

# CHAPTER I

## INTRODUCTION

### 1.1 Problem Background

One of the objectives of national development in the field of education is the intellectual life of the nation and improves the quality of the Indonesian people. Through improving the quality of education at all levels of education, which allows citizens to develop themselves as whole Indonesian people. To realize the national development in the field of education needed improvement and improvement of education in accordance with the development of science and technology.

Mathematics is universal science that underlies the development of modern technology, has an important role in various disciplines and develops the power of human thought. Therefore, mathematics courses should be given to all students start from primary education to higher education to equip learners with the ability to think logically, analytical, systematic, critical, and creative as well as the ability to work together to survive in a state of ever-changing, uncertain, and competitively. And in this case the government through the Department of Education continues to develop the learning of mathematics in the school system through the development and reform the learning of mathematics curriculum.

As stated Cornelius (in Abdurrahman 2009: 253) that the reason for the need to learn math is as follows:

Five reasons for studying mathematics because mathematics is (1) a means clear and logical thinking (2) a means to solve the problems of everyday life, (3) a means to know the patterns of relationships and generalization of experience, (4) a means to develop creativity and (5) a means to increase awareness of cultural development.

This is supported by the statement Cocrof (in Abdurrahman, 2009: 253) argues that mathematics should be taught to students because:

1. Math is always used in terms of life.
2. All areas of study need appropriate mathematical skills.
3. A powerful communication tool, concise and clear.

4. Can be used to present information in a variety of ways.
5. Improve logical thinking, accuracy and awareness of the room.
6. Give satisfaction to attempt to solve a challenging problem.

Quality of Indonesian mathematics education has not achieved the expected results. So it is not surprising that mathematics achievement needs to get the attention of various parties. Besides the student learning outcomes in mathematics are less exciting as stated by Suharyanto ( 2006 ) (<http://www.smu-net.com>), "Mathematics is still the main cause of students not graduating UAN. Of the participants who did not pass, as much as 24.44% fall in the subjects of mathematics ".

One cause of low mathematics learning outcomes this is because many students who consider mathematics as a difficult subject to learn. As put forward by Abdurrahman (2009:) that:

"From the various fields of study that are taught in school, mathematics is a field of study that is considered the most difficult by the students".

Other factors that influence the low math achievement is have not interest in learning. With have not interest, students will not be motivated to study hard because they feel that something is learned is not meaningful to him. Lack of student response and interest in learning the mathematics lesson will hinder the learning process.

Based on the results of observations conducted by researchers can be concluded that the material social arithmetic is one of the subjects that are less attractive to students. Mistakes are often made students is in solving the social arithmetic. Students are always difficulties in applying the existing formulas, other than the students' ability to solve problems is still lacking, students can't understand the problem contained in the items, resulting the students outcomes low on the subject of arithmetic.

Given problem as below:

Number of students of class VII there were 42 people. A total of  $\frac{4}{7}$  part of them are female students. How many people male students?

The results obtained from these tests are beyond expectations. Of the 32 students, 12.5% are getting the right answer and the rest getting wrong answer. Among them 35% problem-solving ability to plan lower and 65% the ability to solve problems of planning that had been set low

Correspondingly, the low mathematics achievement of students can also be caused by mistake the teachers in the delivery of material do not involve the students and tend to make students confused because the materials studied in terms of mathematics with everyday life there. Based on the interviews with the mathematics teacher in MTsN Kualuh Hulu Mrs. Beby fauziah pasaribu S.pd is said that:

Students have difficulty in solving problems that require solving a problem, if the given problem is different from the example and in arithmetic the students is difficult to determine the mathematical concepts that will be used in solving a problem, students can't understand the problem of the questions and it is hard to change the sentence problems into mathematical models.

We often find students who are not interested in learning mathematics. This happens because the fact that the implementation of learning mathematics, learning methods is conventionally defined is still centered on the teacher. As stated by Trianto (2009: 5).

One of the main problems in learning in formal education (school) today is the low absorptive capacity of learners. It seems mean the students learning outcomes that are always still very concerned. This achievement is certainly the result of learning conditions that are conventional and do not touch the sphere dimensions learners themselves, which is how real learning. In this learning tends to be teacher centered, so students become passive.

The low learning achievement of mathematics in school has become a national issue that must be considered by various groups. To overcome the low math scores, the educators trying to hold refinement and improvement in all aspects related to mathematics education. While based on the results of studying mathematics, Lenner (in Abdurrahman, 2009: 253) stated that: "The curriculum mathematics should include three elements: (1) concept, (2) skills, and (3) solving the problem". From the statement above, one aspect that is emphasized in the

curriculum is to increase students' problem-solving abilities. Problem solving is part of the math curriculum which is very important because in the learning process and completion, students gain experience using the knowledge and skills that have been owned to apply to solving problems that are not routine.

