

CHAPTER I INTRODUCTION

1.1 Background

Improving the quality or the quality of education at all levels of education in schools is one way to improve the quality of education in Indonesia. Improving the quality of education in schools is closely related to the quality of the learning process the teachers and students at the School. Student activity is a necessary condition for the continuity of teaching and learning interactions, active both physically and mentally active (Fauzi, 2011).

The state of global education standards was revealed on December 2013 with the publication of the results of the Organization for Economic Cooperation and Development's (OECD) Program for International Student Assessment (PISA). This three-yearly assessment has produced international education rankings for 65 countries based on tests in reading, mathematics and science. The PISA results for Indonesian students are the second lowest in the league table, worse than the last PISA in 2009, when Indonesia ranked 57th. The result shows the Indonesian education system is going nowhere, despite massive investment (Mailizar, 2013).

According to PISA (OECD) 2015 results attribute to Indonesian students' countries/economies with a mean performance/share of top performers below the OECD average with a share of low achievers above the OECD average is 493 which Indonesia have 403 average of science medium to low levels of scientific literacy and low levels of self-efficacy in science, which are connected to low levels of motivation to engage in science-related sectors in the future.

Motivation is defined as the act or process of motivating; the condition of being motivating; a motivating force, stimulus, or influence; incentive; drive; something (such as a need or desire) that causes a person or student to act (Merriam-Webster, 1997).

This support by USC Rossier Online (2017), students motivation is also one of the most important. Students who are not motivated will not learn effectively. They won't retain information, they won't participate and some of

them may even become disruptive. A student may be unmotivated for a variety of reasons: They may feel that they have no interest in the subject, find the teacher's methods un-engaging or be distracted by external forces. It may even come to light that a student who appeared unmotivated actually has difficulty learning and is need of special attention. Therefore, it is very important to focus on the effect of the affective components in science education research (Yilmaz and Cavas, 2007). Students' motivation plays an important role in the processes of conceptual change, critical thinking, learning strategies and achievements in learning science (Tuan, *et al.*, 2005).

Many students in Indonesia have difficulties in learning Biology. They think that learning Biology simply involves memorizing the contents of the subject and regurgitate them during their examinations. According to Tekkaya, Ozkan and Sungur (2001), students have difficulties in learning Biology and have no interest in the lesson due to the irrelevancy of the subject with the daily experiences. Students' motivation to learn this subject was low, because their Biology marks often did not achieve the school standard score for Biology which should be 75 percentages for international schools (Setiawan, 2008).

There are many reasons why students have difficulties in learning biological concepts (Tekkaya, *et al.*, 2001). The nature of science itself and its teaching methods are among the reasons for the difficulties in learning science, while according to Lazarowitz and Penso (1992), the biological level of organization and the abstract level of the concepts make learning biology difficult. Overloaded biology curricula, the abstract and interdisciplinary nature of biological concepts, and difficulties with the textbooks are the other factors preventing students from learning biology effectively (Tekkaya, *et al.*, 2001). Chiepetta and Fillman (1998) state that overloaded biology curricula may not contribute to students' achievement and lead them to learn the material through memorization. This, of course, prevents meaningful learning. Designing learning environments while ignoring students' interests and expectations causes several learning problems as well as decreasing their interest in biology (Zeidan, 2010). Fraser (1998) indicates that there is a close relationship between students' perceptions of their classroom learning environment and their success. Osborne

and Collins (2001) also report that students' diminishing interest in learning science was due to the curriculum content being overloaded and not generally related to working life, the lack of discussion of topics of interest, the absence of creative expression opportunities, the alienation of science from society and the prevalence of isolated science subjects.

Biological science includes many abstract concepts, events, topics and facts that students have to learn. This makes it hard for students to learn them. Teachers' styles of biology teaching and teaching methods and techniques may also be factors that affect students' learning in biology (Çimer, 2004). If students are not happy with the way that biology is taught, they may show disinterest in and negative attitudes towards biology and its teaching.

From this perspective, there appears to be a clear need for further and deeper insight into the topics of biology that may cause low achievement in biology. Therefore, the aim of the current study is to determine the biology topics that senior high school students have the interesting and disinteresting, their views of the learning biological that can make biology learning more effective. This will provide a knowledge base for policy-makers and teacher educators. Knowing students' views of the students interesting of biology topics affecting their learning and suggestions on how to make biology teaching and learning effective may facilitate the students interest of biology learning to update it in line with students' learning needs. Information about students' interests may help teachers to devise strategies and to enhance students' interest in biology (Uitto, *et al.*, 2006).

Based on the problems above motivated researcher to do research entitled **“Analysis of Students' Interest in Biology Topics Grade X and XI SMA Negeri Kabupaten Serdang Bedagai”**.

1.2 Problem Statement

Based on the background describe above, the problems identification in this study are:

1. Indonesian students of science literacy of 57 rank based on PISA.
2. Indonesian students' with a mean performance/share of top performers below the OECD average with a share of low achievers above the

OECD average is 493 which Indonesia have 403 average of science medium to low levels of scientific literacy and low levels of self-efficacy in science.

3. Students have difficulties in learning Biology and have no interest in the lesson due to the irrelevancy of the subject with the daily experiences. Students' motivation to learn this subject was low, because their Biology marks often did not achieve the school standard score for Biology.
4. Not much effort have been made towards finding out the students interest encounter in learning some of the topics in Biology. Although, many factors may account for students' poor interest in Biology, it is evident that most students have difficulties in learning some concepts. It is for this purpose of redressing this trend that this study is being carried out.

1.3 Scope of The Study

According to the problem identification to make this research become more focus, this research will discuss the limited problems as follows:

1. Biology topics grade X and XI in Senior High School.

1.4 Research Question

The study will be guided by the following questions:

1. Is there any significant difference between male and female students' interest in different topics of biology?
2. Which biology topics do senior high school students have the most interesting with?
3. Which biology topics do senior high school students have the most uninteresting with?

1.5 Research Aim

The purpose of the study is to analyse students' perception of students interest in Biology topics. The study is specifically an attempt to:

1. To find out the differences between male and female students' interest in biology topics.
2. To find out the most interesting biology topic in senior high school.
3. To find out the most uninteresting biology topic in senior high school.

1.6 Significance of The Study

The significance of the study including :

1. Theoretically, providing knowledge and information to make decision in education department of students' interest towards Biology topics as one of science in school.
2. Practically, providing a knowledge base for policy-makers and teacher educators. Knowing students' views of the students interesting of biology topics affecting their learning and suggestions on how to make biology teaching and learning effective may facilitate the students interest of biology learning to update it in line with students' learning needs.
3. For students, this study can give the information which are students interest of biology topics is very important that play role in students achievement of cognitive aspect by the affective factor.