
Application of The Contextual Teaching and Learning Strategy to Increase Students' Successful in Mathematics Learning on Grade VIII at SMPN 6 Rambah

Nuraini

Mathematics Magister Study Program
Faculty of Teacher Training and Education
Riau University

ABSTRACT

The success of the learning is depended on learning proses by the teacher and the students. Based on the researcher experience as a teacher on grade VIII at SMPN 6 Rambah stated that many students did not get good score be based on KKM caused in learning proses used konvensional method. According to National Education Department about Minimal Completeness Criteria (KKM):2008 stated that students' total that achieved was 75 % from all the students in its class. The method of this research was Class Action Research by applied Contextual Teaching and Learning Strategy (CTL) and seven components of CTL such constructivism, inquiry, questioning, learning community, modeling, reflection, authentic assesment. The steps of the Contextual Teaching and Learning Strategy were : (1) motivating; 2. Understanding, 3. Applying and 4 scoring (Hartono, 2007). This research consist of 4 steps, they were : planning, implementation, observation and reflection. Those steps were did in 2 cycles and the object of the research were grade VIII at SMPN 6 Rambah. The result of this research showed that Contextual Teaching and Learning Strategy (CTL) can improved Students' Successful in Mathematics Learning in grade VIII at SMPN 6 Rambah by given some lessons such surface area and volume of the cube flank, crossbar, prism and pyramid. Every learning had an increasing. from 28 students were 46,42%, whereas good were 75%. First cycle, students learning result were 67,85% and then second cycle were 85,71%.

Keywords : Learning result, CTL Strategy

Introduction

Mathematics had to be gave to the students to set students' logical and to transform student's characteristic skill by applied mathematics in their daily life. These matters were in line with the purpose of the mathematics learning at SMPN 6 Rambah that had in KTSP were : 1. Understanding the concept of mathematics, explaining the relationship of each concepts and applying algorithm accurately, eefficiency and appropriate in analyzing the problems; 2. Logically, manipulated mathematics in

general, arranging the evidence or explaining the idea and statement of mathematics; 3. Analyzing the problem such as skill in understanding the problem, making a mathematics model, finishing model and making a solution; 4. Communicating the idea with the symbol, table, diagram or other media to clarify the problem; 5. Having a respect in mathematics in daily life such want to know more about mathematics, having attention, and a wish in study mathematics then adroit and confident in analyzing the problem (BSNP, 2006)

One of the indicator to make students' learning successful was the result of the students' learning itself. The students' successful depended in learning process by the students and the teacher. Good result was students' mathematics learning that had good in Minimal Completeness Criteria. Students had a successful learning if their learning result agreed with Minimal Completeness Criteria.

Based on the researcher experience as a teacher on grade VIII at SMPN 6 Rambah stated that students' successful in mathematics learning were still low. Learning process that had on grade VIII at SMPN 6 Rambah was when the teacher explained the lesson, students less of attention, talking to each other and some of them were not focus then they played a cell phone in the class hidely. When the teacher gave them some tasks, they can not finished that task by given some reasons. Students less of motivation and they feeled that mathematics was boring.

Those problems had some reasons and they were : the teacher can not teached interestly, can not motivated the students, students can not be able to analyze the information of the lesson independently and then can not be able to organize learning activity chronologically. Those problems caused of the students low in mathematics.

Some solutions that the teacher has to handle those problems were by given students punishment such taking the students' cell phone, adding the tasks to the lazy students, giving advices to the students and reminding the students about their mistakes so that they did not repeat their mistakes, giving some chances to the students to ask about mathematics, giving rewards and the teacher motivated them that mathematics was interesting. The important one was the students can be able

to understand every problems and can be able to connect with their experience in their daily life. The teacher did not give the excellent result in their learning.

Based on the statements above, learning environment can helped the students to find some relationships between the ideas of the abstract and simple applications in reality context. Dinternalisasi concepts by finding processes, strengthen and connection. Therefore, specificaly, it can improved students' successful in mathematics learning on grade VIII at SMPN 6 Rambah Year 2016/2017.

A. Formulation of the Research

Based on the background above, this research is formulated as in the question "Does the Application of Contextual Teaching And Learning Strategy can improves students' successful in mathematics learning on grade viii at smpn 6 rambah year 2016/2017 on surface area and volume of the cube flank, crossbar, prism and pyramid lesson?"

