

## CHAPTER I INTRODUCTION

### 1.1. Background

Duties of the teacher in the classroom not only to convey information for the achievement of learning objectives, but also to create learning experience to the students. The teachers should strive to keep the activities in that classroom can provide full opportunities for student experience. The teacher should be able to find suitable methods and models that can support their role, to make teaching and learning activities can be conducted effectively. But the reality in classroom, the teaching and learning processes is still dominated by conventional methods. (Ghazi, 2003).

In the teaching and learning by using process approach, the teachers should create learning plans for one semester. In the planning step, teacher determine all the concepts that will be developed, and for any concept determine specified method or approach will be used for any concept and the skill of the science will be developed.

Biology learns how to figure out and understand the universe systematically. Biology is not just a collection of mastery of knowledge in the form of facts, concepts, and principles of course but also constitutes a process of finding. Biology education is expected to be a vehicle for students to learn about themselves and nature, in which there is a wide subject matter that has the specificity of each character as well as the concepts that must be understood (Wina, 2005).

According to constructivism, knowledge is constructed in the minds of student; such knowledge can be gained from the experience of physical and also from others through social transmission. This is in accordance with the opinion of theLorbach and Tobin (2000), knowledge cannot be transferred away from the brain of a teacher to students, the students should be define what has been taught by adapting to them. One of the applications of constructivism in learning at school is a cooperative learning (Anonim, 2005).

Learning activities in cooperative learning also adds elements of social interaction. Cooperative learning is a small group of students who work together to learn and responsible to the group (Hernani, 2004). According to Killen, cooperative learning is an instructional model and philosophy of learning that seeks to improve the students to work in small groups, in order to maximize their learning ability, and learn from their friend and able to lead themselves (Yusuf, 2006)

In cooperative learning, students learn together in small groups and mutual aid to each other. It can train students accept the opinions of others and working with a different background, helping make it easy to receive subject matter, increasing the ability of thinking in solving problems. Due to the communication between the member of the group in delivering knowledge and experience, students able not only to add their knowledge and improve learning outcomes but also social relationship of every member of the group (Ghazi, 2003).

According to some studies suggest that the application of Cooperative Learning approach to the jigsaw model showed better learning outcomes. In her research Zuhriyah (2005) stated that the learning outcomes of students who were taught using a Cooperative Learning approach with jigsaw model is higher than that of conventional on the subject of respiration.

Furthermore, Karuru (2006) reported that STAD cooperative learning can increase the interest and the proportion of correct answers and student learning outcomes better than using the method or lecture setting or teacher centered learning. Activity in the study of biology is an attempt to how students can understand to the concepts. Understanding obtained by students in the learning process can be seen from the results of student learning as measured by giving the test to student. This research done to find effective methods in the learning process in the classroom and can provide an alternative approaches or methods that allow it to be applied in the process of learning biology with the specificity of the subject biology.

The principle learning objectives is that students had mastered the lesson materials in accordance with the indicators that have been determined by

curriculum school management. Because in every class gather students with different abilities (intelligence, talent, and speed of learning), a realistic and logical organization of the material is needed so, subject matter can be achieved and mastered by all students in accordance with established within given time.

Based on data from biology teacher who teach in grade VIII of SMP N. 1 Sidikalang at even semester showed that the average value of daily tests exam for Growth and Development is 65-75. This show the results of biology learning of grade VIII students SMPN.1Sidikalangstill low because of the Exhaustiveness Minimum Criteria(KKM) for Biology subjects is 80. Teachers have no implemented learning strategies and using variety of teaching materials yet that able to improve student achievement results. To minimize time for implementation, this research done only to compare the cognitive achievement of the students.

Based on explanation above the author do research by lifting the title research **“Comparison of Student Cognitive Achievement Taught by Jigsaw and STAD Models in Growth and Development Topic in Eighth Grade of SMP N 1 Sidikalang Academic Year 2012/2013”**

## **1.2. Problem Identification**

Based on this background, some of the problems that can identified as follows:

1. The low learning outcome of student's in Growth and Development topic.
2. The low student's response towards conventional model which is used by the teacher in learning activity.
3. The difficulties of students to learn Growth and Development topic.

## **1.3. Research Scope**

From identified problem, researchers limit comparison of students achievement in biology taught with Jigsaw and *Student Team Achievement Division* (STAD) models. Biology learning result measured in this research is

cognitive aspect of student achievement in VII grade of SMPN 1 Sidikalang first semester on topic Growth and Development.

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

Based on the identification and limitation of problems that outlined previously the matter of researched is formulated as follows “How the comparison of student biology cognitive achievement taught by Jigsaw and STAD?”

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

Based on the formulation of the problem above, the objectives of this study was to compare the student biology cognitive achievement taught by Jigsaw and STAD solving the problem of understanding the growth and development topic concept of VIII grade students in SMPNegeri1 Sidikalang.

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

From the results of research that the researcher expected to be useful for:

1. For researchers, convey information about the effects of cooperative learning taught by STAD and Jigsaw toward study results and its comparison.
2. For teachers especially biology teacher, can make both of the cooperative learning model as an alternative in teaching and learning.
3. For students, it can provide the motivation to learn, practice skills, be responsible for any duty, developing the ability to think and positive thinking, and give provision to be able to collaborate with others both in learning and in society.