

## CHAPTER I

### INTRODUCTION

#### **1.1. Background**

The quality of education in Indonesia is still low. It always gets a sharp scrutiny from many sides, such as Government and Educational Institution. The efforts were done by the government to increase quality of education such as changing educational curriculum, increasing teachers' quality and repairing of accommodations or infrastructure. However, all efforts which the government did were not achieve maximum result yet.

Increasing the quality of education is closely related to the quality of teacher who educates the students at school. A teacher is expected to make a comfortable situation so that students can learn well. The comfortable situation will be able to motivate students to learn, moreover, it is depend on students' willingness to learn.

A good teacher whose has a good competence in teaching is a teacher whose has an ability to make unity steps which is developed by a plausible consideration to reach teaching purposes efficiently. The implementation of teaching method which was chosen by the teachers involves learning purpose aspects, materials relevance, an ability to use the materials' relevancy, and teaching situation.

In learning process, a teacher must be able to reach learning objectives successfully. And the successfulness involves the comparison understanding in short term or long term about what the comparison had learned, and result a good's graduate students.

Result of interview was done to collect the information. The information is obtained from the teachers and students from the senior high school class IX, who has been studying on human circulatory system topic. It is shown that learning process still conducted in one way (teacher centered). The teacher was tended to be active, but unfortunately the students were passive. In another word the learning process almost filled with explanation, which is traditional learning method. The teacher more explain and tell to inform all facts and concepts,

meanwhile the students just listening, taking note, and sometimes discussing about the topics from the teacher. Therefore, students' learning outcome is not maximized. The average score of students' daily test are 65, and make them passive in the learning process. Based on the data which obtained, many students got unsatisfied score, and the score is unachieved minimum standard 75. The data of score are: 8 students (20 % from 40 students) got high scores, 10 students (25 %) got medium scores, 16 students (40%) got low scores, and 6 students (15%) got very low scores.

One of alternatives answers for this problem is teacher should choose learning method that can improve student learning outcomes and students activities according to the materials which will be taught. Teaching and learning's way are being important factor and most impact to reach the learning outcome. So that, the teachers is hoped to complete their skills to maximize their performance in teaching such as: developing teaching methods, skills which can improve learning motivation. One effort to improve student learning outcomes and students activities is implementing the problem based learning and guided discovery.

According to Prawiradiaga, (2008:45) the problem based learning (PBL) was the learning method based on problems to gain a sharp mindset of meta-cognitive (the strategy of ability to solve a problem). This PBL also can improve students' learning outcomes and students' activity. It is proved by the research of Janler (2011:59) "implementation of PBL learning method increase students' activities and abilities to solve a problem in mathematics for 10<sup>th</sup> grade students on SMA Serdang Murni Lubuk Pakam academic year 2010/2011 showed increasing learning outcomes of 11 students (28.11%) to 35 students (90%) with the total of the students is 39. Then, according to Manohar (2010:58) through research "the implementation of PBL to increase students' activities on ecosystem topic for 10<sup>th</sup> grade student SMA Percut Sei Tuan showed increasing of learning activities 40.3 % and the outcomes increase from 42% to 58.06% in the first cycle and the second cycle is significantly increase of 87.09%. It can be said that students' activities and learning outcomes is achieved/success.

Meanwhile Yulianto (2011:148) said that Guided Discovery Learning Method usually is used to develop the comparison materials inductively. The Discovery Learning or invention is a learning in which the students construct their own understanding. The students have to learn through their own activity with including concepts and principles. The students must be motivated to have own experience and do the experiments, so that they are able to construct their own principles. Thus, Martiningsih proposed that “By using Guided Discovery, the students are asked to involve or to participate in the learning activities. The teacher acts as the facilitator and preserve guidance, so that the students are expected to do their own activity or in group to solve problem by the guidance of the teacher”

The Guided Discovery learning method can increase the students' learning outcomes. It can be proved by Ramadani (2011: 59) “the effect of learning method (Expository VS Discovery) on the classification of organism to students' learning outcomes. The average score which has been obtained was 82 and 64 by using expository method. Further research conducted by Rahanita (2008: 56), “the comparison of students' learning outcomes which taught by used expository with which taught by used guided discovery method on arithmetic topic of 12<sup>th</sup> grade SMA Negeri 2 Rantau Selatan as follows: students' which was taught by using expository Model was 11.55 with standard deviation was 1.75 while the students outcomes by use guided discovery model was 15.49 with standard deviation 1.89.

