CHAPTER I

INTRODUCTION

1.1 Background of the Study

The Industrial Revolution 4.0 has entered human life. The Industrial Revolution 4.0, known as the 21st century era, is an era of change that aligns with technological developments. This change is marked by increased connectivity, interaction, development of digital systems, artificial intelligence and virtualization (Lase, 2019). Humans in the era of revolution 4.0 are required to have the ability to think creatively, collaborate, have work enthusiasm, and have the ability to adapt to new environments (Panprase, 2018). Technological developments in this era have many effects on various aspects of human life, one of which is education. As stated by (Lase, 2019) One of the important points that must be improved is the quality of human resources, which is realized through education. In other words, education is the basis for a country's success in facing the industrial revolution 4.0.

The education needed today is education that can improve the quality of human resources. Students are directed to have the skills needed in the 21st century era, including critical thinking, creative thinking skills, and problem-solving. To master these skills, literacy plays a very important role (Zubaidah, 2020). Literacy allows students to understand every skill needed in the 21st century. According to Trilling & Fadel (2009), there are three main skills that students must master in 21st-century education: career and life skills, digital, technology media, and literacy skills, and learning and innovation skills.

(Zubaidah, 2020) also stated that the principle of education in the 21st century era is that education must be student-centered, collaborative, contextual, and integrated with society. At this point, the teacher plays a very important role in realizing this learning.

The technological developments that occurred in this era are very useful, especially in the field of education. Information, communication, and technology (ICT) can support teachers and students in the learning process in the 21st century. According to (Almeida & Simoes, 2019), 21st-century learning follows learning by doing concepts, which requires students to participate in the learning process actively. Utilizing technology in learning can allow students to access the information they need easily so that they can play an active role in the learning process. Additionally, utilizing technology in the learning process can increase students' independence, creativity and activeness in gathering the information needed for learning. Technology will help students learn foreign languages, especially English, because they have many resources to use to improve their skills in English. As stated by (Pramana et al., 2020) the use of ICT can increase effectiveness in the learning process and help teachers achieve learning goals.

But in fact, several schools in Indonesia still use old learning methods in teaching English to students. Learning methods that still apply teacher-centered make students less active in participating in the learning process. This makes students only pay attention to the lesson rather than explore the learning more deeply. Teachers tend to use only textbooks the school provides to teach students, which makes students bored easily when learning. Of course, this will affect the learning outcomes of less active students seeking the information needed to

broaden their insight. So, the use of technology is highly recommended as a learning medium. Utilizing the use of technology in learning can attract students' interest in learning so that it can increase students' interest, creativity and activeness when participating in learning. So, innovations are needed to develop English learning media that align with technological developments.

Technology provides many benefits for human survival, including in the field of education. Developers in education are increasingly more creative in designing appropriate learning media that match this era, one of which is by developing based-game learning media. Based-game learning media is one of the innovations in the world of education that has been very well received. As stated by (Bela & Sari, 2020), Involving digital games in the learning process can make the learning atmosphere more enjoyable. Using games in the language learning process can provide enjoyment and relaxation for students and can also encourage students to use language more creatively and communicatively. Also, teaching language to young learners will be more effective and enjoyable if games are involved in the learning process because, for children aged 5-12 years, games are a natural part of their lives. That why website based-game learning media will have a positive impact if used for language learning (Yolageldili & Arikan, 2011).

Learning media in the form of gamification is one of the popular English learning methods in this era. According to (Kristiadi & Mustofa, 2017), “gamification is the application of game elements in a non-game context”. In education, gamification positively impacts language learning, where students become more motivated to learn, are more interested in learning, and enjoy the language learning process carried out in class (Hamari et al., 2014). Gamification

applies the concept of games by including or presenting learning material in a digital game. So, the game here not only refers to a fictional world but can be adapted to contextual learning material with a more interesting presentation. Gamification as a learning method has several characteristics, including challenges, rewards and competencies that can meet competency needs in the 4.0 revolution era, including 4C competencies.

