

CHAPTER I

INTRODUCTION

1.1 Background

Gagne in Sridevi (2008) state that science is what the scientist does. It is a process by which we increase and refine our understanding and of the universe through continuous observation, experiment, application and verification. Sciences is the body of knowledge, a way of thinking, a way of investigation, and a way of experimentation in the pursuit of exploring the nature (Sridevi, 2008:5). Just like the branches of a tree, a branch of science is made up of many smaller branches. Physics is smaller branches of science.

According to Gagne (Rao, 2008:21) in science learning process needs to do what scientist do. Scientists do observe, and classify and measure, and infer, and make hypotheses and perform experiments. All those skills can be acquired through a process of inquiry learning (discovery), lab activities or experiments so that students get hands-on experience and discover the process themselves.

Generally, learning physics in schools are still using conventional learning methods because this method is easy to implement and quickly seen. In the learning process that is likely to be teacher centered domination master teacher in the classroom. Teacher writes on the blackboard, and then, goes on solving the problems related to it. The students prepare for the exam by memorizing these concepts and formulas, and by solving the related problems. But, meanwhile, some of the students can not comprehend the concept, some others are not interested in the subject as they think that it is not useful to them, and the others are like spectators while few students come to the blackboard and solve the problems. Most of the students do not participate actively and can not comprehend the concept. Teacher only expects them to write, memorize and solve problems. Students become not active, don't have creative and critical thinking,

and easy to forget what they already learned. So, the student's achievement in physics subject still low.

To improve student's achievement in physics subject, teachers can perform a variety of ways, for example by using a model of effective teaching and learning in accordance with the objectives set in the curriculum. Constructivism associates learning to the building of one's own knowledge, is much more appropriate to today's situation, in that it views learning in the perspective of the learner. The teacher is considered as a cognitive guide while the learner is empowered to construct his own meaning, not just memorize the right answer. Constructivism is not a new concept. It is learning or meaning making theory. It suggests that individuals create their own understanding, based upon the interaction of what they already know and believe and the phenomena or ideas which they come into contact (Sridevi, 2008:9). One model of learning based on constructivist views is Discovery Learning Model.

The aim of the Discovery Learning was as a powerful instructional approach that guides and motivates learners to explore information and concepts, embrace new knowledge, and apply new behaviors back on the job. Using this methodology, organizations can educate their employees quickly and with higher levels of retention than traditional training methods.

Based on the experience of Researchers at the Integrated Field Experience Program (PPLT) in SMP Negeri 1 Tebing Tinggi, low yields physics student learning because teachers present material with conventional methods, speeches, and giving tasks. This causes students are less actively and less their achievement because not directly involved in the learning process so that students irresponsible, this all will certainly have an impact on value of students and will cause a minimum completeness criteria (KKM) of SMP N 1 Tebing Tinggi not be reached or is below standard students that is 75.

Based on the description above, researchers interested in conducting research entitled " **The Effect of Guided Discovery Learning Model on the Student's Achievement in Temperature Topic at VII Grade in SMP N 1 Tebing Tinggi Academic Year 2013/2014.**"

1.2 Problems Identification

Based on the background above, the problems identification of this research are as follows:

1. Students' achievement in physics subject are still relatively low
2. Students are less actively in the physics learning activities
3. Lack of interaction among students in physics learning activities
4. Lack of media learning utilization
5. Learning model still not variety in physics learning activities

1.3 Problems Limitation

In order to keep this research become more focused and directed, the researcher limit the problems as the following

1. Learning model used is Guided Discovery Learning Model on the experimental class and Direct Instruction on the control class.
2. Conducted to determine the influence of the Guided Discovery Learning Model on students' achievement in physics subject.

1.4 Problem Formulation

The problem formulation of this research :

Is there any effect of using Guided Discovery Learning model on the students' achievement in Temperature topic at VII grade in SMP N 1 Tebing Tinggi?

1.5 Research Objective

The research objective is as follows:

To know the effect effect of using Guided Discovery Learning model on the students' achievement in Temperature topic at VII grade in SMP N 1 Tebing Tinggi.

1.6 Research Benefits

The benefits of this research are:

1. For School : Can give a good contribution in order to improve the learning process and improve the quality of schools by increasing student achievement and teacher professionalism.
2. For teacher : As a consideration in selecting learning model in learning physics.
3. For students : Students are more motivated to learn physics, so that the educational goals can be achieved.

