

CHAPTER I

INTRODUCTION

1.1 Background

Natural science is concerned with how to find out about natural phenomenon systematically, so that the natural science is not just a collection of knowledge mastery of facts, concepts, or only principles but also is a process of discovery. Natural science education expected to become facilities for learners to learn about human and environment, as well as the prospect of further development in applying them in daily life. The process of learning places emphasis on providing on experience to develop competence in order for learners to explore and understand the natural surrounding scientifically.

Physics is one of the sciences that important in education. Studying of physics can be proven with experiment in the laboratory or in the field. Historically many experts when study of physics giving inventions and new concepts are very useful for the development of human life. Experts try to learn what happens in nature, understand concept, practice the same thing, practicing the other possibilities of happening and poured it into a masterpiece. This works in the development of technology that was donated has an effect on the increase of human civilization.

During in time, physics is one of subjects that are less attractive to students. It is evident from the low percentage of students' mastery learning. This is because in addition to the material in these subjects is difficult to understand, sometimes the delivery of content by teachers lacking attract students. In general, physics teacher at school more often discussing the theory of the handbook, providing formulas and provide example problems. This led to a physical science reading material and students can only imagine.

Learning models like above causing physics to be one of the subjects which are not interested by the students and paradigm of students who assumes that physics is difficult. Though physics is a subject that is close to the daily life and its application can be found directly in our environment. In this case the

teacher has an important role in instilling positive paradigm for students. So physics is no longer a daunting subject and boring.

Based on preliminary study through the direct observation by interviewing the physics teacher at SMP N 1 Tebing Tinggi suggests teachers tend to still use the conventional learning with lecture and question and answer that is teacher centered. In presenting the subject matter, the teacher explain to the class and give a summary of the material with notes on the board and the students listen and record the important things of the material being taught. This leads to students not directly involved in the learning process and passive. From interviews said also that the students learning outcomes in physics subject is low. When the value of KKM 75, approximately 70% of students who did not complete the study in the field of physics.

Many things can cause low physics student learning outcomes, one of which is the learning process that is not in favor of the students. Student learning is just as listeners and teachers are more instrumental or teacher-centered (teacher centered). Dominance of teachers in this study led to more students waiting for a dish of knowledge from the teacher rather than finding themselves the knowledge, skills, and attitudes required in acquiring knowledge.

Based on the observation found that only about 50% students' in SMP N 1 Tebing Tinggi which like the physics. This is because physics is a subject which is interesting and challenging. Moreover, if the method of teaching the teacher is very nice, it will make them more interested in learning physics. In their daily life, they've responded well to the subjects of physics, this can be seen when teachers teach, they observe and record things that are important.

From this observation also found that 38% of students prefer to learn physics when practiced learning how to direct and 36% of students prefer to learn physics by way of groups. But in reality teachers rarely engage students' in the process getting their knowledge and only emphasizes the students to memorize formulas and does not emphasize on the concept and its application. In fact, many students are still difficulties in using the formula to solve a given problem. During the learning process, the teacher invites students rarely conduct experiments for

the material being studied significantly. So in this case the student less directly involved in the learning activity.

Based on the above conditions should apply an appropriate model of learning and can improve students' learning outcomes in physics. Learning model that suitable for used is inquiry training model. Inquiry training model is designed to bring students directly into scientific process into small periods of time. The training has resulted in an increased understanding of science, more creative thinking, and skills for obtaining and analyzing information as students establish facts, build concepts, and then generate and test explanations or theories. The students are active learners involved in exploration, questioning, problem solving, inductive reasoning, invention, labeling, and discovery.

Researchers previously performed by Rostina Harahap (2009) obtained an average value of 36.00 after a pretest that is treated with inquiry learning model of training the student learning outcomes increased with an average value of 77.40, with the title "The Effect of Inquiry Training Model Toward Student Learning Outcomes in Newton's law Topic at Class VIII SMP N 6 Academic Year 2009/2010 ". The weakness in this study is less able to take advantage of future researchers in working together so that when collecting assignments, students rush to do it. And students' difficulties in the implementation of group work.

The background above shows that the issue is very important to investigate and look for the solution, because if the problem is not resolved then it is difficult for teachers to achieve the goals of learning and difficult for students to achieve the competencies expected.

1.2 Problem Identification

Based on the background above can be identified some of issues, namely:

1. Paradigm of students who assumes that physics is difficult
2. Teachers still use conventional learning (teacher centered)
3. Students' learning outcomes in physics subject is low
4. Students are not directly involved in the learning activity

1.3 The Scope of study

As for the scope of study in this research are:

1. Research subject is students class VIII SMP N 1 Tebing Tinggi academic year 2012/ 2013.
2. The topic will be learn is light by using inquiry training model in experimental class
3. Learning outcomes will researched in cognitive, affective and psychomotoric aspect

1.4 Problem Formulation

Based on the background above, problem identification and the scope of study above, so the problem formulations in this research are:

1. How the average value of students' learning outcomes of using inquiry training model and direct instruction model in light topic at class VIII SMP N 1 Tebing Tinggi?
2. How the students' activity and students' affective using inquiry training model and direct instruction model in light topic at class VIII SMP N 1 Tebing Tinggi?
3. Is there significant difference of students' learning outcomes using inquiry training model and direct instructional model in light topic at class VIII SMP N 1 Tebing Tinggi?

1.5 Objectives

Based on the problem formulation above so the objectives that will be achieved in this research are:

1. To know the average value of students' learning outcomes of using inquiry training model and direct instruction model in light topic at class VIII SMP N 1 Tebing Tinggi
2. To know the students' activity and students' affective using inquiry training model and direct instruction model in light topic at class VIII SMP N 1 Tebing Tinggi

3. To know the significant difference of students' learning outcomes using inquiry training model and direct instructional model in light topic at class VIII SMP N 1 Tebing Tinggi

1.6 Benefits

1. For school : give good contribution to repair learning process and improve the school quality through raising of student learning achievement and teachers professionalism
2. For Teacher : as an input to choose appropriate method in physics learning process
3. For student : students more active in learning process and students get good value in physics subject
4. For researcher : as reference to implement learning process to be effective and efficiency in education