

# The Implementation of Problem Based Learning to Improve Student' Activities and Learning Outcomes in Social Science

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**Abstract-**This study aims to describe the improvement of students' activities and learning outcomes of fourth grade students at Putat Gede State Elementary School, Surabaya. This research is a classroom action research which carried out in three cycles. The subjects in this study were fourth grade students of at Putat Gede Sate Elementary School, Surabaya, Academic Year 2018/2019 which consist of 24 students. Data collection technique are observation, learning outcomes tests and documentation. Students activities in learning process of cycle I was 71.86%, increased to 81.90% in cycle II, and 85.83% in cycle III. Student learning outcomes in the first cycle showed an average value of 74.41, the percentage of classical completeness was 70.83% and increased to 78.32 in the second cycle with a classical completeness percentage of 79.16%. The average of Cycle III which contains of students scores is 82.63 and the percentage of classical completeness is 87.50%. Based on the results of the study it can be concluded that the aimplementationof Problem Based Learning learning can improve students' activities and learning outcomes fourth grade students at Putat Gede State Elementary School, Surabaya.

**Index Terms-**Problem Based Learning, Students' Activities, and Learning Outcomes.

## I. INTRODUCTION

Learning activities are a dynamic process to achieve a predetermined goal [1]. Social science (IPS) is a simplification of the various disciplines of social sciences and humanities including basic human activities that are organized and presented scientifically [2]. Based on the observations result which conducted at fourth grade students at Putat Gede State Elementary School, Surabaya, there were several problems in Social Science learning process which identified as follows: (1) the lack of learning media used by the teacher, (2) the low students' motivation in learning social science, (3) the less source books in social science learning process, (4) the low student learning outcomes. This case is proven by the results of student tests on Social Science and only 12 students were able to reach the Minimum Completion Criteria (KKM). The average score of Social Science learning outcomes is 68.36 and it is far from the Social Science's the Minimum Completion Criteria (KKM) which is implemented in 75. The low activities and learning outcomes is caused by monotonous and meaningless learning.

Problem Based Learning as one of the learning models is developed from the learning concept of discovery or Discovery Learning Jerome Bruner which is considered as the capability of achieving social science goals. Learning discovery is a learning processes which includes: information process, transformation, and evaluation [3]. Based on the reseach problem, the objectives of this study are as follows: (1) Describe the activities of students during Problem Based Learning in Social Sciences class at fourth grade of Putat Gede state elementary school, Surabaya, (2) Describe teacher activities when Problem Based Learning is implemented in social science at fourth grade of Putat Gede state elementary school, Surabaya, and (3) Describing student learning outcomes which has been implemented by using Problem Based Learning in social science at fourth grade of Putat Gede state elementary school, Surabaya.

In this study, the researcher presented a relevant literature review. The first study by Yuniara & Surya, "Application of Problem Based Learning to Students' Improving on Mathematics Concept of Ability" [4]. The results of this study indicate that the Problem Based Learning model can improve the activities and learning outcomes of mathematics in seventh grade of MTs Aisyiyah Medan. Second research by Yewa, Elaine H.J. & Gohb, K., "Problem-Based Learning: An Overview of its Process and Impact on Learning" [5]. The results showed that Problem Problem Based Learning had a large influence on learning outcomes compared to conventional learning. Students can collaborate with friends in solving problems so they can make learning meaningful.

The significance different of this reseach is the location of this this research. This study was in fourth grade of Putat Gede state elementary school, Surabaya. Another difference is seen from the subjects and the material. The subjects of the previous studies are Mathematics subjects, while in this study the subjects used are Social Science in Natural Resources. This study is about the students' activities and learning outcomes while taking social scienceby using Problem Based Learning model. By implementing Problem Based Learning model, it is expected to be able to improve students' activities and learning outcomes of social science of fourth grade of Putat Gede state elementary school, Surabaya.

## II. METHODS

The design and methods in this research are classroom action research. Hopkins interpreted classroom action research as a combination of research with substantive action, which is carried out in inquiry or an effort of an understanding of what happened [6]. The design of this study refers to the Kemmis&Taggart model which consists of several cycles, each cycle consisting of four stages: 1) planning, 2) action, 3) observation, 4) reflection [7].

