

# **CHAPTER I**

## **INTRODUCTION**

### **1.1 Background of Study**

Education in schools aims to improve learning outcome and learning activity especially in biology lesson (Sujana, 1991:25). Biology is a lesson that aims to enhance the knowledge, skills, and responsibilities to the environment, process of discovery find out the nature of learning systematically so that students required to be able to make the conceptual thinking and correlate to the students learning environment (Budimansyah, 2002 : 34).

Biology is a knowledge that has an important role in the development of science and technology. Majority of students tend to memorize learning material, but they do not know the concept correctly, not be able to apply theory and concept in the solving the problem (Wina, 2006:15). Scope of biology is basic subject matter to learn more biology deeply which discussed the scopes of biology and describe the object and biological problems on various organization levels of living organisms. This matter really basic and existed around us so the students are able to make an observation an object around them directly.

Excretory system topic is categorized as difficult lesson to understand because of its complicated characteristics of physical and chemical process. Students must have already been on the stage of formal conceptual thinking while learning Excretory system topic (Lazarowitz, 1992:12)

Teaching styles that are often referred to as student-centered include discovery, constructivist, inquiry, experiential, and problem-based learning (Kirschner et al., 2006). These approaches are characterized by students sharing degree of the responsibility for making decisions in the classroom. The teacher is often described as a partner or a facilitator in the learning process. It is argued that learning in a student-centered environment is more personally meaningful and durable as the student is a more active participant in the learning process (Walker, 2007 :10).

Teacher –centered approaches are often referred to as traditional, didactic, or direct instruction. They stress transmission of knowledge in a manner that emphasizes training or memorization. (Costenson & Lawson :1986) described this traditional method as “teaching centered”. The term “teacher-centered” comes from the role that the teacher assumes in a traditional classroom: possessor of knowledge to be transferred to students and principal decision maker as to how that knowledge transfer is to take place.

Based on observations, the learning process at SMAN 1 Tebing Tinggi was teacher-centered learning. Students were not active in the learning, because teacher gave a lot of lecture material. Student’s activities usually only heard and recorded, students rarely ask question or express their opinion, teachers only explain without using the media. Discussion among the group rarely performed so that interaction and communication among students and the teacher still has not been established during the learning process.

According to Biology teacher at SMAN 1 Tebing Tinggi some students have difficulty in understanding the concept of urine and renal structure on the excretory system topic. The process of learning centered to teacher formal that create students to be passive and often carried out only records and copying. Students are still embarrassed to ask the teacher if they face difficulty in understanding urine formation and renal structure. Therefore, student’s learning outcome in the excretion of the material system is not maximized (teacher interview,2012). The result of daily tests students average value is 65, and make them passively in the learning process.

Based on these problems it’s important to improve the learning process in class XI Science 1. So that students can learning actively involved during learning process. Students can develop their ideas and exchange opinions in understanding the concept of the formation of urinary system and be able to find out about the shape the structure of kidney in discussed. It would require a model of learning that can enable a student for teaching and learning activities. The model encourages a more active learning, independence and responsibility of students is a CLIS model or (Children Learning in Science).Through the implementation of

thus model and expected to improve learning outcome and activity in Excretory System topic at class XI Science 1 and CLIS model or (Children Learning in Science) suitable with this matter lesson.

The aim of the Children's Learning in Science (CLIS) was to discover how to use a constructivist approach to teach selected topics, and translate this into materials which could be used by teachers. The teaching strategies suggested to achieve the CLIS objectives in lessons include a focus on the use of :

- Small group discussion to elicit ideas
- Students reporting back their findings
- Writing as means to record ideas and changing views and develop thinking.
- Encouragement of students testing their own ideas and using and practical work.
- Giving time to think about experiences
- Reviewing ideas and comparison with previous ideas.

According to Afrinda research (2010), "Learning by using the application CLIS model can improve student learning activity "In cycle I obtained an average value of student learning activity that is 40.06 increased to 58.96 in the cycle II" Learning to use CLIS model can also enhance student learning results "in cycle I obtained an average value of student evaluation that is 68.76 increased to 76.29 in the cycle II"

Based on the description above, so the research about **"The Application of CLIS Model (Children Learning in Science) To Improve Student's Learning Outcome And Learning Activity In Biology For XI Science Student's SMA Negeri 1 Tebingtinggi Academic Year 2011/2012.**

## **1.2 Problem Identification**

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

1. Student learning outcomes are still relatively low.
2. Students are less actively involved in the biology of learning activities.
3. The tendency to use traditional methodes of teaching.

### **1.3 Research Scope**

Research problem is limited into:

a. Subject of Research

Subjects in this study are the increasing of learning outcomes and student's activity by CLIS model learning.

b. Object of Research

Object in this study are student class XI Science 1 SMAN 1 Tebing Tinggi at 2011/2012 with topic Excretory System

c. Parameter

- The increasing of learning outcomes of student that can be seen from the gain of average pretest and post test score presented in the form of group of group performance index (IPK)
- The increasing student's activity that can be seen from observation sheet

### **1.4 Research question**

By considering the background and limitations of problems in the study then the formulation of the problem are:

1. Is the learning outcome of student's class XI Science 1 SMAN 1 Tebing Tinggi at 2011/2012 in Biology improve after the application of CLIS model ?
2. Do the activities of student's class XI Science 1 SMAN 1 Tebing Tinggi at 2011/2012 in Biology improve after the application of CLIS model ?

### **1.5 Objectives**

Based on the research question above, the research objective are:

- a. To know the increasing of learning outcome of students class XI Science 1 SMAN 1 Tebing Tinggi at 2011/2012 in Biology after the application of CLIS model learning
- b. To know the increasing of activities of students class XI Science 1 SMAN 1 Tebing Tinggi at 2011/2012 in Biology after the application of CLIS model.

## **1.6 Significance of Study**

The significance of study that is expected are:

1. Theoretical Benefits
  - a. The result of this research are expected for teacher of biology in an attempt to improve student learning outcome and student's activity with the implementation if CLIS model.
  - b. Input material for research as prospective teacher of biology on the application of CLIS model learning approach to teaching Excretory System subject matter
2. Pratical Benefits
  - a. The application of active learning strategies that can motivate learners to learn so that educational goals can be achieved.
  - b. Can motivate student to learn biology, so that student's learning outcomes can be interested
  - c. Biology teacher can use CLIS model in teaching learning process to increase learning outcomes
  - d. Give some information about classroom action research to the other educational researcher.