

# CHAPTER I

## INTRODUCTION

### 1.1.The Background of Problem

Learning is the way to form the right human. It is the effort in improving the individual quality. After going through a learning process, the students are expected to achieve the goal of learning is also known as learning achievement, ie the result achieved by the students after undergoing the process of learning (Jihad, 2008 : 15).

Learning biology is aimed to make students able to understand the concepts or principles in biology. To perform this, the biology teachers should master the strategies, approaches, methods, models, and media in the learning activity. One way to improve the learning quality is to look for more inovative learning activities, including modification of learning process in biology subject that is able to make students are competent to discover ideas and solve problems actively in recreative learning situation, to achieve the learning objective.

In the Reproductive System Topic, students are expected to master the process of male reproduction organs, female reproduction organs, reproduction hormones, gametogenesis, menstrual cycle, fertilization, pregnancy, parturition, and contraception. Özcan (2003) in Turkey experiment showed that reproductive system rank number five as difficult topic that is perceived by the students. Tekkaya (2001) stated that Reproduction is categorized as one of 30 topic perceived as difficult topic by the students. Koksal (2008) also showed that 37 participants (57%) categorized the sex organs as moderately difficult topic. This topic consists of complex sentences and filled with terminologies in which students had a hard time in identifying and keeping tracks of key terms. Seven out of ten students emphasized strongly that they were unhappy with the language and terminology that their teacher used in biology classroom (Bahar, 2007). To solve this problem, teacher are able to use a word game to solve terminologies problem, and create recreative learning process. Using games in the classroom is an effective tool in the learning and teaching process (Jaramillo, 2012).

Based on interviewed from the biology teachers of grade XI IPA in SMA Negeri 1 Babalan academic year 2012 / 2013, there were some problems in the learning process. Students tend to be passive in the learning activities and the dominance of certain students in the learning process. Data shows that 55% of the students were not passed the subject matter. The average score of reproductive system of three classes are 68 or below the KKM, while KKM of Biology is 75. The result obtained indicate the student mastery in understanding the subject matter is low.

The methods that were used in teaching biology in SMA Negeri 1 Babalan were lectures, question and answer, and discussion, and the method can be combined with charta or audiovisual media. Although the discussion was applied, but the students were less enthusiastic for discussion, because students did not understand fully about what they discussed. Similar result by Özcan (2003) in Turkey experiment stated that a great majority of teachers, 42 teachers (93%), stated that one of the methods that they mostly used was questioning, 35 (78%) of the teachers said that they used lecturing method. Teachers (24%) used demonstration method by showing charts, models, or by drawing figures on the boards. Based on these problems, it is necessary for a proper solution for the improvement in the learning process so as to make students active and learning achievement can be increased.

Teacher is expected to be more creative in developing the variation of learning strategy to create active students in learning process. In teaching Human Reproductive System topic, teacher needs suitable model to make students interested in achieving better understanding. A model of learning that involves the participation of all students is a model of cooperative learning. Teams Games Tournament model is one model of cooperative learning. Sinaga (2011) Applying TGT cooperative learning model on Human Reproductive System topic has been showed that posttest in experiment class has significant difference compare to control class. In this research, the students learning achievement that was taught by using TGT cooperative learning model increase by 42,59. It was concluded that students outcome is higher. Widyana (2013), in statistical data processing on

post-test data, the significance value means that cooperative learning model Teams Games Tournament based multimedia can improve learning achievement of reproductive system topic as compared with the group of discussion learning model.

Adnyana (2014) showed that the significance of learning achievement of a group of students who studied by using TGT models is less than 0.05, it means that there is a significant difference between the group and a group of students who did not study using TGT models. it can be concluded that the Teams Games Tournament (TGT) models are very effective for improving student learning achievement.