B. Purpose of the Research

The purpose of this research was to improve students' successful in mathematics learning year 2016/2017 on surface area and volume of the cube flank, crossbar, prism and pyramid lesson

C. Significant of the Research

The important benefit of this research are as follows:

- 1) For students : can improve skill on analyzing the problem in their daily life
- 2) For teacher : can give a lesson alternative that can used in stydy mathematics especially to improve skill on analyzing the problem

- 3) For school : can give one of the lesson strategy that can improve students' successful in mathematics learning
- 4) For researcher : it can gave some benefits as an orientation doing the the class action research

A. Contextual Teaching and Learning (CTL) Strategy

This strategy can be applied in seven components, they were constructivism, inquiry, questioning, learning community, modeling, reflection, authentic assesment (Lambas, dkk:2004)

- 1. Konstruktivisme (Constructivism)
- 2. Inkuiry (Inquiry)
- 3. Bertanya (Questioning)
- 4. Masyarakat belajar (learning community)
- 5. Pemodelan (modeling)
- 6. Refleksi (reflection)
- 7. Penilaian otentik (authentic assessment)

B. Application of Contextual Teaching and Learning (CTL) Strategy

Application of contextual teaching and learning (ctl) strategy has 2 steps. They were learning preparation and learning proses

C. Hypotheses

Hypotheses of this research was : when application of contextual teaching and learning (ctl) strategy was applied, it can improved students' successful in mathematics learning on grade VIII at SMP 6 Rambah year 2016/2017 focus on surface area and volume of the cube flank, crossbar, prism and pyramid lesson

Methodology

A. Place and Time

The place of this research was on grade VIII at SMPN 6 Rambah year 2017 second semester year 2016/2017. It is started from January till June 2017.

B. Kind of the Research

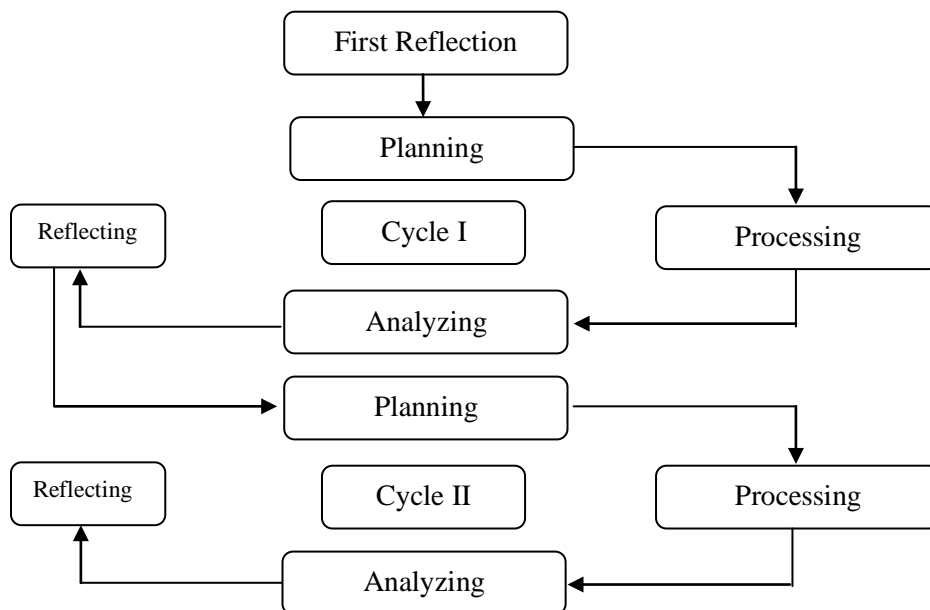
This research was Class Action Research

C. Subject of the Research

Subject of this research was students on grade VIII at SMPN 6 Rambah year 2016/2017. It has 28 students, 12 were male and 16 were female.

D. Research Mapping

This research was did in 2 cycles in 7 meetings. The research mapping was adopted from Arikunto (2007). They were :



E. Instrument of the Research

1. Lesson Instrumentation

The lesson instrumentation used are as follow :

- a. Syllabus
- b. Lesson Plan
- c. Students assignment

F. Instrumentation of the Research to Submit the Data

Instrumentations of the Research to Submit the Data were teacher and students activity during learning, then the data about the result of learning. The observation paper given was focused. The tests given were based on lattices that have on syllabus. The test was did in third and seventh meeting.

