teacher should be able to position in bringing the material not the only source of information. A good teacher should be able to position as a manager not a source of information.

Good learning is student centered learning (student centered learning) encourages students construction knowledge owned. Students seek their own knowledge needed in the learning process. So the memory in search of knowledge can survive with the old.

According to Demirel & Arslan (2010) which states that student-centered learning, students will be more motivated to follow the learning. Where students from memorizing lessons are transformed into knowledge sharing. And students are given facilities in making the project.

Learning in schools is influenced by the learning approach that teachers use. The approach can be student center learning or teacher center learning. The two approaches are complementary, so there should be no assumption that the student center learning approach is better than teacher center learning or sebaliknya. Student center learning approach is an approach that emphasizes the students are more active in learning. Students are given instructions and tasks that will lead them to construct knowledge independently. This approach would be great if applied to learning with long time allocations. The approach of teacher center learning is an approach that emphasizes teachers more actively in learning. Students tend to be passive or just refreshing teacher talks. This approach is more efficient and effective when applied to learning with little time allocation. The approach of learning is then translated again in the form of learning strategies. Learning strategy consists of expository, discovery, group, and individual. Each approach has characteristics that can be used according to the learning needs. Learning strategies can not be applied directly in learning. This is because the learning strategy is still conceptual, so it takes more technical things to apply it concretely.

Learning strategy is applied by using learning method or model. Discovery learning strategies provide space for students to be more active in learning. This learning strategy

requires its application in the form of learning models that have complex steps. Such learning steps are needed to guide students in finding knowledge independently. Learning model which is a concrete application of discovery strategy will make students learn more contextual. Students will be directed to perform tasks related to the real world. Giving the task will be better if berkaitan with the popular and liked by the students.

It will make the students will always remember the knowledge that teachers provide in learning using a model that implements discovery strategies. Discovery learning strategy can be applied one of them with group investigation learning model. This is because the PBL model has a syntax that requires students to be more active in learning and complex so that will be able to build students' knowledge comprehensively. One of the efforts to improve student's learning motivation is by using the learning model of Project Based Learning. This model is based on student center learning approach with discovery learning strategy.

This learning model emphasizes students to be more active to construct knowledge in learning. The PBL learning model is based on constructivistic learning theory from Piaget. This constructivist theory suggests that students must find their own knowledge that is being studied. Learning will be more meaningful if the students find themselves the material being studied. Students will always remember the material they have found for a long time.

That's because pride can find something valuable in learning. The PBL model can make students enthusiastic because it is given more authority in learning. The PBL syntax requires students to investigate a problem in groups. The investigation begins with the teacher's problem. Teachers will submit data and facts related issues related to geography phenomena in a region. Next the student will determine the topic related to the problem. After that, in groups students will formulate research questions relating to a predetermined topic. Next, students carry out investigative activities in the form of searching answers to questions that have been determined by interviewing sources and observing environment related to the topic. After the data are collected, students can answer the research questions and present the results of the research. Based on the opinion of these experts, the advantages of the learning model of Project Based Learning include: improving the ability of high-level thinking, creating a democratic learning atmosphere, improve the development of soft skills, and can increase social solidarity. Students will learn to think high-level (analysis) through investigation activities.

Students will investigate issues related to learning materials. Democratic learning will be created through small group activities that enable all students to be active and have equal responsibility. PBL learning can also develop soft sk By respecting the opinions of friends, communicating opinions, and holding the ego. The investigative learning of small groups will encourage students to build solidarity. The PBL model is based on the educational philosophy of Dewey. Dewey argues that schools are fully responsible for building students' social attitudes by applying interpersonal communication and group involvement between them. Dewey's opinion is consistent with the content of the PBL which requires interaction in both groups and between groups. The interaction within the PBL is well suited to fostering social attitudes. Learning PBL is very influential for the life of students in the community. Dewey argues that cooperatives in the classroom are a prerequisite for addressing complex life

issues in democratic societies (Slavin, 2005: 214).