In an effort to improve students' problem-solving abilities, teachers should endeavor to train and familiarize students perform problem solving in the form of learning activities, such as providing opportunities for students to conduct scientific conversation to gather opinions, conclusions or formulate alternative solutions to a problem. Therefore, teachers need to select the appropriate learning approach to encourage students to learn problem solving students. As stated by Trianto (2009: 8), the teacher should be wise in determining an appropriate model to create conditions conducive for teaching and learning can take place in accordance with the expected goals.

Thus, to achieve better learning outcome in the learning process to choose appropriate teaching can help students gain information, ideas, skills, values, ways of thinking and can make students participate in the learning process. One solution is to implement cooperative learning model. There are several types of cooperative learning model that can be developed in mathematics, one of them is a cooperative learning model TGT (Team Game Tournament). Similarly, as stated by Slavin (2008) that:

Teams Games Tournament is one of type cooperative learning that puts students in a group of 5 - 6 students that have the ability, gender and syllable or a different race. Teacher presents the material, and students work in their groups.

Teams Games Tournament (TGT) is a cooperative learning model that is considered to arouse students' interest in mathematics and to make students more active, encouraging cooperation among students in learning the material, so as to improve student learning outcomes. Learning Teams Games Tournament (TGT) also has the advantage, because learning arranged in the form game that is packaged in a tournament, thus becoming an interesting learning. The advantages of learning model Teams Games Tournament (TGT) by Suarjana (2012) that:

1. Further increase the outpouring of time for the task.
2. Prioritize the acceptance of individual differences.
3. With little time to master the material in depth.
4. Learning process takes place with the activeness of the students.
5. Educating students to practice socializing with others.
6. Higher learning motivation.
7. Better learning outcomes.
8. Improve the goodness of mind, sensitivity and tolerance.

Order in accordance with the procedure of learning to be achieved then the learning model Teams Games Tournament can using the Students Activity Sheet as a medium of written communication of what was found by the students. Students Activity Sheet contains commands that are activity sheets that specify activities that must be performed students. Therefore teachers should can arrange, create and design a good activity sheets for students and using them in the learning process in schools.

Using the Student Activity Sheet, students can practice observation, investigation, verification, and even become a medium for discussion. Thus can increase students' mastery of the material and mathematical concepts are regularly and systematically.

Based on the background above, the researches is interested in doing research, entitled *“Implementation of learning model Team Games Tournament (TGT) using the Students Activity Sheet to improve the ability of students at junior high schools in problems solving”*.

## **1.2 Problem Identification**

Based on the background can be identified the problems that occurred as follows:

1. The low problem-solving ability of students.
2. Still teacher-centered learning.
3. Student interest in learning mathematics is still lack,
4. Students' ability in solving mathematical problem solving especially

social arithmetic materials is still lack.

5. Learning strategies teachers who applied for is less relevant

### **1.3 Problem Restrictions**

From the above identification problem many problems that arise and require a separate research to clarify, therefore in this study the problem restricted to:

1. Efforts to improve the problem solving ability of students to use learning model Team Games Tournament (TGT).
2. Student activity with the application of the learning model Team Games Tournament (TGT).

### **1.4 Problem Formulation**

Based on the above Problem Restrictions then the problem formulation in this research is:

1. How the level of problem solving ability of students by learning model Teams Geams Tournament (TGT) on the social arithmetic topic in class VII MTsN Kualuh Hulu academic year 2013/2014?
2. How the activity of students with the application of learning models Team Games Tournament (TGT) on the social arithmetic topics in class VII MTsN Kualuh Hulu academic year 2013/2014?

### **1.5 Research Objectives**

According with the above problem formulation, then Research objective is:

1. To know is learning model Teams Geams Tournament using Student Activity Sheet can improve students' problem-solving ability to solve the problem on the social arithmetic in class VII MTsN Kualuh Hulu academic year 2013/2014
2. Describe the activity level of students in the application of learning models Team Game Tournament (TGT) on the social arithmetic in class VII MTsN Kualuh Hulu academic year 2013/2014

### **1.6 Benefits of Research**

1. As information material for schools to know how far Teams Games Tournament learning model can improve learning outcomes of students in solving the problem of the social arithmetic.
2. As an input to teacher's MTsN and equal in implementing learning model Teams Games Tournament in solving the problem of the social arithmetic
3. As an input to researchers who wish to conduct similar research
4. Increase the knowledge of the author in making scientific research as educators in the future
5. For students to apply the learning model Teams Games Tournament in solving the problem of the social arithmetic with better results.