CHAPTER 1

CHAPTER I

INTRODUCTION

1.1   Research Background

Authentic learning is a concept to bring the real world or real experience close to the students in the class in order to train the students in finding solutions for any problems and associating it to their society or everyday life (Lombardi & Oblinger, 2007). In the 21st century, authentic learning suggests to grab the attention of students and prepare students to face the real problem in society (Arianie, 2017). In short, learning activities in the class should be more contextual to students' everyday life. Learning in this 21st century needs to blend knowledge, thinking, innovation skills, media, Information and Communication Technology (ICT) literacy, and real-life experience (Alismail & Mcguire, 2015). Authentic learning can be designed and developed in the form of the learning material and also the learning activity. The students would understand the material easier and engage in the learning process is the result that expected on authentic learning (Gürgil, 2018).

According to Gürgil (2018), authentic learning is in line with the constructivism learning theory. Suhendi and Purwarno (2018) explained that constructivism learning could open students' curiosity about something new. It emphasized on experiencing, problem-solving, and associating to everyday life. The students have to get experience in solving the problem given at school. Within solving the problem, students get the moral lesson

to be associated with everyday life. Therefore the students would not be afraid of facing the problem in real life.

The use of authentic learning, which brings reality to the class, is more contextual with students' daily activities. As an impact, using authentic learning in the class can make the learning process successful and achieve the learning objective in the class (Gürgil, 2018). The example of authentic learning is when the students learn about the development of plants in biology, they need to see the real plants and observe them authentically.

It also happens in the context of language learning. An authentic text can help to develop students' writing skills (Chamba, Reinoso, & Rengifo, 2019). The authentic text is created genuinely or based on the trustworthy sources to help the students to develop their understanding based on the real issues (Chamba et al., 2019). The teachers can provide the students, news from the newspaper to learn about report text and also argumentative text.

The use of technologies also preferred as a medium to create authentic learning (Cydis, 2015). A video or picture of places to learn how to describe places directly. In this case, the use of technology offers stimulation to bring the real situation to the classroom. This activity will automatically give them experience and construct the information.

Recent studies explained that authentic learning has a role in language learning, especially in learning English. There are five roles of authentic learning that could be beneficial in learning English. First

authentic learning could influence students' motivation (Albiladi, 2019). The authentic learning in the form of authentic learning material and activity was claimed effective and exciting. It could gain the attention of the students to be engaged and motivated in the learning process.

The second, authentic learning can enhance EFL students' writing skill (Chamba et al., 2019). Chamba, Reinoso, and Rengifo (2019) used authentic written material to see its effect on writing skills. The result found that authentic learning was able to improve not only the writing skill but also students' coherence, cohesion, culture understanding, and language proficiency. (Chamba et al., 2019).

Third, authentic learning can foster oral production by involving students in meaningful activity (Ortiz & Cuéllar, 2018). This study was concerning the effect of authentic learning in the form of the task toward students' oral production in communication. The authentic task through a meaningful activity could build students' engagement and confidence (Ortiz & Cuéllar, 2018).

The fourth, authentic learning affects students' listening skill development and lowering students' anxiety in listening to a foreign language (Polat & Erİştİ, 2019). Polat and Erİştİ (2019) used the authentic video to see its effect on students' listening skills of a foreign language. The authentic video could reflect real communication in a foreign language. It is automatically lowering the student's anxiety in listening to a native speaker and respond to it.

And the fifth, authentic learning can increase students' academic achievement (Gürgil, 2018). The four recent studies found that authentic learning has a positive effect on the students in the learning process. The students could answer the questions quickly and correctly. The positive effect also showed by the number of students' participation. As a result, the academic achievement of the students increased.

Technologies use to hold authentic learning in class. One of the examples is the use of virtual reality. Virtual Reality is not only promoting for playing a game but also contributing to the education field (Hu Au & Lee, 2018). By definition, virtual reality or well known as VR is an immersive, realistic, and three-dimensional technology that can bring real experiences to activate and engage the passive student (Hu Au & Lee, 2018). Virtual Reality can bring reality to the class due to the environment in Virtual Reality (VR) can be constructed (Pilgrim & Pilgrim, 2016). The environment can be designed based on the learning objective and the situation. Virtual reality becomes widespread in this 21st century because of its characteristics.

