# THE USAGE OF STUDENT'S ACTIVITY SHEET TO IMPROVE THE MATHEMATICS LEARNING OUTCOMES FOR 8TH GRADE

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**ABSTRACT**

The teacher uses of the worksheet in a studying process are rare, but actually, the case is students may active through do worksheet during the studying process, which is by the low math test scores of students are the background of the research. The research aims to improve the mathematics student's outcomes grade VIII Muhammadiyah Junior High School 2 Godean (SMP Muhammadiyah Godean 2) in an odd semester in the academic year 2016/2017 through using of student's worksheet (LKS). This research is Classroom Action Research (CAR), implemented in the 8th grade in SMP Muhammadiyah 2 Godean in the academic year 2016/2017 on August 16, 2016, through to September 6, 2016. The subject of this research is the students of class VIII C, which consists of 32 students. Action performed in two cycles. Each cycle consists of planning, implementation, observation, and reflection. At the same time, the object of this research is the use of student's worksheets. The data will be collected using observation and tests. The analysis data are used descriptive qualitative analysis. The result of the research showed that using a student's worksheet on the mathematics studying process could increase the student's outcomes in every cycle. The first cycle average of the student's outcomes of the end cycle test was 58,33 with the individual completeness on the first cycle was 25%. Whereas the average of the second student's outcomes end cycle test was 65,56 with the individual completeness on the second cycle was 34,37%.

**Keyword:** An Action Class Research, Worksheet, Mathematics Learning Outcomes.

**INTRODUCTION**

Education is one of the capital to keep abreast of the development of science and technology; thus, the government is always trying to improve the quality of education in Indonesia at every level of education. Education can be obtained through formal, non-formal, and informal education. School is one place to carry out formal educational processes. Mathematics is one of the compulsory subjects that students must study. Mathematics began to be introduced to students from elementary school through college. According to Suherman, Erman et al. (2003: 56), the usefulness or function of mathematics subjects in schools is a tool, mindset, and science or knowledge. Gagne in Suherman, Erman, et al. (2003: 33) argues that: Learning mathematics two objects can be obtained by students, namely direct objects and indirect objects. Indirect objects include the ability to investigate and solve problems, learn independently, be positive towards mathematics, and know-how to learn. While the direct object in the form of facts, skills, concepts, and rules.

In the teaching and learning process, the teacher acts as a facilitator. In contrast, students act as objects that actively participate in the learning process that involves intellectual and emotional students. Many students see mathematics as a difficult subject. All of that is due to a lack of interest in learning mathematics and the low quality of education in Indonesia. This can be seen from the lack of maximum student learning outcomes, shown in Table 1 below:

**Table 1.** Percentage of Daily Test 1 Math Grade Grade VIII Odd Semester SMP Muhammadiyah 2 Godean 2016/2017 Academic Year

| Class | Student | | Total students | Percentage | |
|---|---|---|---|---|---|
| | ≥ MCC | < MCC | | ≥ MCC | 15,62% |
| VIII A | 27 | 5 | 32 | 84,38% | 12,50% |
| VIII B | 28 | 4 | 32 | 87,50% | 62,50% |
| VIII C | 12 | 20 | 32 | 37,50% | 15,62% |

(SMP Muhammadiyah 2 Godean, MCC=70)

Based on the above data, it can be seen that in class VIII C of SMP Muhammadiyah 2 Godean, there are still many who score below the Minimum Completeness Criteria (MCC). Teachers actively provide material, but students are passive in learning activities. The available learning resources are not fully utilized, so students lack reading material to understand the material being studied. One effort that can help students to understand the material is to use student activity sheets in learning.

According to Majid, Abdul (2005: 176), Student Activity Sheets are sheets containing assignments that must be done by students, usually in the form of instructions, steps to complete an assignment. While the advantages of using students worksheet (LKS), according to Pandoyo in Afriayanti, Risa (2014: 15) are to increase learning activities, encourage students to be able to work alone and guide students well toward the development of concepts. From the opinion above, it is expected that using LKS in lessons can maximize student learning outcomes. Therefore researchers interested in researching with the title Use of Student Activity Sheets to Improve Mathematics Learning Outcomes of Class VIII Students of SMP Muhammadiyah 2 Godean Odd Semester Academic Year 2016/2017.

Based on the description above, the problems in this study can be formulated as follows: Can using LKS improve the learning outcomes of mathematics for students of class VIII C of Muhammadiyah 2 Godean Odd Semester 2016/2017 Academic Year?

Based on the formulation of the problem above, the purpose of this study is to improve mathematics learning outcomes for students of class VIII C of SMP Muhammadiyah 2 Godean Odd Semester 2016/2017 Academic Year using student activity sheets.

In the learning process at school, students' abilities can be seen from the learning outcomes generated by students from questions, problems, or assignments given by the teacher. Learning outcomes are usually used to determine how far someone's ability to the material has been taught. According to Dimyati and Mujiono (2009: 20) argue that learning outcomes are a peak of the learning process. The learning outcomes occur mainly thanks to the teacher's evaluation. Learning outcomes can be in the form of teaching impacts and accompaniment impacts. Both of these are beneficial for teachers and students. Uno, Hamzah B (2012: 139) Student learning outcomes in mathematics are the result of learning mathematics in the form of knowledge as a result of students' treatment or learning.