Problems investigated in PBL are problems that occur in the student environment. The problem will make the learning is not abstract. The PBL model is based on Vygotsky's theory. Vygotsky argues intellectually develops when individuals face new and confusing experiences and when they attempt to overcome the incongruity caused by experience (Arends, 2008). Vygotsky's opinion is consistent with the PBL model which emphasizes the investigation of a problem. Students will be attracted by new knowledge and raises many questions. To answer that question requires an investigation. New knowledge gained by students through PBL is able to develop its intellectual ability.

Motivation to learn is very important for students in learning. Without motivation, students will not be able to follow the learning well. Especially at a certain time will arise in student saturation while learning. It can be observed especially when the learning takes place after 12 noon. In addition it can also arise when the teacher uses only one method of learning in one semester. When learning takes place after 12 noon, students' learning motivation usually decreases. Many students experience drowsiness when learning enters that time. It will be very disturbing the learning process is mainly related to the acceptance of material that teachers convey to the students. Student motivation can also decrease when teachers apply only one method of learning that is too dominant in one semester. It is caused by the student's boredom towards the learning method. Students will never feel challenged by the method or model of learning is monotonous. Student motivation is also influenced by teacher competence. Students will hesitate with teachers who have good competence. Students will feel being in the home of science with the depth of material that the teacher convey.

In it the material that the teacher conveyed will make the students become more want to explore various material that will be conveyed by teacher. Students who are confident of getting good learning outcomes will be more motivated in learning. Motivation can be seen from the strategy in learning. The strategy will facilitate students in achieving good learning outcomes. If all students in one class have a high and good faith, then the learning objectives will be achieved.

Confidence in learning relates to the prejudices of both students towards the entire learning process. Students will usually be prejudiced against their teachers, subject matter, and learning outcomes. In general, students will assess the competence of teachers based on personal perception. The student's assessment is related to the teacher's ability to deliver the material, the style of the teacher in teaching, and the teacher's emotion while teaching. Students will also surely rate the subject matter. The subject matter from the beginning has been considered complicated, tends to make students not sure to be able to master the material. Students' prejudices towards learning outcomes will be directly related to the prejudices of the material. Students tend to be pessimistic about learning outcomes if the subject matter is considered complicated, and vice versa.

In overcoming the problem there is a model that is expected to be a solution that is Project Based learning. Project Based Learning is one of the models implemented in the 2013 curriculum. Using the model students can construct their own knowledge. Students can create works that can be bothered by himself and others. Students can relate theory to the real world.

The steps of project based learning by Sumarmi (2012) are 1). Establishing a project theme, the project theme should have indicators containing general and original ideas,

important and interesting, describing complex issues. 2) establish learning context. Learning contexts should meet project questionnaires questioning realworld issues, prioritizing student autonomy, doing inquiry in the context of society. 3) plan activity. Learning experiences related to project planning are reading, researching, observation, interviewing. 4) processing activities. Indicators in processing activities include; Sketching, depicting analysis, calculating, generalizing and developing prototypes.5) implementing activities to complete the project. Steps taken are trying to work on projects based on sketches, testing the steps that have been done and the results obtained, evaluating the results, recycling other projects and classify the best results.

By using the model of Project Based learning students in conducting investigations divided into groups so that students can have good socialization to the community. According to social transactions, it plays a very important role in the formation of cognition (Richmond & Striley, 1996).

Based on the problem, the researcher conducted the study with the learning model of Project Based Learning with the material of environmental conservation and sustainable development "Influence of Learning Model Based Project on Student Learning Outcomes SMAN 1 Lumajang".

Based on the description that has been described in SMAN 1 Lumajang, can be identified that students are not trained to think in solving problems. One effort that can be done to improve the thinking skills to solve the problem is to choose the appropriate learning model in accordance with the material being taught. In **Introduction**, Authors should state the objectives of the work at the end of introduction section. Before the objective, Authors should provide an adequate background, and very short literature survey in order to record the existing solutions/method, to show which is the best of previous researches, to show the main limitation of the previous researches, to show what do you hope to achieve (to solve the limitation), and to show the scientific merit or novelties of the paper. Avoid a detailed literature survey or a summary of the results.

