

CHAPTER 1

INTRODUCTION

1.1 BACKGROUND

Education is a process for human being to develop their ability and solving the problems. It is the basic and planned effort in creating the learning atmosphere and learning process for students to develop their potential. It consists of religious spiritual, intelligence, skills, personality, good and polite moral, and self-control for self, community, nation and the country (Herviza, 2018). Education is implemented in order to develop the potential of human resources through teaching and learning activities at levels from elementary, secondary, to university. Without education it will be difficult for human being to increase their potential and realize their dream to get a better standard of living (Siregar, 2012). Education has the important role to prepare the nation with good quality citizen to manage the country. To give a high quality education is about giving students the opportunity to grow the skills to be creative and be the problem solver. In the The Fourth Industrial Revolution (Industry 4.0) has started and use the modern smart technology, people must prepare themselves with a high level of critical thinking skills (Fridanianti, 2018).

Critical thinking skills are the ability to consider solution based on facts in right decision while reflective ability are searching consciously and decisively to the best possible solution (Norris and Ennis in Agustin (2016). Critical thinking skills are higher order thinking skill in problem solving systematically. According to Krulik and Rudnick (1993) critical thinking skills consist of four levels including: (1) recall thinking, (2) basic thinking, (3) critical thinking skills, and (4) creative thinking. According to Enis (2011) critical thinking skills consists of 5 aspects including: (1) basic clarification, (2) basic support, (3) inferring, (4) advanced clarification, and (5) strategy and tactics. The skill is an activity to analyze ideas in more specifically, sharply differentiate, choosing, identifying and developing perfect of the skills (Julita, 2019). Rachmatika (2019) added tha critical thinking skills involve the activities of analyzing, creating, using and evaluating objectively, and must be possessed by students (Paul and Elder, 2007).

People who think critically are usually able to ask questions and problems and formulate problems clearly and precisely. Therefore, critical thinking skill is needed by students to deal with the problems they face. In the school, critical thinking skills are one skill that has been applied in the 2013 curriculum. This curriculum requires students to be active in the learning process and place the teacher as a facilitator (Rachmantika, 2019). Teacher as a guide and frontier in education should be carry out critical thinking training for student according to Hashemi (2011). The skill needed to develop students' thinking skills consists of the decision-making skills, and gathering information skills in student. In the future, the individual must be able to evaluate consequences of their actions on others. Also, they determine alternative solutions and analyze the influence to their values in their environment (Fuad, 2019).

Due to the Pandemi Covid 19 the Minister of Education and Culture of the Republic of Indonesia issued circular letter regarding the implementation of education policy in the emergency of the situation. The government has instructed to carry out the teaching and learning process at home using the online learning system (Dewi, 2020). Online learning is a computer network that is interconnected with other computer networks throughout the world. Online learning activities are carried out to replace learning activities directly (conventional). Students are be able to interact with the teachers using the applications such as classroom, video conference, telephone or live chat, zoom, webex, or through WhatsApp groups.

The advantages of the online learning are: (1) increasing interaction between students and teachers, learning can be done anywhere and anytime (flexibility in aspect of time and place), reaching students in a wide scope (potential to reach a global audience), and facilitating the storage of material learning (easy updating of content as well as achievable capabilities). In addition according to (Arnest & Hamid, 2015), independent learning and high interactivity can improve memory, provide more learning experiences, with audio, video, text, and animation and the ease of conveying, updating content, downloading . Students can send emails to other students, sending the comments in discussion forums, and using the chat rooms and videoconferencing links to directly communicate (Pratiwi, 2020).

The Ministry of Education and Culture has decided to open the school and start in July 2021. The regulation is that any learning activity is not allowed in the red zone, the zone which considered to have serious case of the COVID-19 outbreaks (lpmpjatim.kemdikbud.go.id). The learning activity is conducted in what so called new normal, a term refers to a change of behavior to do the normal activities with implementing health protocols to prevent COVID-19 transmission among people. And also, the duration of the students studying at school is also shorter than normal, and students spend more time to study at home using the internet to be connected with the learning atmosphere (djkn.kemenkeu.go.id).