**METHODS**

This research is Classroom Action Research (CAR). This research was conducted in two cycles, with each cycle consisting of planning, implementation, observation/observation, and reflection. This research was conducted at SMP Muhammadiyah 2 Godean in class VIII C odd semester 2016/2017 academic year. The number of students in class VIII C is 32 students with 18 male students and 14 female students. The procedure in this study, there are four steps performed in each cycle. In the first cycle, the first step is planning, in this step preparing the learning material that will be used, making a Lesson Plan, making the worksheets needed, and making research instruments in the form of tests. The second step is implementation, in this step the researcher acts as a teacher in class VIII C. Learning will use student activity sheets, students are divided into six groups, each group consisting of 5 students. The third step is observation/observation; in this step, an observation is made of teaching and learning activities that occur, the use of time when learning takes place as planned. The fourth step is a reflection; in this stage, the teacher will analyze the data that has been collected. The data collected will be used as a basis for

improvement in cycle II. In the second cycle, the work phase follows the work phase of the first cycle, in this case, the cycle II action plan is prepared based on the results of the analysis in cycle I. The data collection techniques in this study were carried out using documentation, observation, and tests. Documentation of the data used is a list of student names, daily test scores 1 grade VIII SMP Muhammadiyah 2 Godean Odd semester. Observation is used to determine the implementation of teacher teaching in the classroom. The test is used to measure students' understanding of the material that has been delivered. The final test cycle data analysis technique uses specific learning completeness guidelines that meet a minimum score of 70 or 70% according to the MCC set by the school.

**RESULTS AND DISCUSSION**

At the end of cycle 1, a test was conducted to determine students' understanding of the material being taught. The final test of cycle one was held on Friday, August 26, 2016, which was followed by 18 students from 32 students in class VIII C. Following is a summary of the final test scores for cycle 1.

**Table 2.** Final Cycle Test Results 1

|              | Lowest score | High score | Average |
|--------------|--------------|------------|---------|
| Cycle Test 1 | 20           | 100        | 58,33   |

From these data, students can be classified that are thoroughly studied and not thoroughly studied. Criteria for mastery learning if at least get a test score of 70. The following is a summary of students' completeness in the final test of cycle 1:

**Table 3**. Completeness of Students in the Final Test Cycle I

| Criteria Limits | Many students | Category    |
|-----------------|---------------|-------------|
| $\geq 70$       | 8             | Complete    |
| $< 70$          | 10            | No Complete |

Judging from the observations obtained that during the learning process in class, students are more enthusiastic about participating in the learning process. The ability of students to complete the second cycle test is also better than the value of the first cycle test. 27 students followed the final cycle II out of 32 students in class VIII C, the summary of the results of the end of the second cycle conducted on Tuesday, September 6, 2016, is as follows:

**Table 4.** Final Test Results for Cycle II

|              | Lowest score | High score | Average |
|--------------|--------------|------------|---------|
| Cycle Test 2 | 35           | 100        | 65,56   |

From these data, students can be classified that are thoroughly studied and not thoroughly studied. Criteria for mastery learning if at least get a test score of 70. The following is a summary of students completeness in the second cycle test:

**Table 5.** Completeness of Students in Final Test Cycle II

| Criteria Limits | Many students | Category    |
|-----------------|---------------|-------------|
| $\geq 70$       | 11            | Complete    |
| $< 70$          | 16            | No Complete |

In the learning process in the first cycle, students still need adjustments to the use of worksheets in learning. Students still did not pay attention to the explanation of the material by the teacher, students still did not dare to work on the questions on the board, but the learning process went well. The average results of the first cycle test were 58.33, with 25% having reached the MCC. In cycle II, students are more daring in working on the blackboard and pay more attention to the material delivered by the teacher. The

average results of the second cycle test were 65.56, with a percentage of 34.37% having reached the MCC. Improved learning outcomes from cycle I and cycle II can be seen in the following table 10:

**Table 6.** Improved Learning Outcomes Cycle I and Cycle II

| Evaluation result | Cycle I | Cycle II |
|---|---|---|
| Complete students | 8 | 11 |
| The highest score | 100 | 100 |
| Lowest value | 20 | 35 |
| Average | 58,33 | 65,56 |

Overall, it can be concluded that learning mathematics using student activity sheets can be used as an effort to improve mathematics learning outcomes in students of class VIII C, SMP Muhammadiyah 2 Godean, odd semester 2016/2017 academic year.

**CONCLUSION**

Based on the results of research and discussion, it can be concluded that the use of student activity sheets can improve student learning outcomes in class VIII C of SMP Muhammadiyah 2 Godean 2016/2017. This is indicated by the results of the end of the first cycle and the second cycle's first tests. In the first cycle, the average result of the first cycle test was 58.33, with an MCC completeness of 25%. While in the second cycle, the average results of the second cycle test were 65.56, with the achievement of MCC completeness of 34.37%.

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