However, in the process, there are still some teachers who have not used technology in their learning process. They still use conventional teaching methods, using only textbooks in the learning process. Teacher-cantered learning has yet to be widely used in Indonesia. Some schools persist in using conventional methods in teaching and learning activities. In Bali, several elementary schools still apply conventional methods and do not use technology as new learning media. This is due to the limited learning media available for teaching. Currently, technology has become a friend for students because they were born and grew up together with technology. So, teachers' awareness of using technology in learning needs to be increased. Elementary school is the first level of receiving English learning, which needs more implementation in attractive learning methods.

Researchers have made observations at one of the elementary schools in Singaraja, SDN 1 Astina. During observations, researchers found several problems related to teaching English at school. Conventional teaching methods are still used in teaching and learning activities that do not apply the use of technology as learning media. Thus, this school was chosen as the setting of the study in developing the gamification teaching model. The gamification that will be developed is in the form of a website-based game. This development research

aims to help teachers and students find fun learning methods to make learning more enjoyable for students as the first English students' receiver at their age.

Apart from that, students at school also think that English is difficult to learn. Students are still shy about giving opinions during discussion sessions for fear of being laughed at by their friends. Not only that, monotonous learning media also makes students easily bored and lazy to participate in teaching and learning activities. So, the application of technology-based learning methods needs to be improved. The product is expected to be accessed via smartphone, and based on the results of observations made directly, all students have their own cellphones so that all students can access the product that will be made. Therefore, researchers decided to research here and develop a website-based game as an English learning medium for students. In addition, developing this product is expected to help teachers and students create a fun English learning atmosphere.

1.2 Identification of the Problem

Based on the background described, teachers have not utilized current technological developments properly, especially in the learning process. Currently, teachers still use conventional methods in teaching where this method focuses on the teacher so that students rarely get involved directly in the learning process. The learning media teachers use is still limited to textbooks and syllabus, which makes students bored more quickly while learning. Apart from that, in this era of revolution 4.0, the learning media used in learning still needs to be improved and keep up with current developments. Besides that, the students also considered that English is one of the most difficult subjects for them.

Based on the research background above, there are two problems identified:

1. The teaching methods is still relied on traditional approach which also only focus on the use of textbook as the learning media.
2. The use of technology-based learning media is still limited in the learning process.
3. The monotonous learning media used by teachers makes students quickly bored in learning.

1.3 Limitation of The Problem

The limitation of the problem in this study aims to limit the problem so as not to spread. This research focuses on developing and applying gamification in English subjects for fifth-grade students in the second semester. This research will use Design and Development (D&D) research method and will be support by ADDIE development models that consist of five stages: analysis, design, development, implementation and evaluation. The final product of this research will be implemented for fifth-grade students in the second semester.

1.4 Research Questions

The research question of this study formulated as follows:

1. How is the development process of website based-game as English learning media for fifth grade elementary school students?
2. What is the quality of English website based-game as English learning media for 5th grade elementary school students in second semester?

1.5 Research Objectives

Based on the research problem above, the expected objectives of the researcher are as follows:

1. To identify the development process of gamification in the form of website based-game as English learning media for fifth grade elementary school students.
2. To analyze and determine the quality and feasibility of the website based-game as English learning media for 5th-grade elementary school students.

1.6 Research Significances

The benefits achieved and expected from this research are as follows.

1. **Theoretical Significance**

   The results of this study can provide understanding and development of knowledge in making innovations in learning and describe the benefits of science related to gamification in a broader scope.

2. **Practical Benefits**

   In addition to theoretical benefits, this research also has practical benefits. These practical benefits have an impact on various parties as follows.

   a. **For students**

      This research is expected to create fun and meaningful learning for students. So that students do not get bored easily and are more motivated to participate in learning activities.

   b. **For teachers**

      This research is expected to help teachers. It can help teachers create a pleasant learning atmosphere and get references regarding interesting learning media.

   c. **For other researchers**

The research is expected to be a reference for future researchers when researching the development of gamification as an English learning media.

