The Application of Autonomous Learning with Master Plan Techniques to Increase Mathematics Learning Results of Students VII\textsuperscript{d} SMP Muhammadiyah Kuok

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Abstract: This study aims to determine whether the application of autonomous learning with MASTER-Plan techniques can increase student learning outcomes of VII\textsuperscript{d} class at SMP Muhammadiyah Kuok on the subject line and corner? This research is a classroom action research that is a practical research that aims to improve the deficiencies in classroom learning by doing certain actions in order to improve and increase the practice of learning in the classroom more professional. Subjects in this study were students of VII\textsuperscript{d} class of SMP Muhammadiyah Kuok, seven semester of the academic year 2008/2009 with the number of students as many as 27 people. The subject used was lines and corner. Instrument used in this research was evaluation in the form of test. The test is performed four times in four meetings with details once before the action and three times after the action. After the data obtained then the researchers manage the data using the computer software of SPSS for windows version 16.0 which aims to determine whether or not there is a significant increase of two variables that are the result of learning mathematics before using autonomous learning with MASTER-Plan techniques and learning mathematics after using autonomous learning with MASTER-Plan technique. From descriptive data analysis conducted on the application of autonomous learning with MASTER-Plan technique obtained the value of Test $t = 9.070$ which means greater than the price criticism Test $t$ both at a significant level of 1\% and 5\%. Thus, the hypothesis of action in this research is accepted. Based on the analysis, it can be concluded that the application of autonomous learning with MASTER-Plan techniques can improve the learning outcomes of mathematics students of VII\textsuperscript{d} class at SMP Muhammadiyah Kuok.

Keywords: Self-study; Master Plan technique; subject line and corner.

1. Introduction

Education is a conscious effort and planned to grow and develop the potentials or abilities that exist in the students themselves by seeking the creation of a conducive learning atmosphere. A conducive learning atmosphere can make students more easily accept lessons, make learning more fun and improve learning outcomes.

Teaching of material by lecture method makes passive students during the learning process, their learning supplies are often left behind at home, many students are difficult to concentrate, even they chat and interfere with friends or leave the classroom while learning is taking place and very few students can answer teacher’s questions, moreover ask questions about things that they are less understood.

Based on preliminary study with mathematics teacher of class VII\textsuperscript{d} SMP Muhammadiyah Kuok that the learning process has not been effective and the reality is still conventional. Which in the learning is only active teachers while passive students. Students can only accept what the teacher explained, in other words students cannot find their own learning style so that only pegged to the teacher.
The Application of Autonomous Learning with Master Plan Techniques to Increase Mathematics Learning Results of Students VII d SMP Muhammadiyah Kuok

The completeness of the mathematics learning result especially on the subject line and the corner that was carried out in 2007-2008 in the class VII d SMP Muhammadiyah Kuok, about 65% of 34 students still cannot reach the minimum completeness criterion (KKM) that is 60, based on the facts above, the results of learning mathematics on the subject line and corner need to get serious attention. To the authors feel the need to find a solution in the hope of improving student learning outcomes and for the year 2008-2009 students are expected to achieve mastery, both individual and classical.

2. Related Works

Research related to the application of autonomous learning with MASTER PLAN techniques to improve student learning outcomes mathematics class VII d SMP Muhammadiyah Kuok with the conclusion:

1. The learning process with autonomous learning with MASTER PLAN technique to improve mathematics learning result of grade VII d students of SMP Muhammadiyah Kuok obtained a mean increase in cycle 1 of 66, 19, cycle 2 of 77, 04 and cycle 3 80, 93 whereas mean before action 49, 07.
2. Learning process with autonomous learning with MASTER PLAN techniques can improve student learning outcomes class VII d SMP Muhammadiyah Kuok on the subject line and corner.

3. Materials & Methodology

3.1. Data

The study was conducted in junior high school Muhammadiyah Kuok Kampar city of Riau Province in the seven semester of the academic year 2008/2009. This research took place in December 2008 to May 2009. The subjects of this study were students of class VII d SMP Muhammadiyah Kuok which amounted to 27 people.

3.2. Method

This type of research is Classroom Action Research. This research was conducted in 3 cycles, previously had been observed to know the initial condition of the research subject that is the teacher has not implemented autonomous learning with MASTER PLAN technique of student learning result still low. The first cycle consists of 1 meeting on drawing materials, corner measuring, and corner types followed by a cycle learning result test first. The second cycle consists of a meeting on the corner material that followed by the second cycle test results. The third cycle consists of 1 meeting on the material of each other's corner (supplement) followed by the third cycle learning test. Each cycle consists of 4 stages: planning, action, observing and reflection reflecting).

There are four stages to be passed on this class action research namely: planning, implementation, observation, reflection. Figure 1 describes the model of classroom action research cycles conducted by researchers.

This research was conducted in 3 cycles, the first cycle consists of 1 meeting and 1 daily repetition, the second cycle consists of 1 meeting and 1 repeat daily. Researchers will hold five stages namely, initial reflection, planning, action implementation, observation and reflection. The third cycle consist of 1 meeting on corner of each other material followed by the third cycle test result. Each cycle consist of four stages that are planning, action, observing, and reflecting. Data collection techniques used in this study, among others: observation techniques and test techniques.