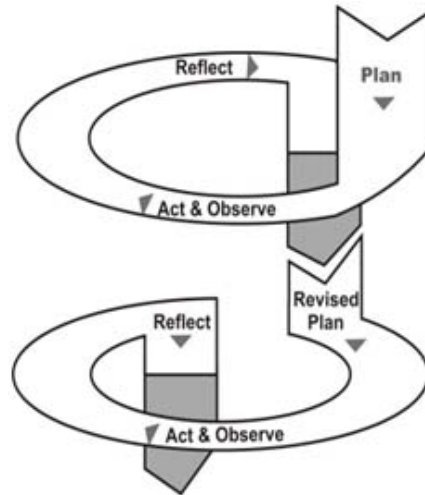


Figure 01. Action Research Model

The subjects were all fourth grade students of Putat Gede State elementary school, Surabaya in academic year 2018/2019 with 24 students. They are 10 female students and 14 male students. The material is taken in this study is natural resources uses. Data collection techniques include observation, learning outcomes tests and documentation. Data analysis was quantitative analysis techniques with percentages. There are two kinds of data analysis in this observation which are teacher's activity observation data and students' activities observation data. Analysis of observation data was obtained by giving scores on every aspect which observed during the learning process in each cycle. Analysis of observation data of teacher and student activities by using the following formula:  $P = \frac{f}{N} \times 100\%$

Information:

p= the frequency of occurance percentage

f = the number of teacher/ students' activities that appear

N = Activity score

Student learning outcomes in each cycle in the study were analyzed individually and classically. Determination of the level of completeness of individual learning was measured based on the KKM of social science is 75. Furthermore classical learning completeness was achieved if  $\geq 80\%$  of all students in the class were thoroughly achieved. To determine the test results of student learning outcomes, it use the following equation:

$$\text{Value} = \frac{\text{Total Score}}{\text{Maximum Score Amount}} \times 100$$

After calculating the score of learning outcomes and the average learning outcomes of social science in one class, the next step is to find the percentage of students' classical completeness towards the learning process. For the completeness analysis of students' classical learning towards the learning process expressed in the percentage with the following equations:

$$p = \frac{\sum \text{students who complete the learning process}}{\sum \text{students}} \times 100\%$$

To make it easier in knowing the level of its success, a range of assessment criteria is made for teacher activities, student activities and student learning outcomes in the classical model as follows:

Table I: Criteria for student learning activities and outcomes [8].

80% - 100%	= excellent
61% - 80%	= Good
41% - 60%	= Enough
21% - 40%	= Less than enough

The indicators of successful research in this study are: (1) this study is said to be successful in the learning process if student activities achieve  $\geq 80\%$  of all observation aspects. (2) this study is said to be successful in the learning process if the teacher's activities achieve  $\geq 80\%$  of all observation aspects, and (3) the study is successful if 80% of the students have learning outcomes with a minimum score of 75. The score is accordance with the Minimum Completion Criteria (KKM) determined in social science at Putat Gede State Elementary School, Surabaya.

### III.RESULT AND DISCUSION

In this section, the results of this research are explained on the implementation of Problem Based Learning model to improve the results of students' activities and learning outcomes in social science of natural resources. This classroom action research is carried out in 3 cycles with the allocation of 3x35 minutes per meeting. The first cycle is held on October 1, 2018, the second cycle on October 8, 2018, and the third cycle on October 15, 2018.

Problem Based Learning is carried out in five phases. The first phase provides problem orientation to students. The teacher displays information about the use of natural resources and displays the problems that arise. The second phase organizes students for doing research. Students are divided into 6 groups. The third phase is created to help independent and group investigations. The teacher helps students to get information. The fourth phase develops and presents artifacts and exhibits. Each group writes about their problem solving which is the data obtained from the internet or books in the library, then all groups present the results of the discussion in front of the class. The fifth phase analyzes and evaluates the problem solving process. Each group writes down what problems are faced during the learning process and in solving the problem. Observations are carried out when learning activities take place with the following data:

Table II. Recapitulation of Teacher and Students' Activities

No	Cycle	Teacher's activity percentage	Students' activities percentage
1	Cycle I	70,62%	71,86%
2	Cycle II	80,10%	81,90%
3	Cycle III	87,25%	85,83%

From the results of observations in the first cycle, the percentage of the implementation of teacher activities was 70.62%, so it was necessary to continue in the next cycle. In the second cycle obtained a percentage of 80.10%. It shows that an increase of 9.48% from the first cycle. In cycle III the percentage of 87.50% increased by 7.4%. This percentage has fulfilled the indicator of success in the study which is determined by 80%.