G. Technique of Collecting the Data

Technique to collect the data was by fill the observation paper did by the teacher during learning. Whereas, result of the learning submitted by used a test that consit of test I and II. The test I was did after third meeting and the test II was did after seventh meeting.

H. Technique of Analyzing the Data

To analyze the data, the researcher used qualitative statistic. Sudjiono (2005) stated that qualitative statistic analyzing is not about numeral form. Therefore, to analyze the data, it is by telling some arguments about students and the teacher activity during learning prossecces.

According to Suryanto (1997) stated that if the students score will get bad score, its strategy did not success yet, but if the students score will get good score, it was called success. The successful of this strategy was using frequency of distribution list students' successful in learning on basic score, cycle I and II.

The data that explained about students' successful in mathematics learning was presented as follow :

$$\text{Result} = \frac{\text{Maximum Score}}{\text{Students score}} \times 100$$

Discussion

A. Research Finding

To know the level of the students score on grade VIII at SMPN 6 Rambah before and after, it can be seen on the table as below :

Tabel 4. List of students score on grade VIII at SMPN Negeri 6 Rambah

Interval	Skor Dasar	Ulangan Harian I	Ulangan Harian II
25 – 34	1	0	0
35 – 44	1	0	1
45 – 54	2	2	1
55 – 64	8	5	2
65 – 74	3	2	2
75 – 84	6	10	12
85 – 94	5	7	6
95 – 104	2	2	4
Σf	28	28	28
Jumlah siswa yang mencapai KKM	13	19	24
Persentase Jumlah siswa yang mencapai KKM (%)	46,42	67,85	85,71

Based on the table 4, students less of KKM had a little from Basic Score to Test I and from Test I to Test II was from 15 students into 9 students on Test I and then 4 students on Test II. Total students that agree with KKM, it got an increasing was from 13 students on Basic Score into 19 students on Test I and then on Test II was 24 students. According to Suyanto(2007), if the students score was good after the test, it been successful. In this research, students score was good after the test then before, so it can called successful. If the test was successful, so the result of the students learning was increasing.

B. Discussion

Based on the result of analyzing the research, known that the activity that did by students and teacher in general was agreeing with the planning. In learning process, it has an increasing every meetings. It can be seen from the students skill in doing the task from LKS.

In test I, students got some troubles to answer indicator number 3 task 4 and total

students that agree with KKM were only 1 students. Students had some mistakes on indicator number 3 caused by the students had some misunderstanding to determine aquarium surface area, students were not careful to analyze the task, so the students can not answered all the tasks. There are some students were good used the formula, but did something wrong in calculate. In the test II, many students got some troubles to answer the task indicator 3 task 4 were 14 students. It caused the students can not answered all the task completely, so their score were not enough.

There were not some obstacles during process of the research on grade VIII at SMPN 6 Rambah or this research agreed wit the researcher planning was from Monday, January 17th till May 2017 and finishe on Thursday, February 16th 2017, but the time was not effective yet. The result of students mathematics score by aplying contextual learning was increasing even its increasing was not much because the basic score of the students were high enough. It can be seen that the successful of the action by applying contextual learning

strategy in surface area and volume of the cube flank, crossbar, prism and pyramid can increased students successful in mathematics learning on grade VIII at SMPN 6 Rambah.

Conclusion And Suggestion

A. Conclusion

Based on the result of the research, the researcher would like to give conclusion about the research. The result of this research was the contextual learning strategy can increased the students successful in surface area and volume of the cube flank, crossbar, prism and pyramid on grade VIII at SMPN 6 Rambah.

B. Suggestion

Based on the result of the research, researcher would like to give some suggestions that has link with the contextual learning strategy as follows:

1. Before study surface area and volume of the cube flank, crossbar, prism and pyramid, the mathematics teacher has to remaind to the last materials to the students that it has a link such as wide of square, wide of long square, wide of triangle and phytagoras theorem and has to make the students know much about tthat material.
2. In applying contextual learning strategy, the teacher has to be more variative and interesting in giving example of that material application in daily life and the teacher has to use instrumentation to help the students to understand the concept.