A study was written by Bonner and Reinders (2018) discussing how the teachers use technology like virtual reality in the language classroom. There are two examples of activities using virtual reality used in the language classroom. The first is virtual reality video creation. This activity aimed to provide students with new environments in language production. The main activity is doing a role play by visiting a web page of a talk show program. To get an excellent experience, students need to afford

a high-end VR headset as one of the requirements. The second activity is orienting students to a reading topic through 360-degree videos. In this activity, enriching vocabulary is the main purpose. The students can use standard google cardboard to do this activity and find the 360-degree video as the topic. Those two activities of using virtual reality are in the form of web-page series.

Animals of Nusantara is one of the examples of Virtual Reality in the form of application for language learning purposes. This application was published on the 20th of January 2019 by SLD Team and qualified by Google's terms and conditions. This application can support the material on teaching English for VII grade students of Junior Secondary school in their first semester. The theme of *Animals of Nusantara* is the zoo trip. The theme was unique since the animals are the endemic animals of Indonesia. Nine animals classified into three big groups. The first group is Wallace's animals that are consisting of Javanese Rhinoceros, Sumatran Elephant, and Tiger. The second group is Weber's animals, including Sandalwood Pony, Sun Bear, and Tapir. And the third is Spider Monkey, Bird of Paradise, and Kangaroo as the endemic animals from Australis animal. In each scene of the animal, there is a board of information for the animals. By *Animals of Nusantara* VR application, the students can be closer to the real situation. The students who have never go to the zoo could get the experience of it virtually.

In line with the implementation of curriculum 2013, virtual reality fits the fourteen (14) principals in curriculum 2013 (Scarino & Liddicoat,

2009). The first curriculum 2013 offers the chance for students to explore more about the materials. By virtual reality, students can explore the environment through the 360-degree experience of learning (Pantelidis, 2012). The 360-degree experience gives the students a chance to approach the three-dimensional object, turn around, move forward, and also backward.

Second, curriculum 2013 provides unlimited sources for the learning process. This statement means sources are not only from the textbook and teachers' explanations in the class but also from the environment. Students do not only learning from the book but also the material provides in the virtual reality in three-dimensional form.

Third, the scientific method uses in implementing the curriculum in 2013. This method involves the process of observing, questioning, exploring, associating, and communicating. The implementation of virtual reality can support the students in exploratory steps. Students could observe and even interact with the object and environment.

Fourth, competency-based learning uses to change content-based learning. The activities from the use of virtual reality can be designed as a follow-up activity. The activity could stimulate the students' competency. The learning objective concerns the students' competency instead of knowledge about the material. As a result, the students could use the knowledge in real life.

Fifth, curriculum 2013 promotes integrated learning for students. The teachers can create integrated learning for students by using virtual

reality as a medium. There are many types of media by using virtual reality mode. The creativity of the teachers in need to design creative integrated learning that suitable for students.

Sixth, open-ended answers are expected from the students. To get the open-ended answer from the students, the teachers need to design the appropriate follow-up activities. The teachers can open a discussion session instead of giving a multiple choice. By doing that, students are expected to answer or discuss the topic using an open-ended answer.

Seventh, curriculum 2013 promotes learning by doing to make the students construct the concept. This point is related to the constructivism learning theory that the students will get the information by their experience. Students can construct the concept from the information gotten from observing the object and environment in virtual reality.

Eighth, improvement and balance of soft skills and hard skills are important. In this case, the creativity of teachers in designing the activity is matters. Doing teamwork is a way to train students' soft skills. Besides, a hard skill such as speaking, writing, listening, and also reading could be trained in the activity.

Ninth, curriculum 2013, paying attention to the sustainability of learning. Virtual reality is not only media that can be used at school but also at home with friends. In *Animals of Nusantara*, the students can find another endemic animal from Indonesia as the sustainability of learning. Also, *Animals of Nusantara* application can be used at home with parents' supervision.

Tenth, the teaching and learning process needs to be the reflection of education mottos by Ki Hadjar Dewantara. The curriculum expects that the teaching and learning process could give a good model (*Ing Ngarso Sung Tulodo*), enhancing students' desire or motivation (*Ing Madya Mangun Karson*), and improve the creativity of the students in the learning process (*Tut Wuri Handayani*). The animals in *Animals of Nusantara* virtual reality could be a good model of endemic or local animals from Indonesia as the reflection of *Ing Ngarso Sung Tulodo*. It could give knowledge from students to know and aware of endemic animals. The teachers can design a game as the follow-up activity of *Animals of Nusantara* VR. *Guess Me and Spell My Name!* is an example of a game-based activity to learn about the characteristics of animals. *Let's Count!* is a game-based activity to learn how to write and spell the name of animals. This game could motivate the students to learn as the motto of *Ing Madya Mangun Karson*. The creativity from the teachers to design meaningful activities to train students' creativity could be the reflection of *Tut Wuri Handayani*.

