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Application of the Recitation Method to Improve Analytical Thinking Ability and Learning Outcomes

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Abstract: The recitation method is a learning method that is characterized by the work of assignments by students. Analogy ability is the ability of a person (student) in solving problems by drawing conclusions based on the similarity of the process or the data provided. Learning outcomes are abilities possessed by students after students carry out learning activities. This study aims to describe how the process of applying the Recitation method improves students' analogical thinking skills and student learning outcomes. The subjects in this study were students of class VIIIA SMP Satya Dharma Jalan Puger, Balung District, Jember Regency. Data collection techniques were carried out with observation sheets, tests, and documentation. This research uses classroom action research (CAR). The results of the study can be seen from the acquisition of the percentage of teacher and student activities in the first cycle of 94.87% and 87.17% respectively, while in the second cycle the percentage of teacher and student activities is the same, namely 97.43%. Analogy thinking ability and student learning outcomes in the first cycle respectively get an average of 41.26% and 60% while in the second cycle the average Analogy thinking ability and student learning outcomes are 66.98% and 80.47%. So it can be concluded that applying the recitation method can improve students' analytical thinking skills and student learning outcomes.

Keyword: Analytical Thinking Ability, Learning Outcomes, Recitation Method.

INTRODUCTION

Recitation is one of the learning activities which is marked by an assignment by the teacher to students and students are required to account for the task to the teacher both orally and in writing. How to work on this method can be done individually or in groups which can then be done in class or at home. This is also conveyed by Arif (2016) that "*the method of assigning assignments is defined as a way of teaching and learning interaction which is characterized by the existence of tasks from the teacher that students do at school or home individually or in groups*". Each learning method is applied with specific aims and objectives. This statement is following the theory conveyed by Azmi (2017) "*every type of teaching method must be appropriate or appropriate to achieve a certain goal*". The application of the Recitation method goes through 3 steps, namely, 1) The phase of giving assignments by the teacher, 2) The implementation of assignments by students, 3) The phase of being responsible for assignments by students. In the application of the recitation method, the teacher is obliged to give rewards to students in the form of an assessment of student work, this can motivate students to be more enthusiastic in completing the tasks given by the teacher. To determine the level of effectiveness of the application of the recitation method and the suitability of the learning steps using the recitation method, observations were made by two observers. Observations were made to teachers (researchers) and also to students.

In this study, the Recitation method was applied to improve students' Analogical thinking skills. Analogy thinking ability is the ability of a person (student) in solving problems by connecting or comparing the similarity of the problem.

Furthermore, the analogy is divided into two, namely, 1) Declarative Analogy, which is an analogy used to explain something vague by using other things that are already known, 2) Inductive Analogy, which is an analogy that is compiled based on the principle equation of two different things which is then concluded that what is in the first is also in the second. In this study, the researcher used an inductive analogy. According to Harjoko (2014) the ability of analogy is the core of cognitive development which consists of placing the structure of one element for the structure of another element with the appropriate relationship. Furthermore, Kesuma (2013) says that students do analogy thinking if, a) Students can identify whether there is a relationship between a problem and prior knowledge, b) students can identify a source problem structure that is by the target problem, c) students can find out how to use problem in solving the target problem. Therefore, according to Harjoko (2014) that the ability of Analogy is cognitive development, it can be said that Analogy is part of learning outcomes relating to individual cognitive (students). Which is the result of learning in this study is the ability of students in mastering the material relations and functions, and the student's ability to solve problems using the ability to think of an analogy.

Learning outcomes are the ability of an individual or individual to change (students) after carrying out certain learning activities. This is in line with the opinion of Dick and Reiser (Sumarma, 2011) who said that learning outcomes are abilities that students have as a result of learning activities. These abilities include 4 types namely, 1) Knowledge, 2) Intellectual Skills, 3) Motor skills, 4) Attitudes. Meanwhile, according to Novariyanti (2017) learning outcomes can be classified into 3 domains, namely, 1) Cognitive Domain, 2) Affective Domain, 3) Psychomotor Domain. While in this study, the benchmark for student success is student learning outcomes in the cognitive domain or students' intellectual abilities related to student knowledge. The objectives of this study include 1) to explain the process of applying the recitation method in learning mathematics. 2) to find out the improvement of students' Analogy thinking skills after using the Recitation learning method. 3) to find out the increase in student learning outcomes after using the Recitation learning method.

METHOD

The type of research used in this research is Classroom Action Research with a qualitative approach. The subjects of this study were 21 students of class VIIIA SMP SATYA DHARMA BALUNG with a composition of 10 male students and 11 female students. The design of classroom action research that was compiled according to Kemmis and Mc. Taggart was divided into 4 research stages, namely, 1) planning stage, 2) implementation stage, 3) observation stage, 4) reflection stage. These four stages are then called cycles. This research is divided into 2 cycles. In each cycle, four face-to-face meetings are consisting of three face-to-face teaching and learning activities in the classroom and one face-to-face test at the end of the cycle. At each face-to-face observation, two observers were conducted, then the results of these observations were used as a guide for improving learning methods at the next face-to-face. The research took place from 5 October 2018 to 9 November 2018. The cycle was applied to obtain data consisting of, Student and teacher observation data (researchers) obtained through the observation method by two observers using observation sheets, Learning outcome data obtained through tests at the end of each cycle, and Student's Analogy ability data obtained through the end of the cycle test. The data are then analyzed using the following equation,

The formula for Analysis of Teacher and Student Observations

$y =$(score obtained per cycle)/Maximum score per cycle x 100%..................................(1)

The formula for Analysis of Student Learning Outcomes

q = total score of all students / maximum score of all students x 100% ....(2)

Analytical Thinking Ability Analysis Formula for students

p = total score of all students / maximum score of all students x 100% ....(3)

After obtaining the average percentage of each data analysis result, then the results are categorized based on the category guidelines in the following table

Table. 1. Qualification of the Percentage of Scores, Analogies, Learning Outcomes, and Observations

Percentage of Observation Score	K
66.68% x 100%	T
33.34%≤x 66.67%	S
0% x 33.33%	R

Information

K : Category

Q: Height

S : Medium

R : Low

After categorizing the results, it will be decided whether the cycle is continued or stopped. The cycle is stopped when the students' learning outcomes and analogy abilities reach the high category.

