

CHAPTER I

INTRODUCTION

A. Background

The teaching and learning process of science lesson should be conducted in an interactive, inspiring, fun and challenging way that also motivate students to actively participate, and provide opportunity for students to build innovation, creativity, and independence according to their talents, interests, as well as physical and psychological development. This process need to be done systematically through exploration, elaboration and confirmation process. (Permendiknas No.41, 2007). Moreover, science lesson also need to be well-designed to stimulate curiosity, interest and enjoyment in science and its methods in enquiry (UCIES, 2012)

Based on the preliminary study which is done during professional teaching practice program in one of Cambridge based-private school in Bandung, specifically in grade secondary 2 – low achiever class, it is found that most of the students did not pay attention to teacher explanation and did not show active participation during the science lesson took place. Students rarely involved in demonstration or even interactive discussion that can build the concept mastery. During group work, the interaction among students during performing task always dominated by some students who has high academic achievement while other only lies on him. Moreover, based on the results from questionnaire filled by students, it is found that generally, students are not enjoy (81.81%) and feels frustrated (63.63%) in learning science. From opened questions given, it is found that most of the students regard science as difficult, not interesting and complicated subject especially when they deal with formulas, calculations and various terminologies which are hard to understand (54.54%). This condition does not challenge and motivate students to learn science as 63.00% students give up learning when they know that the science concept which is going to be learned is difficult. Besides, the pertinent teacher argue that generally students in secondary 2 – potential class

are having poor concentration, so that they are easily bored and then not interest and easily give up to learn. This condition results in low students' achievement where the average of previous physics chapter test score is still below the minimum completeness criteria, that is 50.

The problem elaborated above need efforts to be solved, that is by applying instructional model that stimulate their interest to learn and makes them enjoy during learning science so that they will not easily feel bored and give up to learn science, thus students' learning activity and learning achievement can be improved. The learning model that can be used to address this problem is cooperative learning model. One of cooperative learning types is Team Game Tournament (TGT). According to Slavin, in TGT students are not accustomed to interact each other, communicate one to the other and work together only, but students also have to understand the concept and compete to be the best (Lang & Evans, 2006). TGT is believed can improve students' achievement by building positive interaction among students Slavin (2008:164). Some other researchers have proved that the use of TGT can improve students' motivation to learn and learning achievement (Fadhilah, 2011; Hulten, 1974; Edward, 1972), students' learning achievement (Ismoyo, 2012; Yuliani, 2011; Slavin and Kartweit, 1979) and students' learning activity as well as learning achievement (Kusmiati, 2011).

TGT is actually a cooperative learning type which is adaptable to most subjects and grade levels (Slavin, 1995), but in this research the topic will be used to implement this learning model is waves chapter, specifically describing waves and properties of waves motion topic. This topic is chosen because it comprises of many terminologies, formula and calculation that might be difficult to be understood by low achiever students in secondary-2 level. Differently from previous researches, in this research the number of sample is only 14 students with low academic ability who lack of self independency in learning science. Moreover, in this research TGT will be integrated with reading infusion. This is done to prepare students with prior knowledge before instructional process takes place. It is necessary to make students possessing ability to analyze, synthesize and critique the information that has critical role in learning process and

production of learning achievement (Fang, et.al, 2008). Researcher hope, by integrating TGT with reading infusion, students' learning activity and achievement can be improved.

According to elaboration above, it is necessary to implement the study which is entitled "The Impact of Team Games Tournament with Reading Infusion toward The Improvement of Students' Learning Activities and Achievement in Waves Topic"

B. Problem of Research

According to the background which is elaborated above, the research problem of this research is: "How is the impact of Team Games Tournament with Reading Infusion towards the improvement of students' learning activities and achievement in waves topic?"

1. Research Questions

In order to make this study focus, the research problem above is described with the following research questions:

- a. "How is the impact of Team Games Tournament with Reading Infusion towards the improvement of students' learning activities in waves topic?"
- b. "How is the impact of Team Games Tournament with Reading Infusion towards the improvement of students' learning achievement in waves topic?"
- c. "How is the impact of Team Games Tournament with Reading Infusion towards students' learning interaction pattern?"
- d. "How is the students' response toward Team Games Tournament with Reading Infusion implementation?"

2. Research Problem Limitation

The limitations of this research are:

- a. The topic that will be used as medium to achieve the objective of the research that is to improve learning achievement and activities is waves that

contain vibration and waves concept; and, kind of waves and properties of waves concept which regard to the Scheme of Work of Secondary 2 Science used in pertinent school.

- b. The students' achievement that is going to be measure in this research is learning achievement in cognitive aspect according to Bloom includes: remembering (C1), understanding (C2), and applying (C3) with regard to the learning objective stated on Scheme of Work of science used in pertinent school.
- c. The aspects of students' learning activities that learning will be measured are learning activities according to Diederich, which includes visual, oral, motor and writing activities. Moreover, the learning interaction pattern of students during study team will be investigated as well in which it is also related to students' learning activity which is observed. Learning interaction pattern that is observed in this research is learning interaction pattern according to Roychoudhury and Roth which only focus on learning interaction in heterogeneous group composition.
- d. Students' response toward the implementation of team games tournament with reading infusion is focusing on responses toward working as a team, games in science lesson and reading infusion. The measurement of students' response is done by using questionnaire.

C. Objective of Research

The objective of this research is to investigate how is the impact of TGT with reading infusion towards the improvement of students' activities and achievement in waves topic.

D. Significance of Research

It is hoped that this research can be used as reference for alternative learning model in particular science concept. Differently from previous relevant

studies, in this research researcher use small sample size where the samples are Cambridge based – private school’s students.

