

CHAPTER I

INTRODUCTION

1.1. Research Background

Learning is all mental or psychic activities carried out by a person, causing changes in behavior different between after learning and before learning. Learning is also defined as a process of change in human personality and the changes appear the form of increased quality and quantity of behavior such as increased skills, knowledge, attitudes, habits, understanding, thinking power and other abilities. Learning is a human process to achieve various kinds of competencies, skills and attitudes. Learning starts from humans born until the end of life. The ability of humans to learn is an important characteristic that distinguishes humans from other living things. Learning can bring change, both changes in knowledge, attitudes, and skills. With these changes, of course, will also help solve problems and be able to adjust to their environment (Baharuddin, 2015).

In general, students learning difficulties are influenced by two factors, internal factors that come from students themselves and external factors that come from outside themselves students. The teacher is one of the external factors that influence students learning difficulties. Teachers as teaching staff have an important role in achieving learning objectives and determine the success of the learning process, because teachers are directly involved in it. Syah (2012) argues that learning difficulties are caused by factors originating from within students (internal) and from outside students (external). Internal factors that can cause learning difficulties include because health, disability, intelligence, talent, interest, mental health and special types of learning. While external factors include the influence of the family, school and community environment.

The learning process is not always successful, often there are things that result in failure or learning difficulties experienced by students. Learning difficulties occur because students are unable to associate new knowledge with old knowledge, causing incomprehension or obscurity of a lesson, biology subjects will experience symptoms of learning difficulties when students are no

longer able to concentrate, most students get low grades, students show lethargy, and most students do not master the material that the teacher has delivered. Learning difficulties in students are very closely related to the achievement of s and also daily activities (Subini, 2011).

In the learning process at school, one of the difficult subjects is biology. Learning difficulties affect learners learning achievement. In addition, learning difficulties make students less motivated to study biology. As a result, it is difficult for them to achieve good results from their study (Yulia, 2019). There are many reasons why students have difficulties in learning biological concepts. The nature of science itself and its teaching methods are among the reasons for the difficulties in learning science. 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 (Crimer, 2012).

Biology subject is one of the complex subjects, because it includes all living things (humans, animals and plants). The process of learning biology contains process skills namely, observing, classifying, measuring, using tools, communicating results through various means such as oral, written and diagrams, interpreting, predicting and conducting experiments. Biology is a subject difficult to learn. The difficulty affects students achievement. In addition, the difficulty makes students less motivated to learn the subject. As a result, it is hard for them to achieve a good result of their studies. The difficulty is caused by misconceptions, difficulty in finding relation between biology topics and the nature of the topic in general (Diki,2013). The learning process will eventually produce a person's ability which includes knowledge, attitudes, and skills.

Virus is one of the materials taught in the field of science studies. According to Firmanshah (2020) students experienced difficulty learning different biology materials at each grade level. Grade X students had difficulty learning about virus topic. This material as a whole was seen as the material with the highest percentage of difficulties compared to other materials at the level of State

High Schools, on the island of Lombok, West Nusa Tenggara. Most of the students, which were 74.12% in grade X, had difficulty in studying and comprehending the virus. In the virus material, students had difficulties in almost all competencies that existed in the competence, such as: identifying the characteristics of virus, analyzing the process of virus replication, analyzing the role of virus for life, and identifying the types of virus.

According to Hasibuan (2016), the location of learning difficulties in virus topic experienced by students is on the indicator of identifying the characteristics of the virus by 18 students (18.94%), the indicator explains how to replicate the virus as many as 55 people (57.89%) and the indicator distinguishes body structure of virus with other creatures as many as 22 students (23.15%). Dumais (2009) states that students who know about the meaning and characteristics of virus are only 13.8%, how to replicate the virus is only 14.9% and the structure of the virus is 53.1%. This of course leads to the question of why and what causes students to experience difficulties in the learning process of virus topic.

In virus topic students are expected to gain knowledge about the characteristics of virus, the structure of the virus body, how to replicate virus, the role of virus both beneficial and detrimental virus topic is included in the topic of microbiology. In the topic of microbiology, including virus, bacteria and fungi. These three topic are many use difficult Latin language and terms understood by students. Most students often get it wrong distinguish virus and bacteria, including names and the disease it causes. Students often think virus are bacteria and virus are prokaryotic cells. Because both virus and bacteria use Latin and have a similar body structure as microorganisms. This has strengthened the perception so far which states that the location of the in learning materials in biology lies in the difficulty of remembering Latin names, memorizing concepts and imagining abstract things (Harahap, 2018).

