

CHAPTER I

INTRODUCTION

1.1. Background

Progress of a country can be measured from the advancement of education in the country. In a variety of electronic media and raised the quality of education in Indonesia is low. Lack of education in Indonesia can be seen based on data from the *Education for All (EFA)* in *Kompas*, education development index for all or education for all in Indonesia declined. If last year Indonesia was ranked the 65th, this year's slump in the rank-69.

This further indicates the low quality of education in Indonesia. Ganis (2010) says:

“The cause of the low quality of education in Indonesia, among others, is a matter of effectiveness, efficiency and standardization of teaching. It is still a problem of education in Indonesia in general. The specific problems in education are (1) poor infrastructure, (2) the low quality of teachers, (3) the low well-being of teachers, (4) the low student achievement, (5) the low educational equity opportunities, (6) the high cost of education”

Education is the basic foundation of human personality and the ability to develop in accordance with the values prevailing in society. Education is also a lifetime requirement. The quality of education is as well as determining the progressing of a nation. Thus, education can be used as a benchmark of quality development of a nation.

Based on *Wikipedia* that:

"Education is the conscious effort and be planned to create an atmosphere of learning and the learning process so that learners are actively developing the potential for him to have spiritual power, religious, self-control, personality, intelligence, noble character, as well as the necessary skills themselves and society"

Mathematics is one area of study which occupies an important role in education, it can be seen from the time school hours more than other subjects. Mastery of mathematics became the capital or the tools to study other subjects,

like physics, chemistry, biology and even social sciences. Mastery of basic knowledge of mathematics would provide for areas of great importance, such as Science and Technology.

Although mathematics is a subject that is considered important, but still many students who learn math results is low. Because mathematics is also a difficult subject to understand. Bambang (2008) said that :

“Many factors that lead to learning mathematics is considered difficult, such as the characteristics of abstract mathematical, logical, systematic, and full of symbols and symbol-confusing formula. In addition, some students do not like math because it is full of matter and poor communication”

Tinggih (in Hudojo, 2003:40) says: “mathematics is not only related to numbers and operations, but also elements of the space as a target”. However, this quantity has not met the other goals of mathematics, which is addressed to the relationships, patterns, shapes and structures. In solving math problems need imagination, intuition, problem solving activities and communication activities. So in generally, mathematics is often considered as subjects that are considered difficult or elusive.

Recognizing the importance of mathematics, both in the structuring of thought and attitude formation as well as the use of mathematics itself, the increase in student learning outcomes at every level of education needs to get serious attention. Increasing students 'mathematic skills not only from students who lack skills, but there are factors that also determine the success of students in learning mathematics is learning tailored to the needs of the students' situation. That is the results of teaching and learning process to work well, the need for appropriate methods or strategies in learning and teaching by students and teachers.

When following the *Program Pelatihan Lapangan* (PPL) in SMA Negeri 1 Lubukpakam, the writer observed that many students pay less attention to follow the process of learning mathematics in the classroom. There are many students who doesn't do their exercise that teacher give. From the value of their

examination is low. So, we can conclude that learning outcomes is still relatively low.

Based on data from UNESCO, the quality of mathematics education in Indonesia was ranked 34 of 38 countries surveyed. Other data that showed low student math achievement Indonesia can be seen from the results of the survey National Center for Education in Statistics (2003) to 41 countries in mathematics learning, where Indonesia's Rating to 39 below Thailand and Uruguay

We can see that it means, our student's mathematics learning outcomes is relative low.

Something that led writer to apply cooperative learning is when PPL. Improved student learning outcomes and students are more active when the learning process takes place. The teacher supervisor learning process methods, and be adopted to be applied for the next meeting.

The writer found the same opinion when holding observation in SMA Negeri 1 Tebing Tinggi. From interviews with Mrs. Merliana Sitanggang, S.Pd at the school, said that many students who are less active in the learning process. It is possible that the learning process interesting and less monotonous. In the end after a given test, their scores were still quite low. From these statements we can conclude students learn math of SMA Negeri 1 Tebing Tinggi is still quite low.