The data obtained during the learning process is processed by tabulating the data and then analyzed by descriptive analysis that is:

1. Learning outcomes are analyzed by comparative descriptive analysis that is comparing test values between cycles with the initial conditions.
2. Student learning activities were analyzed by qualitative descriptive analysis based on data obtained through observation sheets, field notes and questionnaires.

The data obtained is presented in the table, the percentage is obtained by the formula:
The Application of Autonomous Learning with Master Plan Techniques to Increase Mathematics Learning Results of Students VIIId SMP Muhammadiyah Kuok

\[ N = \frac{A}{B} \times 100\% \]  

(1)

Where:

- \( N \) = Percentage of acquisition according to activity observed
- \( A \) = Number of students according to observed activity
- \( B \) = Number of students attending each meeting

This research was conducted in 3 cycles, the first cycle consists of 1 meeting and 1 daily repetition, the second cycle consists of 1 meeting and 1 repeat daily. Researchers will hold five stages namely, initial reflection, planning, action implementation, observation and reflection. The third cycle consist of 1 meeting on corner of each other material followed by the third cycle test result. Each cycle consist of four stages that are planning, action, observing, and reflecting. Data collection techniques used in this study, among others: observation techniques and test techniques.

4. Results and Discussion

4.1. Result

With the application of self-study with MASTER PLAN technique, the result of student learning is increased. It can be seen at the initial condition of student's completion percentage of 22.22% that...
The Application of Autonomous Learning with Master Plan Techniques to Increase Mathematics Learning Results of Students VIIId SMP Muhammadiyah Kuok

increase to 25.93% in cycle I, increase to 55.6% in cycle II and increase again to 81.48. It means that this class action research can exceed the target of success indicator that is 65% students mastery.

Increased student learning outcomes can be seen by comparing the initial conditions, cycle 1 cycle 2 and cycle 3 as illustrated in Table 1.

Table 1. Student learning outcomes at baseline, cycle I cycle II and cycle III

<table>
<thead>
<tr>
<th>Initial Conditions</th>
<th>Cycle I</th>
<th>Cycle II</th>
<th>Cycle III</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Students</td>
<td>%</td>
<td>Number of Students</td>
<td>%</td>
</tr>
<tr>
<td>6</td>
<td>22.22</td>
<td>7</td>
<td>25.93</td>
</tr>
</tbody>
</table>

Based on the Table 1 we can see that there is an increase in student learning outcomes. Before the action was done there were 6 complete students with the percentage of completeness 22.22%. In the first cycle has increased that there are 7 complete students with percentage mastery 25.93%. In cycle 2 has increased again, there are 15 students who complete with the percentage of completeness 55.56%. Cycle 3 has a significant increase where there are 22 students who complete with percentage completeness of 81.48%. It means that this class action research can exceed the target of success indicator that is 65% students mastery.

4.2. Discussion

Based on the research results we obtain the number of students who achieve mastery in the first cycle more than the number of students who achieve mastery before the action. Thus the number of students who achieve completeness in the third cycle is more than students who reach KKM in the first and second cycle. This shows that autonomous learning with MASTER-Plan techniques can improve student learning outcomes class VII\textsuperscript{d} SMP Muhammadiyah Kuok on the subject line and corner. Based on the researcher's observation on the performance of the students there is a need to be addressed including the students are still confused and have not understood the autonomous learning with MASTER PLAN techniques, the aspect that has not been done by teachers in learning, so that learning has not run completely in accordance with the plan causing student learning outcomes reach the target completeness.

Another factor cause the above obstacles is teachers are not used to using autonomous learning model with MASTER PLAN technique. But in the third meeting and the fourth aspect in the learning process has increased, this is because students are getting used to the autonomous learning model with the MASTER PLAN technique. Given the motivation that teachers always provide students understanding of the stages of implementation of autonomous learning with MASTER technique is increasing and even more excited in learning.

From the previous writer's experience when viewed from the learning materials, cycle II material is more difficult to understand the students than the material cycle I. But after tried to apply autonomous learning with MASTER technique, the student score on the material cycle II increased if compared to the results of tests on the material cycle I. Thus, the result of the study supports the action hypothesis which reads the application of autonomous learning with MASTER PLAN technique can improve student results Class VIIID Muhammadiyah KUOK on line and corner subject.

5. Conclusion

It can be concluded that the implementation of the action using autonomous learning with MASTER PLAN has obtained a mean increase in cycle 1 of 66.19, cycle 2 is 77.04, cycle 3 is 80.93. Mean of student learning outcomes before action is 49.07. Therefore, we note that the application of autonomous learning with MASTER PLAN techniques can improve student results of Class VIIID Muhammadiyah KUOK on line and corner subject.

Based on the results of the study, the authors propose some suggestions:
1. Applying autonomous learning with MASTER PLAN technique in learning process is expected to the teacher to really pay attention to student activeness to get expected result.
2. Applying autonomous learning with MASTER PLAN techniques in the learning process is expected to make the teacher really pay attention to the time to be used, for learning done in accordance with the planning and achievement of desired goals.

3. Autonomous learning with MASTER PLAN techniques will be better if combined with methods that match the learning style of students.

4. Since this research is only done on the subject line and corner, the researcher suggested that autonomous with MASTER PLAN technique can be applied on other subject.

5. On this occasion the authors hope that teachers can familiarize students to be active in learning, cooperate and interact with his friends and even provide opportunities for students to teach his friends.

References