Learning difficulties are a condition of the students learning properly and causing certain disturbance. The students cannot study optimally and have difficulty to concentrate. The difficulty it concern is about the virus topic (Harahap, 2017). Virus is one of the topics in biology learning in even semester to tenth grade students. Student can be gain knowledge about the characteristic of viruses, the structure of the virus body, viral replication, the role of viruses and their advantages and disadvantages. In Tsabari (2010) this topic includes the topic microbiology topic and involve viruses, bacteria, and fungi. This material uses language that is difficult for students to understand. Most of students make a mistake in distinguishing the viruses and bacteria including the names and the diseases they cause (Harahap, 2017). The topic is frequently come out in test which is daily test and biology Olympiad. The main problem is lack of understanding on the topic of viruses. This condition is less favorable for students and low learning outcomes (Hasibuan, 2016).

The interviews was conducted with the biology teacher to explore the nature of the situation regarding the virus material learning process. The response showed that virus material is one of the subject matter that makes it difficult for students to study biology. The average of student learning outcomes is relatively low, although the material is close to students's everyday life. The SMA Sinar Harapan school run the on-line learning system during this research is conducted. The observation revealed that both teacher and students experience difficult time to conduct the learning activity. This research is trying to explore the inner quality of studying virus material in term of critical thinking skill of students when the studying activity

is conducted using the on-line system. The title of this study is “**An Analysis of the Students’ Critical Thinking Skills and Difficulty on Virus Material using the Online Learning System during the Pandemi Covid -19 Period of Class X SMA Sinar Harapan Pantai Labu Academic Year 2020/2021**”.

1.2 Problem Identification

Based on the background that indicated the identify problems as follows:

1. Students of class X SMA Sinar Harapan Pantai Labu lack of critical thinking skills.
2. There are problems of online learning system of class X SMA Sinar Harapan Pantai Labu during the period of pandemic COVID-19.
3. The students of class X SMA Sinar Harapan Pantai Labu have difficulties in virus material during the period of pandemic COVID-19.

1.3 Scope of Problem

The research is limited of:

1. Analysis of students’ critical thinking skills of the virus material of class X SMA Sinar Harapan Pantai Labu during the period of pandemic COVID-19.
2. Students’ difficulty using the online learning system on the virus material class X SMA Sinar Harapan Pantai Labu during the period of pandemic COVID-19.

1.4 Research Questions

The research questions are formulated as follow:

1. How is the students’ critical thinking skills of the virus material of class X SMA Sinar Harapan Pantai Labu during the period of pandemic COVID-19?
2. How is the students’ difficulty level using the online learning system on the virus material of class X SMA Sinar Harapan Labu during the period of pandemic COVID-19?

1.5 Research Objectives

Based on the research questions, the research objectives as follows:

1. Finding out of the students' critical thinking skill of the virus material of class X SMA Sinar Harapan Pantai Labu during the period of pandemi COVID-19.
2. Finding out the students' difficulties of the virus material of class X SMA Sinar Harapan Pantai Labu during the period of pandemi COVID-19.

1.6 Research Benefits

The benefits of research can be identify as follows:

- a. For Teacher
 1. By carrying out this research, the teacher is able to know effective, efficient learning so that is able to improve the learning system in the classroom.
 2. The teacher will further enhance students' critical thinking skills.
 3. Adjusting the learning process directly and indirectly.
- b. For Students
 1. Participate in learning process.
 2. An exciting and fun learning atmosphere.
 3. Student is given the chance to think critically and confidently in express opinion.
- c. For school
 1. Facilitating school learning's needed.
 2. Improving student's skills, achievement ability and their attitude.

1.7 Operational Definition

The operational definition of this study are:

1. Critical thinking skills are skills one own to be able to think clearly and rationally about what to do or what to believe. It includes the ability to engage in reflective and independent thinking.
2. Online learning is considered to be a form of distance learning. The method allows a variety of learners to experience connectivity, convenience and interaction. On-line learning makes use of the Internet to connect students with educational material, as well as instructors and sometimes other students.