

## CHAPTER I

### INTRODUCTION

#### 1.1 Background of the Study

Education is an effort to develop and nurture human resources through various learning activities organized at all levels of education. Education in schools can not be separated from the process of learning and interaction between teachers and students.

Biology of learning objectives is for students to understand, discover and clarify concepts or principles in biology. Therefore, in addition to mastering the material, biology teachers are also required to master the strategies, approaches, methods, models, and media in creating a fun learning environment so that students are more active learning and student learning outcomes for the better. (Khairiah, 2011).

I interviewed biology the average teacher for grade XI of SMA Negeri 1 Tebingtinggi and it was suggested that one of the most difficult topic for students is learning human reproductive system. She emphasized that the students had problem of memorizing the kinds of reproduction organs and its anatomical and physiological structure of each organ. The method of lecturing is used to deliver all the information due to the lack of media and alternatives for some reasons. Teacher becomes the only source of information. The observation showed that the result of student monthly test in the biology subject is below the minimum completeness criteria (KKM). The value is 70 and of the average of students scored only reached 65.

In this situation teachers are in charge to have initiatives dealing with difficulties faced by both teachers and students. Teachers are expected and encouraged to be more active and creative in developing learning strategy. The strategy may involve the students in the process instead of waiting the information to be delivered. Vygotsky theory suggested that students need to learn and work in groups so that the students can interact with each other and needed the help from teacher to students in learning activities (Syamsudin, 2007). The Work in group emphasizes the interaction between student activity to motivate each other and help each other to master the subject matter in order to achieve maximum

performance. The advantages of cooperative learning model is a type of cooperation in groups and in determining the success of the group's success depends on the individual, so that each group member cannot rely on other members.

Cooperative learning model is not entirely new for the teachers. Model of cooperative learning is a learning model that prioritizes the groups (Slavin, 2007). Each student in the group had levels of different abilities (high, medium and low) and if it is possible a member of the group come from different races, cultures, different tribes and with regard to gender equality. Cooperative learning model prioritizes cooperation in solving problems to apply the knowledge and skills in order to achieve learning objectives.

STAD learning model can serve as an alternative model because it tolerates the heterogeneity in the classroom. It reduces the gap between several groups of students in the classroom. There are different sort of backgrounds of students in each classroom, ranging from gender, ethnicity, race and religion.

After finishing each activity in the group, students must be evaluated to find out their achievement in the topic. Evaluation will help them to keep the information they acquire for sometimes. The activity of evaluating is conducted in the form of games which is challenging and exciting. One of them is *Word Square* comes in the Student's Paper Work Sheet. This type of game combines the ability to answer the questions and match the answers provided in the answering box. Just like filling a crossword puzzle but the answers are already there. Some of the answers are not very clear by adding some boxes next to real answers provided. Those answers will lead students to tricky options of the answers. The activity will help students to improve their ability to think in critical and thorough way.

There are several researches about Word Square used in teaching Biology. Observation method and Student Paper Work sheet combination was used to teach Animal Classification in SMP Negeri 8 Purworejo (Wirianingrum (2007). The activity has showed an increase in the student's studying activity. The observation data showed that 62.5 % of the students are classified to be very active, and 72.25% of them belong to the classical active group. Similar trend was also

revealed for the student's achievement in the exam. The average of the result was 69.93 and has increased to 76.38 with the classical mastery from 77.5 to 87.5. Nainggolan (2010) found out that improvement of 87.5% was revealed on the topic of Mollusca for students at SMA Negeri 1 Sei Rampah.

Based on the problem above I am interested to solve the problem in this school. I proposed to combine the STAD model with Student's Paper Work *Word Square* method on the student's achievement For Human Reproductive System Topic in Grade XI IPA Students of SMA Negeri 1 Tebingtinggi Academic Year 2012/2013.

### **1.2 Problem Identification**

There are several problems of this research, they are:

1. Most of the students have not reached the Mastery learning standard
2. Some of students learning achievement in Biology subject is below the KKM.
3. Teacher is the only source of information and lecturing is the main method of teaching.
4. Activeness and cooperation among the students in the learning process are still low.

### **1.3 Limitation of The study**

There are many factors that affect the student's achievement at school but this research focuses on the effect of STAD model combined with Student's Paper Work *Word Square* Method to improve the student's learning achievement and activity in the topic of Human Reproductive System of Grade XI IPA Students of SMA Negeri 1 Tebing Tinggi Academic Year 2012/2013.

### **1.4. Formulation of The Study**

In accordance with the issues that have been stated, then the problem can be formulated as follow:

1. Is STAD model can increase the student learning achievement on the topic of human reproductive system in grade XI IPA students of SMA 1 Tebing tinggi academic year 2012/2013?

2. Is student's average learning achievement who are taught using STAD combined with student's paper work word square higher than who are taught with do not using student's work word square on the topic of human reproductive system in grade XI IPA students of SMA 1 Tebing tinggi Academic year 2012/2013?

### **1.5. The Research Objective**

There are several aims of this research, they are:

1. To know about student's learning achievement taught by STAD model combined with Student's Paper Work *Word Square* method in the topic of human reproductive system of grade XI IPA students of SMA Negeri 1 Tebing Tinggi academic year 2012/2013.
2. To know about differences of student's learning achievement on the topic Human Reproductive System using both STAD model combined with Student's Paper Work *Word Square* method and without using both model and method of the grade XI IPA students of SMA Negeri 1 Tebing Tinggi academic year 2012/2013.

### **1.6. The significant of The Study:**

**The research findings will be useful for:**

1. Students
  - To improve student's eagerness to study.
  - To improve student's activity in studying.
2. Schools
  - References and guidelines to improve student's achievement on the topic of Human Reproductive System and to help teacher to optimize their performance.
3. Researcher
  - Insights and experiences for the preparation as teacher in the future.