In teaching and learning activities teachers should strive to create conditions for effective learning so that learning is progressing well. Low interest and student achievement in mathematics for understanding the learning process less support students caused by too much note to memorize, poorly equipped learning strategies that can enhance students' learning interest. Thus causing the student's boredom or too monotonous that makes to lower learning outcomes of students in mathematics courses.

Educators must have ability develop or create a learning environment that can improve spirit and motivated students to engage in teaching and learning activities. Competent educators will be better able to create an effective environment, so that learning outcomes are at an optimal level. In creating educative interaction, teachers can choose one of the alternatives if the development of the learning model is cooperative learning.

Choosing a teaching method needs to consider several things such as materials to be delivered, goals, time available and the number of students as well as matters related to teaching and learning process. Siberman (2004), says “what I hear, I forget. What I hear and see, remember a little. What I hear, see, and ask question about or discuss with someone else, I begin to understand. What I hear, see, discuss, and do, I acquire knowledge and skill. What I teach to another, I master (Active learning, 15:2004)”. In teaching and learning, teachers should not only explain it while the students just listen. This causes students to feel bored. But educators should have more invites students to participate in the learning process.

Learning strategies that encourage students to actively participate is in the cooperative learning strategy. According to Slavin learning cooperative learning is done in groups, students in a class made small groups consisting of 4 to 5 people to understand the concept of which was facilitated by the teacher. In cooperative learning there are many different types of learning, learning method among which TTW (*Think Talk Write*). A learning method that is expected to cultivate communication skills and mathematical understanding of students is a method TTW (*Think Talk Write*).

Introduced by Huinker and Laughlin is basically built through thinking, speaking and writing. *Think Talk Write* is one of the cooperative learning has four steps - an important step in the implementation. Four steps - it is an important step as follows:

1. Step 1 - Thinking. Students are given the opportunity to think about the material or the opportunity to answer questions - the questions asked by teachers in the form of worksheets and done individually.
2. Step 2 - Talking. Once organized into groups, students are directed to engage actively in discussion groups on a worksheet that has been provided, the interaction is expected at this stage students are able to share the answers and opinions of the members of each group - each.
3. Step 3 - Writing. At this stage students are asked to write in language and thought itself the result of study and discussion groups are obtained.

4. Students' writing exhibited to show in front of friends as well as providing an opportunity for students to correct the work of other groups.

The flow advances TTW strategy (*Think Talk Write*) starting from the involvement of students in thinking or talking to himself after the reading process, then talk and share ideas (*sharing*) with his friend before writing. This atmosphere is more effective if done in a heterogeneous group with 4-5 students.

Based on above, in order to improve students' mathematics learning outcomes, especially on the subject of Three Dimensional Space. Researchers picked the title "**The Difference of Student Mathematics Learning Outcomes Using Think Talk Write (TTW) Learning and Conventional Learning at First Grade SMA Negeri 1 Tebing Tinggi**".

1.2. Identification of Problem

Based on the above, it is defined there can be some problems, namely:

1. Lack of student interest in learning mathematics
2. The low student learning outcomes
3. Lack of active participation of students in learning mathematics
4. The monotone of learning activity
5. No strategy that teacher used

1.3. Problem Limitation

The research will be orientated to discuss about the difference of student's learning outcomes on the subject "Three Dimension Space" in the section "Distance In Space especially In Cube" using Thing Talk Write (TTW) learning and conventional learning at First Grade SMA Negeri 1 Tebing Tinggi.

1.4. Problem Formulation

Based on the above formulation of the problem, then the formulation of the problem is: Is there the difference of student's learning outcomes using Thing Talk Write (TTW) learning and conventional learning at First Grade SMA Negeri 1 Tebing Tinggi?

1.5. Research Purposes

The purposes of this research is to see whether there is the difference of student's mathematics learning outcomes using Thing Talk Write (TTW) learning and conventional learning at First Grade SMA Negeri 1 Tebing Tinggi.

1.6. Benefits of Research

The benefits of this research are:

1. For teachers, as input for teachers in general, especially the teaching of mathematics in order to implement the Think Talk Write (TTW) to improve student learning outcomes.
2. For students, to increase learning activity, achievement, and students learning outcomes.
3. For author, as reference material for further research and train author to implement and develop research skills.