From table 3, it is known that in the first cycle the achievement of student activities was 71.86%. This percentage has not yet reached the indicator which determined in this study is 80%. It means students have not applied Problem Based Learning learning activities yet. In the second cycle the percentage of activities achievement is 81.90% and it is an increase of 10.04% from 71.86% criteria which is a "good" criteria in the first cycle to be 81.90% with "very good" criteria in the second cycle. The success percentage in the second cycle has reached the success indicator which determined in this study which is 80%. However, there is one aspect that has a low score, that is the aspect of asking questions. In the third cycle, the percentage of classical student activity was 85.83%, and get increase to 3.93% from the second cycle. The percentage of student activities reach the success indicators which is set in this study so that this research stops in the Third cycle.

The learning outcomes test in this study is a test of students' cognitive learning outcomes which is done by giving a test at the end of each lesson. The recapitulation of student learning outcomes from cycle I-III can be seen in the following table;

Tabel III. Recapitulation of Students Larning Outcomes in Cycle I-III

No	Cycle	The average score of learning outcomes	Classical Completeness percentage
1	Cycle I	74,41	70,83%
2	Cycle II	78,32	79,16%
3	Cycle III	82,63	87,50%

Based on Table III, it is known that in the first cycle was 17 students from 24 students completed the learning process and 7 students did not complete the learning process. The percentage of classical completeness and the average score in the first cycle has not yet reached the success criteria which is determined in this study is 80% so this research is continued in cycle II. One of the factors

that effect the low achievement of the KKM is the lack or the low of mastering the concept of learning material so that students still get difficulties in doing presentation and doing exercises.

In the second cycle was 19 students from 24 students completed the study and 5 students did not complete the learning process. The average learning outcome in the second cycle was 78.32 with a classical completeness percentage of 79.16%. The average value of learning outcomes obtained in the second cycle which has been able to achieve the minimum completeness criteria which is 75 but the percentage of classical completeness obtained in the second cycle also still does not reach the indicators which determined in this study so this research continues in third cycle.

Cycle III was 21 children completed in the learning process and 3 students did not complete in the learning process. The average student learning outcomes is 82.63 with a percentage of classical completeness is 87.50% which indicates that the indicator has been achieved in the third cycle, because it has achieved the success indicators which is determined in this study that is  $\geq 80\%$ , and the average learning outcomes reach the minimum completeness criteria. Based on the results of the research and the description above, it can be said that the application of Problem Based Learning can improve social science learning outcomes of fourth grade students of Putat Gede state elementary school, Surabaya.

#### IV. CONCLUSION

Based on data analysis, the results of this research on increasing student learning activities and outcomes using the Problem Based Learning learning model at SDN Putat Gede I / 94 Surabaya Putat Gede state elementary school, Surabaya concluded as follows: 1) the percentage of implementation of teacher activities in the first cycle is 70.62% in the category of "good", and increased into 80.10% in the second cycle and 87.25% in the third cycle with the category of "very good", 2) students learning activities in the first cycle got a percentage of 71.86% in the "good" category get into 81.90% in cycle II and 85.83% in cycle III in the category of "very good", 3) student learning outcomes in the first cycle obtained an average score of 74.41 with a completeness percentage of 70.83%. In the second cycle, student learning outcomes obtained an average score of 78.32 with a completeness percentage of 79.16%. The third cycle of student learning outcomes obtained an average value of 82.63 with a completeness percentage of 87.50%. 4) Problem Based Learning is student-centered learning that can improve social science activities and learning outcomes.

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