1.7 Expected Product Specification

The final product in this study is in the form of website based-game as English learning media in accordance with the syllabus of fifth-grade elementary school students in second semester. The explanation of gamification will be describe as follows:

1. The product developed will present material for fifth-grade students in the second semester based on the syllabus, which is designed as attractively as possible by using images, colors, sounds, and animations that foster student interest and motivation in learning English with the help of technology.
2. Teachers and students can access this learning media via android smartphones by downloading this application on the play store and can be used independently by students and teachers anytime.
3. This gamification learning media contains English material according to the syllabus for fifth-grade students in second semester.
4. Gamification learning media combines elements of words, pictures, animations, sounds, and examples that can add insight to students.

1.8 Development Assumptions and Limitation

Gamification learning media is developed based on the following assumptions:

1. The gamification learning media is designed to be an attractive learning media that can increate students interest and motivation in learning English.
2. Gamification learning media expected can help teachers provide students with exciting and fun learning.
3. Through gamification, learning media is expected to help students understand the existing material to improve their critical thinking skills.

The limitations in developing this gamification learning media are as follows:

1. The gamification learning media developed is only limited to the syllabus for fifth-grade in the second semester.
2. The media developed is based on the needs of fifth-grade students of SDN 1 Astina Singaraja.

1.9 Definition of Key Term

In this section, the researcher explains the key important terms as a guide for conducting research. There are two key terms, conceptual definition and operational definition, which will be described as follows.

1.9.1 Conceptual Definition

The conceptual definition is a statement from experts relating to the theory used in this research. There are several theories used in this research, including:

1. **Education in Industrial Revolution 4.0**

   Learning in the Industrial Revolution 4.0 era is emphasized to improve the quality of creative human resources and by the demands of the Revolution

era 4.0. Therefore, learning in this era is focused on student-centered learning. Apart from that, students are also required to be active and creative and always develop 4C abilities (collaboration, critical thinking, creativity, and communication) (Putriani & Hudaidah, 2021).

2. **Teaching English for Young Learners**

   Young learners are children aged 6-12 years old studying in elementary school. Children at this age like to play and easily understand things, especially language (Yolageldili & Arikan, 2011).

3. **Game as Learning Media**

   Games have the ability to reduce students fear and anxiety learning English, making students more motivated and willing to participate actively in the learning process so it can creates a more enjoyable and engaging learning environment (Eltem & Berber, 2021)

4. **Gamification**

   Gamification is a based-game learning media that can increase students' interest and motivation in learning (Hamari et al., 2014). As a learning medium, gamification has the basic elements of gamification, namely points, badges, levels, leaderboards and avatars (Fadilla & Nurfadhilah, 2022).

1.9.2 Operational Definition

Operational definitions are used to assist researchers in conducting correct research. There are several operational definitions in this research, as follows:

1. **Education in the Industrial Revolution Era 4.0**

   The use of technology in education 4.0 era have an important role that can improve the quality of the learning process and will be impact to the human resource. Games are one type of technology that can be used in education because through game the learning environment can be more enjoy for students. This research is developing learning media in the form of website-based game that can be use by students in learning English.

2. **Teaching English for Young Learners**

   Elementary school students are categorized as young learners with an age range of 6-12 years. Children like to play at this age and tend to get bored easily when studying. Therefore, this research will develop a based-game learning media for fifth-grade students to learn English.

3. **Gamification**

   Gamification is widely known and used as a learning medium, one of which is in learning English. Gamification can increase students' interest and motivation in learning English. This research was conducted to develop a website game based English learning media based on the syllabus and several gamification elements, namely points, badges, levels and challenges.