

CHAPTER I

INTRODUCTION

1.1 Background

One of the efforts to develop every aspect of the human personality into a complete human is the goal of education. Waspodo (in Islam & Suparman, 2019: 2855) said that "National education functions to develop skills, form character, and create a dignified national civilization to educate the nation's life, aiming to develop the potential of students to become human beings who believe Almighty God, have a noble character, healthy, knowledgeable, skilled, creative, independent, and become democratic and accountable citizens". The widest possible opportunity must be given to humans to get an education in achieving educational interests. The education system must be able to educate and serve all ages of schooling so that all humans have the opportunity to pursue education or it is often said to be equal education. With this equitable distribution of education, all humans are expected to be able to learn basic skills within themselves, namely reading, writing and arithmetic.

The field of education itself is growing along with the times, one aspect that is developing in the field of education in Indonesia itself is a change in the curriculum which used to be the 2006 KTSP, now schools have implemented the 2013 curriculum.

The government developed the 2013 curriculum to support the success and achievement of education in Indonesia. The formation of a young generation who has a broad insight is successful and intelligent. It must be supported by quality education to be able to compete in this era. According to Budiani (in Trisyagil *et al.*, 2020: 49), the 2013 curriculum is a curriculum that focuses on a scientific approach enriched by discovery learning. Indonesia has implemented the 2013 curriculum in 2014/2015 simultaneously in all educational institutions to achieve educational goals.

In chemistry learning, giving experience through the use of process skills and scientific attitudes must be emphasized. Learning must be student-centered.

Thus, the students can develop their creativity and skills as mandated in the 2013 curriculum. One of the components that can affect the improvement of students' skills and creativity is teaching materials (Panggabean & Harahap, 2020: 58).

Teaching materials can be developed based on multimedia based on technology. Recently, there has been a rapid revolution in the internet and wireless communication technology. Various interactive multimedia networks, such as mobile learning, mobile voice, and instant messaging have been spawned by this. Nainggolan & Mutiah (2020: 71) said that at present, science and technology have developed rapidly along with the advancement of the times. This makes the teachers more enthusiastic and proactive in implementing learning media in the teaching and learning process.

Under the times, to achieve the expected learning objectives, a teacher must be able to utilize learning media facilitated by schools, at least utilizing cheaper and more efficient media. Conventional or traditional teaching will be replaced because of the popularity and convenience of the internet in helping to apply teaching materials to achieve learning goals and certainly increase competitiveness (Lin *et al.*, 2017: 3553).

Based on the results of an interview with a chemistry teacher at SMAN 7 Medan and also with some students, it was found that learning chemistry on hydrocarbon material contains complex concepts and is quite difficult for students to apply, because of the problems of chemical reactions and their application in everyday life as well as abstract concepts that make it difficult for students to understand hydrocarbon teaching material just by reading. This can be caused by the presentation of the material by the teacher which is monotonous, unattractive, and boring. Not only that but also the lack of use of learning media in the classroom and the lack of learning resources for students (teachers only use textbooks from school) also affect it. These things will make students not motivated to learn how important hydrocarbons are in everyday life. Less skilled teachers in utilizing learning media can also reduce student interest in learning. Lack of student interest in learning hydrocarbon material can result in decreased student learning outcomes.

Therefore, in overcoming these problems, innovation in learning chemical materials, particularly hydrocarbon material, should be needed. Teachers are

expected to strive to improve student learning outcomes, namely by implementing innovative classroom management by implementing learning media.

Learning media is a tool that can be used as a means to stimulate feelings, attention, thoughts, abilities, and skills in the learning of students. The learning process will also be encouraged by the existence of learning media. Learning media is a component of the learning system. In this component, learning media occupies an important position in learning. Learning media can also be a means of communication in the continuity of learning. Communication will be lacking if it is in the learning itself and will not take place optimally if it is not equipped with learning media (Sidyawati *et al.*, 2021: 212). One of the learning media that can be used is Adobe Animate.

Adobe Animate is software that can be used to create animations and become a learning medium. With the use of Adobe Animate learning media, the concepts in chemistry learning will be more concrete and can be simplified through the animation made. Adobe Animate influences improving student achievement related to hydrocarbon material. With the Adobe Animate learning media, students are given more opportunities to study material that has not been mastered or not yet mastered (Prakasiwi *et al.*, 2021: 574).

Related research conducted by Silvia & Bukhori (2021: 121) shows that with the use of Adobe Animate CC learning media in two classes, namely the experimental class and the control class, there are differences in learning outcomes. From the data that has been loaded with the Minimum Completeness Criteria of 75, the average learning outcomes of the experimental class are 82. While in the control class, the average learning outcomes are 71, and only a few students have scores above the Minimum Completeness Criteria. From the difference in the average learning outcomes, it has been shown that the use of Adobe Animate CC learning media increases the interest and learning outcomes of students. According to Putra *et al.* (2019: 51), implementing mobile-based interactive learning media in the learning process, one of which is Adobe Animate CC, can improve student learning outcomes and is feasible to use and apply.

Therefore, based on the background, the authors are interested in conducting research entitled "**The Development of Learning Media “Adobe Animate” to Increase Students’ Learning Outcomes in Hydrocarbon Material**".

1.2 Problem Identification

Based on the background above, the problem identification in this study is:

1. Students in SMAN 7 Medan have difficulty understanding hydrocarbon material.
2. The decrease of students' interest in SMAN 7 Medan in learning makes learning outcomes low on hydrocarbon materials.
3. The teaching material used in SMAN 7 Medan is only the textbooks from school so it does not attract the attention of students.
4. Student involvement of SMAN 7 Medan in the teaching and learning process of chemistry in the classroom is still lacking and monotonous.

1.3 Scope of the Problem

So that research does not deviate from research references, then:

1. The media to be developed is Adobe Animate learning media on hydrocarbon material.
2. Adobe Animate learning media is only to determine the students' learning outcomes.
3. Implementation Adobe Animate learning media is limited to 1 class in grade XI.

1.4 Formulation of the Problem

The following problem formulations were made to provide direction that can be used as a reference in research are:

1. How is the feasibility level of the Adobe Animate learning media that has been developed on hydrocarbon material?
2. How is the level of student learning outcomes against the use of Adobe Animate learning media that has been developed?

1.5 Research Objectives

Based on the formulation of the problem above, the objectives of this research are:

1. Knowing the feasibility level of Adobe Animate learning media that has been developed on hydrocarbon material.
2. Knowing the level of student learning outcomes against the use of Adobe Animate learning media that has been developed.

1.6 Research Benefits

The benefits expected from this research are:

1. For students
Improving the students' chemistry learning outcomes in the hydrocarbon learning process.
2. For researcher
The researcher gets a lot of knowledge about the use of Adobe Animate learning media to improve the quality of the results of the learning process.
3. For teachers
Opening the teacher's thinking insight in teaching, so that it can improve learning methods that are less attractive and monotonous by choosing the right learning and media.
4. For the School
Improve the quality of schools through improving student learning outcomes and teacher performance in schools.
5. For college students or further researchers
As information material for a researcher to be able to develop better further research.

1.7 Operational Definition

1. Adobe Animate
Adobe Animate is software that can be used to create animations and become a learning medium that brings the benefits of the availability of teaching materials in the learning process.

2. Students' Learning Outcomes

Students' learning outcomes are the results obtained by students in the teaching and learning process on hydrocarbon material which will be measured before and after the use of learning media developed at the beginning and end of learning.

3. ADDIE Model

ADDIE model is one of the models in developing a learning media software consisting of (A) analysis, (D) design, (D) development, (I) implementation and (E) evaluation.