The tool's effectiveness can be explained by what Moore and Detlaff in Orawiwatnakul (2013), stated that crosswords can be used to teach terminology, definitions, spelling, and pairing key concepts. The result of research by Orawiwatnakul (2013), found that students in Spain experience supported the hypothesis that learning vocabulary through crossword puzzles contributed to the students' improvement of vocabulary. The use of crossword puzzles was most likely to enhance the students' vocabulary learning in the three proficient groups due to higher average scores from the pre-and post-tests (high = 16.69: 21.30, intermediate = 11.91: 21.68, low = 8.91 : 17.91). So, it may be concluded that the tool in this study was suitable to all students. No matter what level of vocabulary proficiency students had before the intervention, they could improve their vocabulary knowledge as well. It will be very useful to help students understand the terminology in Human Reproductive System topic.

Teams Games Tournament (TGT) model is an alternative way that suitable to the characteristic of students that prefer the recreative learning situation. Teachers didn't limited their instruction only one model, but rather they used many methods together. Özcan (2003) in Turkey experiment stated that few teachers also used some additional methods like teaching by playing, by making analogies, by taking students to the conferences, but these teachers are very low in number. The following study by Sumiati (2010) showed that Teams Games Tournament model can be combined with crossword puzzle on learning

achievement in biology. This combination attracts students to compete and stay focus during learning process. The result showed that the average score of learning achievement in coordination system topic using crossword puzzle is higher (64,40) than using ladder games (52,13). It can be concluded that Teams Games Tournament model using crossword worksheet has significant effect on students learning achievement in biology topic of coordination system.

Similar result showed by Rahayu (2008) that the application of the model Teams Games Tournament (TGT) with TTS media (crossword puzzle) improve the process of learning biology students as indicated by increasing learning achievement biology of eighth grade students of SMP Negeri 7 Surakarta. The student learning achievement for the cognitive domain, value of students from cycle 1 to cycle II, had increased by 13.34. The result by Nasution (2012) in combining Teams-Games-Tournament (TGT) with Crossword media on Science subject of grade IV A MI Sultan Agung Yogyakarta showed the student achievement before action in the KKM 6.5 is 61% or High category (11 completed), then the first cycle is 83% or Very High category (15 completed), and the second cycle to be 90% is category Very High (17 completed).

Based on the explanation, the researcher expects students will have better learning achievement by Teams Games Tournament (TGT) model by using crossword puzzle worksheet on Human Reproductive System topic of grade XI of SMA Negeri 1 Babalan.

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

From the background above, it can be identified that there are problems:

1. Student learning achievement in Human Reproductive System Topic is still relatively low (below KKM).
2. Biology learning process used conventional method or lecturing, not varied
3. Students tend to be passive learners.

4. Human Reproductive System is difficult topic that consists of terminologies with complex sentences in which hard to be identified by the students.

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

The scope of this study will be limited on the effect of Teams Games Tournament (TGT) model using crossword puzzle worksheet on learning achievement in the experiment class, while control class uses lecturing by Direct Instruction model. The material in this study is limited on human reproductive system topic in grade XI IPA students of SMA N.1 Babalan, covering male reproductive organs, female reproductive organs, reproduction hormones, gametogenesis, menstrual cycle, fertilization, pregnancy, parturition, and contraception. This research performed to see learning achievement through implementing the Team Games Tournament (TGT) using crossword puzzle worksheet.

### **1.4. Research Question**

1. Does Teams Games Tournament (TGT) model using crossword puzzle worksheet affect significantly on students learning achievement in Human Reproductive System topic?

### **1.5. Research Objective**

The purposes of this study is :

1. To know the effect of Teams Games Tournament (TGT) model using crossword puzzle worksheet on students learning achievement in Human Reproductive System topic.

### **1.6. Research Significances**

The significances of study that are expected,

### 1.6.1. Theoretical Significance

1. The result are expected to provide a useful input for the educational development, especially students' learning achievement in biology.

### 1.6.2. Practical Significances

1. Teacher can use Team Games Tournament model using crossword puzzle worksheet to improve students' learning achievement in studying Human Reproductive System topic.
2. To provide information to emphasize students' learning achievement in teaching and learning activities.
3. To improve students' encouragement in studying Human Reproductive System topic.
4. To help teacher to optimize their performance in teaching Human Reproductive System topic.
5. The research is able to motivate students to learn biology to increase the learning achievement.