RESULT AND DISCUSSION

The subject matter used in this study is relations and functions. In cycle one, the study went through four stages, namely, the first stage, namely the planning stage, the planning stage the researcher prepared the lesson plans, test questions, task sheets at each meeting, and observation sheets. In the second stage of implementation, at this stage, the researchers applied to learn activities using the recitation method. things that need to be considered at this stage are the suitability between the method and its implementation as well as the suitability of the material and student assignment sheets. The third stage of observation, this stage is carried out simultaneously with the implementation of learning where two observers make observations using the observation sheet. The fourth stage is reflection, reflection is the final stage to determine the level of success and determine whether the next cycle needs to be done. At this reflection stage, analysis of the data obtained in one cycle is carried out using the equations or analytical formulas contained in the research method. Data The data obtained after the application of cycle 1 are, 1). The data from the teacher's observations in cycle 1 was 94.87%, then, based on Table 1. Qualification of the percentage score, the results of the percentage of teacher activities were in the high category. 2). The data from the observation of student activities is 87.17%, in the high category. 3). Data on student learning outcomes is 60%, in the medium category. 4). The data on the results of the student's analogy ability test was 41.26%, in the medium category. Based on the percentage gain in cycle 1, it can be said that students' learning outcomes and analogy thinking skills have not reached the indicators of research success, namely reaching the high category. So it needs to be continued in cycle 2

In cycle 2 the research was carried out based on four stages as in cycle 1, but the difference was that there were improvements in cycle 2 where the improvement was a deficiency that occurred in the previous cycle. After researching cycle 2 using the same four stages in cycle 1, the data obtained from research cycle 2 were then analyzed using the formula contained in the research method. The data obtained in cycle 2 are as follows, 1). Data The results of observations of teacher activities are 97.43%, in the high category. 2). Data on student activity results is 97.43%, in the high category. 3). Data on student learning outcomes of 80.47, is in the high category. 4). The data on the results of students' analogy thinking ability is 66.98%, in the high category.

Based on the percentage of data obtained in cycle 2, there was an increase in students' analytical thinking skills by 25.72%, an increase in student learning outcomes by 20.47%, an increase in teacher activity by 3.44%, and an increase in student activity by 10.26%.

The application of the recitation method in Class VIIIA SMP SATYA DHARMA Balung shows fairly good results. This is shown through the acquisition of the percentage of student and teacher activities. At the stage of applying the method, a teacher or researcher must motivate so that students want to do assignments at each meeting, for that giving rewards in the form of assessments or praise for student work is a way for researchers to motivate and encourage students. Teachers or researchers should provide problems that are not too complicated so that they do not make students lazy or have difficulty, if this happens it will trigger students not to work. Therefore, it is recommended to take young problems and those with instructions for working in the student handbook.

In the section on improving students' Analogy thinking skills, researchers are required to provide easy examples to direct students on how to solve problems using analogies. Students are vulnerable to comparing problems based on the differences between these problems with students' prior knowledge, so researchers need to create a simple problem in which students are directed to make comparisons by connecting or looking for a similarity of a problem, this is under what was conveyed by Azmi (2017) that "analogy is talking about two different things and the two different things are compared if in the comparison only the similarities are considered without paying attention to the differences, then an analogy arises". Researchers stimulate students to do analogous thinking using examples that are solved using reasoning, this is as a start so that students are accustomed to doing reasoning or thinking activities after students are accustomed to solving reasoning problems, students will also get used to thinking activities, one of which is analogy thinking. Based on the results of research conducted by Rahman (2014) with the research title "The effect of the use of the discovery method on the mathematical analogy ability of students at SMK AL - IKHSAN Pamarican, Ciamis Regency, West Java" the results showed that the analogy ability in the experimental class increased from the initial average before learning 8, 22 % became 15, 28,% while the initial mean of control class was 8, 25% to 13.92% using the expository method. While in the research, there was an increase in the ability to think analogy by 25.72%. So it can be said that students' analogy abilities can be improved.

The application of the recitation method also affects student learning outcomes which change from each cycle and it can be said that the application of the recitation method can improve student learning outcomes, this is supported by research conducted by Hasugian (2013) where the application of the recitation method can improve results. classical student learning is 33.01%. Meanwhile, in research conducted by researchers, there was an increase in classical learning outcomes by 20.47%.

CONCLUSION

The application of the recital method goes through three phases, namely, the assignment phase, in this phase the teacher must consider the type of assignment and student abilities. the phase of carrying out tasks by students in this phase students are required to do their tasks according to the provisions of the teacher, then the phase is responsible for the results to the teacher, in this phase students are required to report what they have done both in writing and verbally and the teacher is obliged to provide an assessment to students as a reward for student work. In the application of the method, there was an increase in student learning outcomes and students' analogy thinking skills, respectively, namely 20, 47%, and 46.98%.

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