METHODS

1. Research Design

This research aims to know the effect of learning model of Project Learning by using virtual group in the implementation of curriculum geography learning strategy 2013. Based on the objectives formulated, the researcher uses quota experiments (quasi experiment). Experiments based on Sudjana (2010: 44) are the cases where the skeletons do not allow for strict control. Control processing is done according to the conditions.

The design of the research used is the Nonequivalent control group design. The pollinator selects the Nonequivalent control group design as the researcher has an unselected group of tracks. The design in this research is used the Pretest-posttest and the object of the researcher interesting the class experiments and control class. The experimental class gives the model Project Based Learnings and the control class as a comparator using the lecture and assignment model.

Tabel 1. Research design

Class	Pretest	Treatment	Posttest
Eksperiment	O ₁	X ₁	O ₂
Control	O ₁	-	O ₂

(Sugiyono, 2010)

Note:

O1: Pre test before learning

O2: Post test after learning

X: Treatment using Learning model Project Based Learning with virtual group

-. Treatment of using speech, discussion, questioning, and assignment.

2. Treatment

This study aims at measuring the extent of the control of the graphics of a class of controlled experiments. In the research of a literary power from a number of measures applied to a class of experiments and controls. The research acknowledgment involves the following activities:

First, the bounded observation is limited to obtaining general information about school conditioning. The activity is done to obtain data about the number of students (subjects) who are involved in the research. In addition, these pads are also used for knowing the schedules of the XI social program.

Second, determining the subject of the research for controller's. The determinants of the experiments of the contest class with the view of the average middle test of the even semester. Based on the latter, they are obtained by the class of XI social program 1, while the control class XI social program 3.

Third, the test is tested using class XII social program 1. The use of the scholarship of the students has found that the lesson will be used for research. Trial tests consist of 5 finished questions.

Fourth, these activities are done in this manner is to do the same interpretation to the students to learn the ability of the student. One the test is derived from the 5 problems. The next is to give the elected class which is selected. The applicant is named: the experimental class is treated using the model of Based Learning. The treatment of the class is done every three times. Each meeting takes 2 hours of learning or for 90 minutes

Fifth, in the case of each of the controls each control is given a posttest. The posttest is performed to find out the last ability of the student following the learning. The posttest is still using the same thread when pretesting. Thereafter, the average scoreposttest is less theoretical criterion which results in the ability of the screenshot of the academic performance (Artati, dkk, 2009). Based on the score of the controller class score, the next is analyzed and described the influence model of Based Learning to the results of the training.

RESULTS AND DISCUSSION

1. Results

The average score of the experiment class is better than the control class. Based on the results of t test, found the score below sig. 0.05. It means there is influence of learning model of PBL to student's geography learning result.

2. Discussion

a. Advantages of Models Project based Learning in the Research

In the case of the learning activities take place, using the learning of Project Based Learning. Obtained by some of the findings of the current learning process are: a) the modelProject Based Learning delivers the student's education for learning; B) the students present the authentic problems c) the students may understand the problem of their lives.

b. Disadvantages of Model Project based Learning in the Research

The shortcomings of the Learning-Based Learning model found in the current learning activities take place, among others: a) the study of the staff at the time of experimenting, so that the achievement of the goals does not work optimally, b) the geographer teacher who acts as the model teacher in the study of the unaltered learning step of the model of Based Learning. This causes the following researchers to guide the teacher and the students when the learning activities take place; C) a sufficient number of students are 30 students, so the cause is often the same as the lesson in the learning activities.

CONCLUSION

Based on research results, then means there is influence of learning model of PBL to student's geography learning result. The average score of learning outcome of geography of experiment class is higher than control class. This is because the Project Based Learning steps that require students to find learning resources and analyze problems independently. The student's activity makes the students' geography motivation high.

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