Virus influence our lives in many respects. Most often virus are viewed negatively, since we encounter them mainly in the form of diseases. According to

Simon (2017). The concepts were most prominent in virus is virus attack cells, the infected cell produces new virus, virus multiply by host cell division. This indicates that participants did have some correct knowledge about host-virus interactions. However, the fact that even amongst university students up to two thirds of participants did not provide any answer, and that several answers were wrong (e.g. virus replication by own division) points to the need for more intense and detailed education concerning virus biology.

To understand the several large the difficulty levels and the points of difficulty of students in learning, it can be done in various ways. One of them is analyzing the results of students learning evaluations. The description of the level of learning difficulties will be seen from the results of their learning evaluation. Based on the results of the analysis, educators can determine the best solution for students so that students are able to achieve test results as expected. Based on the background proposed above, the author are interested in conducting research on **“AN ANALYSIS THE STUDENTS LEARNING DIFFICULTIES ON VIRUS TOPIC IN GRADE X MIA SMA NEGERI 8 MEDAN ACADEMIC YEAR 2020/2021”**.

Based on consideration of the thought of the description above this study was conducted to analyze the factors of learning difficulties on learning virus topic who are limited by internal factors, namely physical and psychological, then external factors, namely school factors. Based on the background proposed above, the author are interested in conducting research with the title : **“AN ANALYSIS THE STUDENTS LEARNING DIFFICULTIES ON VIRUS TOPIC IN GRADE X MIA SMA NEGERI 8 MEDAN ACADEMIC YEAR 2020/2021”**.

1.2. Problem Identification

Based on the background of the problem above, the problems identified are as follows :

1. The low of students test result in virus topic
2. There are difficulties in learning biology on the virus topic experienced by students in grade X MIA SMA Negeri 8 Medan

3. There are factors that cause students learning difficulties which consist of internal and external factors of students
4. The lack of use of school facilities in biology learning
5. Students learning interest on the learning biology in virus topic is still low
6. In the learning process the participation of students is not entirely comprehensive, so only active students understand the information provided by the teacher and other learning resources

1.3. Research Scope

The research is limited to :

1. The difficulty learning from the cognitive aspects of students on virus topic in grade X MIPA SMA Negeri 8 Medan Academic year 2020/2021.
2. The learning difficulties from the aspect of learning indicators on virus topic in grade X MIA SMA Negeri 8 Medan Academic Year 2020/2021.
3. The factors causing students learning difficulties in learning on virus topic in grade X MIA SMA Negeri 8 Medan Academic Year 2020/2021.

1.4. Research Question

The research question are formulated as follow:

1. What is the students learning difficulties in the cognitive aspects on virus topic in grade X MIA SMA Negeri 8 Medan Academic Year 2020/2021 ?
2. What is the students learning difficulties from indicator aspects of learning virus topic in grade X MIA SMA Negeri 8 Medan Academic Year 2020/2021 ?
3. What does the factors that cause students learning difficulties on virus topic in grade X MIA SMA Negeri 8 Medan Academic Year 2020/2021

1.5. Research Objectives

They are 3 objectives of the research, they are :

1. To find out the students learning difficulties from the cognitive aspects on virus topic in grade X MIA SMA Negeri 8 Medan academic year 2020/2021.

2. To find out the students learning difficulties from indicator aspects on virus topic in grade X MIA SMA Negeri 8 Medan academic year 2020/2021.
3. To find out the factors that influence students learning difficulties on virus topic in grade X MIA SMA Negeri 8 Medan academic year 2020/2021.

1.6. Research Benefits

The benefits expected from the research results are

1. For biology teachers, it becomes information to teachers about students learning difficulties on virus topic and then the teacher gets the best solution in students to understand the virus topic.
2. For students, as reference in learning, especially in studying virus topic, so that the later can improve the students learning achievement.
3. For the other researchers, this research can be a reference source in the next research process about virus.

1.7. Operational Definitions

Operational definitions in this research are :

1. Analysis is an investigation of an event (essay, deed, etc.) to find out the real situation (causes, problems and so on).
2. Learning difficulties are the obstacles that students experience in absorbing biology subject matter (Virus)
3. Learning is generally defined as relatively permanent changes in behavior, skills, knowledge, or attitudes resulting from identifiable psychological or social experiences.
4. Test results is the direct result of students behavior after going through the teaching-learning process in accordance with the material they studied.