CHAPTER I

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INTRODUCTION

This part presents the background of why this study was conducted. It covers the research background, research questions, research objectives, and research significance.

1.1 RESEARCH BACKGROUND

In the development of technology, humanity now rides into a new era called the Industrial Revolution (IR) 4.0.. Tay, Lee, Hamid, and Ahmad (2018) mentioned that in IR 4.0, technology evolved into digital world with built-in sensing devices virtually in producing any products and equipment. Technology in IR 4.0 creates a virtual world by digitalizing the real world. It makes real world and virtual world have no gasp. Technology that shows real world in the form of a virtual world is Virtual Reality.

According to NMC (2016, p. 42), virtual Reality refers to "computer-generated environments that simulate the physical presence of people or objects and realistic sensory experiences" (as cited in Pilgrim & Pilgrim, 2016). VR used tools that led people to feel another experience in visual in the form of 3D images. These tools are in the form of headset and eyeglasses blended into one. It can be found anywhere in any electronic store with various prices and features like a controller or magnetic button for aids in VR.

Virtual reality technology is innovation in technology that provides a lot of visual environments and use in everyday life (Yildirim, 2017). This VR break through the innovation in IR 4.0, and day by day, it develops very fast. From the explanation of what VR is, it is related to what IR 4.0 means that there is no barrier between the real world and the digital world.

In the real world, technology for learning activity in Teaching English is rarely used. As a result of preliminary observation in one junior high school in Singaraja, there was a lack of teachers who used technology to teach English in class. The teacher still used conventional way and media to teach their students. It was a monotonous activity which affects the students' interest in learning English.

According to Augusto (2018), characteristics of young learners, especially Alpha generation, is a visual learner. Visual learner means that they will learn fast if they learn through visual environments. One of the technologies that provides visual as the main advantage is VR. VR is new for children in Indonesia, primarily when it was used in school. It was hoped that it would become the most brand-new activity which can improve student's comprehension in English. It has become the most effective media if the design of the media is appropriate and achieve the main objectives of learning.

According to Piovesan, Passerino, and Pereira (2012), VR also makes teaching and learning process more exciting and pleasant for students. It is because VR can provide the real situation created by the computer to make a real experience that can be experienced by student in the class. Pilgrim and Pilgrim said that "VR

has the potential to enhance classroom instruction by providing prior knowledge and motivating students through authentic and engaging experiences" (2016, p. 96).

For the students themselves, they have positive perceptions of using VR device in the English classroom (Norzaimalina, Majid, & Ismail, 2018). By the characteristics of young learner who is a visual learner, VR can be accepted in the English Clasroom with young learners

In the syllabus, especially in grade VIII's syllabus which can be seen in the appendix 02, some materials can be visualized into a Virtual Reality application. Those materials are simple present tense, present continuous tense, recount, and simple past tense, degree of comparison, notice, and expression of 'there is' and 'there are'. Notice and Simple Present Tense can be visualized into a certain topic such as public places. Recount and simple past tense can be visualized in VR by visualized it by the topic given in the syllabus. That topic is people. For a degree of comparison and expression of 'there is' and 'there are', it can be visualized into VR-based materials by converting it. That topic is animals. Those materials are the result of the document analysis that is conducted before.

After preliminary and document analysis that has been conducted previously, developing materials must be done to make it applicable in the Virtual Reality application. Materials were developed by considering 16 aspects promoted by Tomlinson (2011), those 16 aspects are

    a.   Materials should achieve impact.

    b.   Materials should help learners to feel at ease.

    c.   Materials should help learners to develop confidence.

d. What is being taught should be perceived by learners as relevant and useful.

e. Materials should require and facilitate learner self-contribution or how leaner facilitate themselves in the learning activity.

f. Learners must be ready to acquire the points being taught.

g. Materials should expose the learners to language in authentic use.

h. The learners' attention should be drawn to linguistic features of the input.

i. Materials should provide the learners with opportunities to use the target language to achieve communicative purposes

j. Materials should take into account that the positive effects of instruction are usually delayed

k. Materials should take into account that learners differ in learning styles.

l. Materials should take into account that learners differ in affective attitudes.

m. Materials should permit a silent period at the beginning of instruction.

n. Materials should maximize learning potential by encouraging intellectual, aesthetic, and emotional involvement, which stimulates both right- and left-brain activities.

o. Materials should not rely too much on controlled practice.

p. Materials should provide opportunities for outcome feedback.

Those 16 things that promoted by Tomlinson (2011) is a guideline for developing a VR application that can help the students and teachers in the teaching and learning process in the English class.

1.2 RESEARCH QUESTIONS

Based on the problems found in the research background, the problems of this study can be defined as

1.1.2 How to develop Virtual Reality-based learning materials for 8th Grade Students to learn English at Junior High School?

1.1.2 What is the quality of Virtual Reality-based learning materials for 8th Grade Students learning English at Junior High School?

1.3 RESEARCH OBJECTIVES

Based on the problems found that mentioned in the research background, the objectives of this study can be defined into two, there are General Objective and the Specific Objective.

1.1.3 General Objective

In general, this study design and develop a Virtual Reality based learning materials to learn English at Junior High School.

1.1.3 Specific Objectives

a. Develop a Virtual Reality-Based Learning Materials in form of Application for learning English at 8th grade of Junior High School.

b. Measure the quality of Virtual Reality-Based Learning Materials as application to learn English at 8th grade of Junior High School.

1.4 RESEARCH SIGNIFICANCE

By conducting this study, the significance both in theoritical and practical are

1.1.4 Theoretical Significance

Theoritically, this research is to facilitate Junior High School's students in learning English with VR based learning materials. Moreover, this research is to provide the future researcher with empirical study in Virtual Reality for education aspects.

1.1.4 Practical Significance

a. Students: For students, they will be assisted effectively to learn English by using VR-based materials application that meet the 16 aspects by Tomlinson.

b. Teachers: For EFL teachers, they will be benefitted as they could design activities by using Virtual Reality to teach English.

1.5 SCOPE OF THE STUDY

The scope of this study was focused on developing VR-Based Learning Materials in form of android application for VIII grade of Junior High School and measuring the quality of it. The VR application developed by Design and Development design promoted by Richey and Klein (2007). This VR application was a prototype that still needs to be tried out in the future to seek the effects that appeared both in teachers and students.