Eleventh, the new paradigm of learning everywhere is promoted in curriculum 2013. Students could learn at home, school, and also in society. At home, the students are supervised by the parents, and the school teachers took the same role. In society, students can learn by their surroundings and learn by observing society.

Twelfth, this curriculum believes that everyone is the teacher who can share the information, everyone is students who are still learning, and everywhere is a class to study. Students can share the information with their

parents or learning from someone else by one product of virtual reality. Also, they can share the information with their friends and discuss it.

Thirteenth, the use of technology to improve the efficiency of the teaching and learning process is needed. *Animals of Nusantara,* as the example of virtual reality, can be used continuously. *Animals of Nusantara* as a supplementary media can be implemented at the beginning of the lesson, in the exploring phase, or as a media in enrichment activity at home. A study also mentioned that students that use virtual reality could answer the question quickly and correctly (Tutschek & Ebert, 2018).

And fourteenth, the curriculum expects that students will be able to be tolerant of background and individual differences (Scarino & Liddicoat, 2009).In the implementation, the limited equipment to use VR at school trains the students to share the product of virtual reality to their friends in the class and respect others.

Animals of Nusantara is one of the examples of virtual reality products for language learning that is already developed by the SLD Team. *Animals of Nusantara* are in the form of an android-based application. The content of local animals is the uniqueness and advantages of this application. It could give them information on local animals and enrich the awareness of it. According to an informal interview with the developer of *Animals of Nusantara*, this product was tried out to thirteen participants of English teachers in Buleleng regency. From the process of trying out the product found, there are two difficulties faced by the teachers. The first difficulties were dealing with the tutorial on using the *Animals of Nusantara*

VR. The second problem was designing the follow-up activity for *Animals of Nusantara*.

These problems were in line with the study conducted by (Habibu, Mamun, & Clement, 2012). This study conducted to check the difficulties faced by teachers in using Information and Communication Technology (ICT) in the teaching and learning process. The result found that teachers have a desire to integrate ICT in the teaching and learning process in the class, although they found many difficulties. Those difficulties were the lack of genuine software, inadequate computer in the classroom, low-speed internet, lack of motivation from both teachers and students side to use ICT, lack of proper training skills, unavailability of latest ICT equipment, lack of expert technical staff, poor administrative support, and also poor course curriculum. Two out of nine difficulties are dealing with teachers' motivation and lack of proper training skills

Based on the explanation, the development media to provide information about *Animals of Nusantara* Virtual Reality application is needed. The information on the product, the way to use the product, and the activities design written in the form of a handbook. This handbook developed by using Design and Development research promoted by Richey and Klein (2007). The handbook developed for VII grade of teachers in Junior High School since the material of the media is suitable based on the material contains in the syllabus.

1.2   Research Questions

1. What are the problems faced by the teachers in using *Animals of Nusantara* virtual reality to teach English?

2. How to develop a handbook for *Animals of Nusantara* virtual reality to teach English?

3. What is the handbook's quality developed for *Animals of Nusantara* virtual reality to teach English?

1.3   Research Objectives

1. **General Objective**

   In general, this study analyzed the problems faced by the teachers in using *Animals of Nusantara* virtual reality, develop a handbook for *Animals of Nusantara* virtual reality to teach English**,** and describing the quality of the handbook.

   Specific Objectives

   a) Explanation of the problems faced by the teachers in using *Animals of Nusantara* virtual reality application to teach English.

   b) Development of a handbook of *Animals of Nusantara* contains authentic learning activities by using Virtual Reality, an immersive technology.

   c) A description of the quality of a handbook of *Animals of Nusantara* includes authentic learning activities by using Virtual Reality, an immersive technology.

1.4   Research Significance

1. **Theoretical Significance**

   Theoretically, the result of this study has analyzed the problems faced by the teachers in using *Animals of Nusantara* virtual reality application and facilitate the teachers with possible activities in a handbook for using *Animals of Nusantara* for teaching English using authentic learning through virtual reality as an innovative media.

   Practical Significance

   a. **Students:** The results of this study used to improve students' motivation, achievement, and performance in English class

   b. **Teachers:** The results of this study would be useful for teachers to be more creative in teaching using ICT media.

1.5   Scope of the Study

The scope of this study focused on developing an authentic learning handbook for *Animals of Nusantara* virtual reality application for 7th-grade students of junior high school. The handbook developed by the design and development method promotes by Richey and Klein (2007) by following the ADDIE model.