

CHAPTER I INTRODUCTION

1.1 Background

Science is the body of knowledge that describes the order within nature and the causes of that order, science is an ongoing human activity that represents the collective efforts, findings, and wisdom of the human race, an activity that is dedicated to gathering knowledge about the world and organizing and condensing it into testable laws and theories (Hewitt, 2006).

Science is a field of endeavor as exciting and aesthetically rich as literature and art. A new teaching and learning paradigm is necessary to convince students science is more than a collection of laws and equations in a textbook. Students must given opportunity to explore, to try, even to play and enjoy "on their own" in much the same fashion that scientists do research in labs (Obstrovsky,1991).

In Indonesia, physics subject usually taught in junior and senior high school as one of the main subject. Physics is more than a part of the physical sciences. It is the basic science; it's about the nature of basic things. The concepts of physics reach up to these more complicated sciences. That's why physics is the most basic science. An understanding of science begins with an understanding of physics (Hewitt, 2006).

Based on preliminary observation on student at SMA N 1 Serdang Bedagai, 86.05% of student said physics is an attractive subject and 48.84% student enthusiast to learning physics because of teacher learning method is interesting to them. Teacher use several learning method like CTL, Discussion, and solve question with simple equation. Student active ask question to teacher. Students more often only had given ready-to-use-formulas without understanding the meaning of these. Students are used to answer the question with routine procedures, so that when a given problem is a little different then the student will be confusion. This fact leads the situation where average student learning outcomes is 57 while Minimum Standard (KKM) is 75.

The result of preliminary observation showed that there are some problems: 1) Teacher make group of student but the learning activity is writing and give example question; 2) school do not have physics laboratory or provide enough tool and instrument 3) Teacher only once a while bring physics instruments to help student understand the concept; 4) Teacher often use simple formula problem solving method because he think student will easier to understand but when problem modified student become confuse and learning outcome low.

Learning physics has been less providing change for students to understand the physics they are studying. The main focus of learning physics for this is to get an answer. The students rely entirely on the teacher to determine whether the answer is correct. So that every physics lesson presented in class are more dictate. It is possible students earn high scores, but they are not good thinkers in the class and will have difficulty in solving physics problems, especially for problems solving. That will further obstruct the student's creative ability.

To overcome the above problems and to achieve the educational goals to the maximum, the teacher's role is very important and teachers are expected to have a good model of teaching and able to choose appropriate learning method and suitable with the concepts of the subjects that will be delivered.

It required an effort in order to improve the quality of education and teaching, one of the efforts is choose the strategy or the way in delivering course material in order to obtain an increase in student achievement, particularly physics subject. For example, by guiding students to jointly engage actively in the learning process and is able to help students develop in accordance with the intellectual level will further strengthen students' understanding of the concepts being taught. This requires understanding of the interests and motivations. Without the interest indicates that students do not have the motivation to learn. To that end, teachers must give injections in the form of motivation so with the help of students can get out of trouble learning (Van Joolingen, 1999).

In learning physics, students should be given the opportunity to discover his own facts and concepts, which involve the students learning process, can be created by teachers, one of which is through the method of discovery. Discovery method is a way of developing active learning to find their own students, investigating their own, then the results obtained will be long-lasting in the memory and can improve students' thinking processes. The most fundamental differences of discovery learning different from traditional forms of learning are 1) learning is active rather than passive 2) learning is process-oriented rather than content-oriented, 3) failure is important, 4) feedback is necessary and 5) understanding is deeper (Papert, 2000).

Learning becomes more meaningful when students explore their learning environments rather than listen passively to teachers (Bruce, 2003).

Based on the background above, researcher is interested to take one research with title: **"THE EFFECT OF GUIDED DISCOVERY LEARNING MODEL TO STUDENT'S LEARNING ACHIEVEMENT IN STATIC FLUID TOPIC AT CLASS X1 SMA N 1 SERDANG BEDAGAI ACADEMIC YEAR 2015/2016"**

1.2 Problem Identification

Based on the background above, problems can be identified as follows:

1. Student's ability to solve modified problems is low
2. Physics tool and instrument provided by school is deficient
3. Student's didn't have experiment experience
4. Student's learning outcome is under Minimum Standard (KKM)

1.3 Problem Scope

Problems that developed in this paper should be limited to provide a clear description of the issues that will be reviewed. In accordance by problem identification, problems scopes of this paper are:

1. The method applied in this research is Guided Discovery Learning Model
2. Subject matter is Static fluid topic
3. Learning outcomes that will be examined only on cognitive aspect

4. The research conducted at class XI of SMA N 1 Serdang Bedagai Academic Year 2015/2016

1.4 Problem Formulation

The problem formulation in this research is:

1. How the student's learning outcomes after taught by Guided Discovery Learning Model?
2. How the student's learning outcomes after taught by Conventional Learning?
3. How the effect of guided discovery learning model of the students' achievement in static fluid topic at class XI SMA N 1 Serdang Bedagai academic year 2015/2016?

1.5 Objective

Based on problem formulation, the objective to achieve in this research is:

1. To know the student's learning outcomes in physics subject after taught by Guided Discovery Learning Model.
2. To know the student's learning outcomes in physics subject after taught by Conventional Learning.
3. To know the effect of guided discovery learning model to the student's learning achievement in static fluid topic at class XI SMA N 1 Serdang Bedagai academic year 2015/2016.

1.6 Benefits

From this research are expected to obtain the benefits as follows:

1. For school: Provide input for develop learning process to increase creative thinking ability of student class XI SMA N 1 Serdang Bedagai so that increase education source to produce qualified graduates.
2. For teacher: motivate creativity and teacher activity in implement method of teaching. Motivate teachers to develop more guided discovery method on another concept.
3. For student: Increase student's creative thinking ability in learning physics.