CHAPTER 1

INTRODUCTION

1.1 Background

One of effort to improve the quality of education is through providing quality textbooks. A good textbook must be able to present the subject matter in accordance with the demands of the curriculum, follow the development of science and technology. Beside it, it can bridge learning so that the determined competencies are achieved. Besides learning innovations in textbooks, it will be able to provide opportunities to improve the quality of education in Indonesia (Situmorang, 2013).

A teacher must be able to create a conducive learning atmosphere in the school environment. To Realize the conducive atmosphere needed appropriate methods and teaching materials. Now there are many types of teaching materials used in school. One of the materials used is in the form of teaching materials text book.

Teaching materials text book sold with a price that quite expensive, some parents complain the price of text book at school. Some of them prefer to buy in Bookstores (Gramedia, Salemba, etc.), and the other prefer to buy the last books. But now the books sold in last book also have prices that are not much different from the new books. So that it still burdens the parents of students in school. In addition, some form of a text book or printed books have a weight that can reach 1 kg, the which makes it difficult, for students to carry them. In one day there are 2-5 subjects, it means that if the textbook has a weight of 1 kg, the students will carry 2-5 kg of weight in his bag, in addition to printed books also students should bring a notebook, exercise books, etc.

Many text books that are used in school or sold on the market have a less attractive appearance that is not even attractive to students. Example in the chemistry textbooks of Class XI SMA Grafindo publisher, the reaction rate material does not explain the factors that affect the rate of reaction and the questions are very large but not in accordance with the available material display

on the books was not interesting, there are many image but only black and white color that is likely to make the students bored. The second analysis is a high school chemistry book class XI Erlangga publisher, the material identified incomplete, nothing is described about molarity. Sample questions given bit and is not described chart the reaction order. The interface is also less attractive because it consists of only two colors.

To overcome this problem one of them is to use a multimedia-based teaching materials. Multimedia-based learning has many advantages compared to the printed book. Learning with multimedia elements involving almost all the senses. The use of multimedia to facilitate students in learning, as well as time is used more effectively and efficiently. The use of multimedia in learning will acquaint students with technology. The use of media will also increase the motivation of learners, if motivation increases, the learning outcomes will increase.

Innovative learning is a learning strategy that encourages learning activities. In an innovative learning strategies that educators not only depend on the learning materials that exist in the book, but also to implement new things suitable and relevant to the issue of teaching materials. Through innovative learning students will not be blind to the current technology (Nurdin and Hamza, 2014).

This requires an innovative development of teaching materials in multimedia-based chemicals, one of which is in the form of an electronic book (e-book) in order to increase students' motivation and improve learning outcomes of students in chemistry. E-book is digital versions of books which generally consists of a collection of papers that contain text or images. E-book display integrating sound, graphics, images, animation, and film so that the information presented is richer than the conventional book (Nelson, 2008). E-book available today is still very simple, just a textbook that is uploaded and changed into pdf format. This means that the content of the material and look the same as the textbook used in schools. The e-book is designed systematically developed and directed According to the learning objectives. This e-book is also equipped with multimedia in the form of practical videos and animations. The innovation of the e-book was

developed in the form of adding animation in it that can move and there is a motivational video for students. This interactive feature is expected to encourage students to understand the material and be more motivated in learning chemistry.

There are few studies about the development of teaching materials based multimedia e-books, one of which is the research Tiyas et al (2015), that develops e-book interactive on the material thermochemical based representations of chemistry, then validated and limited trialled with teachers and students take in response to the e-bookwhich has been developed, the results obtained by the percentage of expert validation interactive e-books on aspects of conformity with the curriculum contents, readability, and the construction of 86; 97.33; and 100%. The percentage of teachers feedback on aspects of the suitability test and the graphic content of the curriculum is of 94% and 92% while the student feedback on readability aspect amounted to 89.09%.

Suryani and Sukarmin (2012) research that develop the interactive e-book on the electrochemistry subject, the result based on the percentage of the valuation result of positive responses by all students to give interactive e-book with the average percentage of students responses amount of 92,5%. But from that search, there are no e-book development to improve student learning outcomes. Eva Pratiwi Pane (2016) showed that improving student learning outcomes that uses innovative teaching materials chemistry-based multimedia material higher reaction rates compared with the results of student learning using the student handbook, which is evidenced by the sig. (0,000) $<\alpha$ (0.05) and t> tttabel (11.881> 1.97338), research conducted on three schools in the city of Medan, SMA Negri 6 Terrain increasing learning outcomes by 69%, SMA Negeri 3 Medan with 71%, and in SMA Methodist 2 Terrain by 70%.

The reaction rate is one of the chemical concepts that are abstract (Kirik and Yezdan, 2012) The reaction rate is one involving chemical materials connectedness three levels of representation. This material is abstract elusive by learners, so that the students often have difficulty understanding the concept of reaction rate which eventually lead to misconceptions on the concept. Such

material may be well understood if attention connectedness three levels of representation in order to achieve effective learning (Nurpratami, 2015).

Based on the above background, the researchers are interested in doing research to develop innovative teaching materials chemistry with the title "The Development of Innovative E-book on The Reaction Rate Materials To Increase Student Motivation and Learning Outcomes".

1.2 Identification of Problem

Based on the bacground above, so can identify the problem that consist of:

1. The price of text books are quite expensive to make parents complained.
2. Text books have enough mass weight making it impractical and difficult to carry anywhere.
3. Many text books that are used in school or sold on the market have a less attractive appearance.
4. E-bookavailable today is still very simple, just a textbook that is uploaded and changed into pdf format.

1.3 Scope of Problem

To clarify the scope of the discussion, then made the limitations in this study, namely:

1. The material on the research is the reaction rate material in class XI Madrasah Aliyah Swasta Al-Ikhlas Bah Jambi.
2. Instructional media used in this study is an e-book media.
3. The subject is students of class XI SMA odd semester.

1.4 Formulation of The Problem

Based on the description above, the formulation of the problem in this research are as follows:

1. How the analysis of chemistry school textbook based on BSNP?
2. How the development of innovative e-book?
3. How the feasibility of the innovative e-book on reaction rate material based on the BSNP criteria?

4. Does student motivation that use innovative e-book is higher than use of school textbook?
5. Does student learning outcome that use innovative e-book is higher than use of school textbook?

1.5 Research Purpose

The purpose of the study is based on the formulation of the problem above is as follows:

1. Knowing the analysis of chemistry school textbook.
2. Knowing the development of e-book.
3. Knowing the feasibility of innovative e-book on reaction rate material based on the BSNP criteria.
4. Knowing whether student motivation that use innovative e-book is higher than use of school textbook.
5. Knowing whether student learning outcome that use innovative e-book is higher than use of school textbook.

1.6 Benefits of Research

The benefits of this research are as follows:

1. Getting innovative ebook form on the material reaction rate for SMA / MA.
2. As a guideline or input material for chemistry teachers in teaching material reaction rate.
3. Adding to the experience and knowledge of researchers in developing innovative ebook