In order to increase students' learning outcomes and activities in the learning process, the teacher should choose an appropriate teaching method. Based on the problems that have been described previously, the author is interested to do research which related to learning method. The problem will be observed in this research is the differences of problem based learning and guided discovery method on students' learning outcomes and students'activities for 11<sup>th</sup> grade student SMA Negeri 1 Tebing Tinggi on the topic Human Circulatory System.

Based on explanation previous paragraph the author is proposed to do research of "**The Comparison of Students' Learning Outcomes and Students' activities through implementing Problem Based Learning (PBL) and Guided Discovery Method on Human Circulatory System for 11<sup>th</sup> Grade student SMA NEGERI 1 Tebing Tinggi academic year 2012/2013.**"

### **1.2. The Problem Identification**

Based on the background, the problems identified are:

1. The biology learning process is still conducted by lecture method, which too much informs the facts to the students. It makes students' skills in conduct the scientific method and solve the problem are low.
2. Students' learning outcomes in biology is not satisfied. It can be seen from the students' score in final exam is less than 75.
3. Students' interest in learning biology is low.
4. Students' interaction in the learning process was still low, so that the tendency to participate in teaching-learning process is less.

### **1.3. The Scope of Problem**

According to the identified problem, the scopes of this research are as follow:

1. To compare of students' learning outcomes which is taught by using Problem Based Learning and Guided Discovery
2. To compare of students activities which is taught by using Problem Based Learning and Guided Discovery
3. The topic chosen in this research is human's circulatory systems for grade 11<sup>th</sup> SMA N 1 Tebing Tinggi academic year 2012/2013.
4. The score of learning outcomes based on cognitive and affective aspects.

#### **1.4. Research Question**

Based on the background and research scope, research question can be formulated as follow:

1. Is there any difference between students' learning outcomes that is taught by using Problem Based Learning (PBL) and Guided Discovery Method on the topic of Human's Circulatory system in SMA N 1 Tebing Tinggi for 11<sup>th</sup> grade?
2. Is there any difference between student learning activities which is taught by using Problem Based Learning (PBL) and Guided Discovery Method on the topic of Human's Circulatory system in SMA N 1 Tebing Tinggi for 11<sup>th</sup> grade?

#### **1.5. Research Objectives**

The objectives of this study are:

1. To compare between students' learning outcomes which is taught by using Problem Based Learning (PBL) and Guided Discovery method on the topic of Human's Circulatory system in SMA N 1 Tebing Tinggi for 11th grade
2. To compare between students' activities which is taught by using Problem Based Learning (PBL) and Guided Discovery method on the topic of Human's Circulatory system in SMA N 1 Tebing Tinggi for 11<sup>th</sup> grade

#### **1.6. Significance of Research**

This research is expected to provide benefit as follows:

1. Provide input to the researcher as a teacher candidate to apply the learning process and improve the students' learning outcomes and their activities.
2. As the references for the author about the model of Problem Based Learning and Guided Discovery Method
3. As input and useful information to the educational institutions generally and particularly on SMA Negeri 1 Tebing Tinggi about the difference of Problem Based Learning method and with Guided Discovery Method

4. For students, as the comparison learning experience that can increase the learning outcomes and their activities.

### **1.7. Operational Definition**

1. Learning outcomes is the result obtained by students after being treated by using Problem Based Learning and Guided Discovery in the topic of human circulatory system topic in Class XI SMA Negeri 1 Tebing Tinggi that can be observed from pretest and posttest score.
2. The Student activities are an act of mental or psychics which is important in teaching-learning interaction.
3. The Problem Based Learning is used as learning process where the problem is allocated to the real life.
4. The Guided Discovery is the learning method designed to teach the students found the facts and concepts. Teacher only direct instructions to students.