CHAPTER I

INTRODUCTION

A. Background

Education is something that can not be separated from life. In preparing

qualified human resources and able to compete in the development of science and

technology, the role of education is important, that education should be run as well

as possible in order to obtain maximum results. Education is an effort to assist

students in developing themselves, whether intellectual, moral, and psychological.

The process is the most important thing in education, not the end result because of

the presence of the many things that can be learned and understood by learners.

Education is actually a complex sequence of events, the event is a series of inter-

human communication in order to grow as a whole person.

Mathematics as a subject at school rated an important role in the education

system throughout the world. Mathematics education have a very important role

because mathematics is a basic science that is used widely in a variety of life.

Chambers (2008, p. 8) suggests that mathematics is a science of the abstract patterns

that have karasteristik as a tool to solve the problem, as the foundation of scientific

research and technology, and can give the ways to model real-life situation. In

mathematics learning students are expected to foster the ability to think effectively,

critical, logical, systematic, creative, accurate, and efficient to solve the problem.

According Tall & Razali (Ciltas and Tatars, 2011, p. 462), the goal of

mathematics education is actualized mathematics learning to a higher level. But the

fact that most students have difficulty. In The work that mathematics each student

2

had a different, this is in line with the opinions Khiat (2010, p. 1459), "students may

not have the same onceptions of understanding in mathematics learning when they

are studying primary, secondary, or tertiary mathematics ". According to

Abdurrahman (2012, p. 202) some said mathematics as a field of study that is the

most difficult.

Mathematics emphasis on solving a problem, where problems in

mathematics is usually presented in the form of mathematical problems. A question

would be a problem if the person does not have specific rules that may soon be used

to find answers to these questions. Therefore, a teacher is expected to optimize the

students in mastering the concepts and solve mathematical problems with critical

thinking, logical, systematic, and structures.

Bell (1978, p. 311) states that the mathematical problem solving can help

students develop their skills and help them in applying ability in a variety of

situations. But in reality there are many students have difficulty in solving

mathematical problems, both in solving mathematical problems in schools and

solving mathematical problems in the era of competition that is solving the

problems of mathematics Olympics.

According to Bell (1978, p. 402) the difficulty of students in solving

mathematical problems one of which is caused by difficulty in reading

mathematical problems encountered. Students tend to be able to read the material

directly mathematics from books, but is not able to understand what they was

reading. Bell (1978, p. 408) shows the best way to identify the cause of the

3

difficulties students are asking students to read aloud mathematical problems then

asks students to interpret it by sentence.

Beliefs and perceptions of students about the subjects under study is

important and supposed to influence the achievement of students in learning.

Students from one another have differences. Individual student differences may be

differences in the cognitive, affective, psychological, and so on. Bandura (Schunk,

2012, p. 146) states that "self-fficacy (efficacy expectation) Refers to personal

beliefs about one's capabilities to learn or perform an action at designated levels".

Self-efficacy is the belief in one's ability to do something, and Schunk (2012, p.

146) states that it is not the same as knowing what to do. Self-efficacy refers to a

person's view regarding the ability in doing a certain action, while the outcome is

more expectation refers to beliefs about the results to be obtained from the action.

Low self-efficacy of students in mathematics especially in solving

mathematical problems like mathematics olympics as a number of students who do

not want to try more to do mathematics especially mathematics olympic problems,

and tend to quickly give up when they gets difficult task especially if the task or

problem is given related to the problem about the Olympics. In fact, according to

Schunk (2012, p. 147) and supported by the results of research Hamdi & Eternal

(2014), self-efficacy strong influence on learning achievement. Confidence

(efficacy) is the primary basis of an action. A person who has confidence in himself

to perform an action called has self-efficacy. Confidence in the ability to

accomplish specific tasks known as self-efficacy.

4

According to Bandura (2009, p. 2) self-efficacy is the belief that one feels

about an ability to develop and complete the actions required to manage a situation

that will come. In addition, explained also that self-efficacy influence on how

people think, feel and motivate themselves and how they act. According to

Woolfolk (2009, p. 284) that this self efficacy arise when students handle the tasks

are challenging and meaningful with the support they need in order to succeed. In

addition, self-efficacy appeared to observe the success of students who are working

on the same task. The feedback provided by teachers accurately and encouragement

can help the growth of self-efficacy.

Observations made in several schools in Sulawesi, especially those in

schools located in these areas, it appears that the low results of students'

mathematics learning and student participation in a race related to mathematics.

Some students who had interviewed researchers on learning outcomes and their

participation against competition-related mathematical reveals that their difficulties

and lack of confidence to the results to be obtained. This is largely attributable due

to the many factors that can affect, one of which is the efficacy of the students

themselves. Therefore, it is important to analyze the difficulties and self-efficacy of

students so that problems related to solving mathematical problems both problems

in school as well as problems in competition or olympics can be resolved more

effective solutions through hardship and student self-efficacy.

Based on the description above, the researchers are interested in doing

research titled “An Analysis of Students’ Difficulties and Self Efficacy on SMPN 5

Maiwa in Solving Olympic Mathematical Problems”.

5

B. Research Problems

Based on the background described above, the formulation of the problem

in this research is how to describes the students’ difficulties and self efficacy on

SMPN 5 Maiwa and its relation to problem solving about the Olympics?

C. Research Aims

Based on the formulation of research problems, then the aim of this research

is to describe the students’ difficulties and self efficacy on SMPN 5 Maiwa and its

relation in problem solving about the Olympics.

D. Research Contribution

Researchers expected the results of this research can be useful for education,

especially in mathematics, namely:

1. For Students

Provide motivation so that students are more confident in solving

mathematical problems, especially on issues about mathematics olympiad.

2. For Teachers

An overview for educators, especially teachers of mathematics on the

junior level of the level of confidence of students in solving mathematical

problems, especially on issues about mathematics olympiad.

3. For Parent

An overview for parents about the level of difficulty and their confidence

so that they can take the follow up to further increase their confidence in

menelesaikan mathematical problems.

6

4. For Other Researchers

Give information to researchers about the difficulties and self-efficacy of

students in solving mathematical problems and can be used as a source of study

or reference for next researcher that discusses research topics that are relevant

to this research.

E. Term Limitations

To avoid different interpretations of the terms used in this research, it is

necessary given the term limitations as follows:

1. Analysis is an activity to understand, classify, reduce and attribute information

from an observation to a problem in the field.

2. Difficulty solving mathematical problems are barriers experienced by students

caused by several factors internal. Difficulty solving mathematical problems

students can be seen from:

a. The ability to understand the problems.

b. The ability to make allegations against the related concept of principle or

formula used and the channels for resolving the problems.

c. The smoothness on solving the problems.

3. Self-efficacy is the belief of students towards mathematics student in his ability

to solve problems so that they can achieve success in mathematics achievement

accompanied by a feeling confident about the effort is doing.

4. Problem Olympics in question is a matter of mathematics olympiad problems

with the SMP / MTs relating to algebra and geometry.