

# CHAPTER I

## INTRODUCTION

This section offers an overview of the research investigation, incorporating several essential components including the study's context, identification of the problem, limitations of the problem, research questions, research goals, significance of the research, and explanations of important terms.

### 1.1 Background of the Study

In this rapidly developing era which a Fourth Industrial Revolution Era, technology has grown become more crucial for every individual for their life. Elementary schoolers can already use their mobile phones to send text messages, kindergarten kids are able to operate an iPod Touch, and teenagers are becoming more socially active in the virtual world through their blogs or YouTube channels (Wong, 2015). It can be said that humans now live in two worlds: the real-life world and the virtual world (Gunadi et al., 2022). According to Maslin, (2021) this era is often called as the technology era. It is not surprising that nowadays technology is often collaborated with all aspects of life such as education. Because of that, many schools are already implementing technology as a supporting medium. They provide laptops or gadgets, improve internet access, and develop computer literacy programs for both teachers and students (Gopo, 2022). The role of technology in education can be included in four parts which are the part of curriculum in education, instructional delivery system, as supporting media and tools to support the entire of learning process. Education must also follow the

existing developments and create some changes that follow technological developments. Maslin also stated in his article that modern students are prefer to use technology as their learning equipment or tools. It stated that it is more interactive to use technology in the learning process because students will easily transfer the knowledge when it is assisted with the use of technology. The involvement of technology in education is expected to obtain creative and innovative students to face the 4.0 revolution century industry (Delipiter Lase, 2019). Another supporting data is stated in Ghavifekr and Rosdy (2015) as cited in Hashim (2019) students are more familiar with technology and will learn better in a technology-based environment. Hence, teachers are necessary to adapt and learn the changes to bring a new kind of learning experience (Ling & Yunus., 2017, as cited in Hashim, 2019). Moreover, we should pay more attention to the use of methods to improve creative thinking by facilitating technology that helps improve the creative and critical thinking of students (Alfar, 2002; Mubarez and Ismaiel, 2010; Aljaraiwi, 2019).

From the explanation, it shows that technology in education is an important point in order to make the learning process become more meaningful and interactive. But, in fact, in reality, there is still a lot of teachers who runs the learning process in a traditional ways. Conventional ways is when the learning process still requires a person to run the learning process and should be at a certain place or specific time (Sholeh, 2020). In other word, conventional (traditional) approach is involving teacher and students to be gathered together and most of the assignment or exam are still paper-based. The learning process also still relies on the use of textbooks. This kind of learning process may cause

boredom from the students because the teacher only uses one learning media and the learning process is still centered on the teacher which most of the explanation about the material will only delivered by the teacher. Educators must also understand that the society has changed as well as the ways of learning in the classroom therefore as teachers, need to develop skills in implementing technology and change the strategies to support students (Lopez-Lopez, 2012).

In the 21st century, learning is no longer using teacher-centered, but it should have been student-centered. Students are expected to master 21<sup>st</sup> century competencies, which include critical thinking, problem solving, communication, and collaboration. (Gunadi et al., 2022). To master those 21st-century competencies, it is crucial for students to understand literacy, and promoting English literacy among students can be an excellent option for improving their English language skills. (Ratama et al., 2021).

Based on the preliminary observation conducted at SD N 1 Astina, which focuses on the English learning process, the researcher obtained data indicating that the teacher relies primarily on textbooks to teach students, resulting in a teacher-centered rather than student-centered learning process. Technological tools have not been utilized as supporting mediums for teaching. The learning activities were mostly led by the teacher, with the teacher explaining the material page by page. Although the teacher occasionally gave students the opportunity to answer questions, the learning process still remained primarily focused on the teacher. The researcher also observed that some students were not paying attention to the teacher's explanations, while only a few more "dominant" students actively participated by raising their hands. These observations indicate the need

for implementing changes in the learning process. From the article by Chin Teoh et al., (2021), using conventional approach in teaching and learning usually makes the students become passive listeners and rarely want to give responses or comment to the teacher. Moreover, teacher might be “spoon feeding” or too focus on their responsibility so the learning process more dependency on their teacher.

These changes can be started from the selection of methods in learning. In fact, there are various types of learning methods that teachers can apply to make an interactive learning circumstance. Nowadays, gamification become one of the popular methods used in education that requires teaching and learning activities to be more fun and enjoyable. According to Lee and Hammer (2011) as cited in Aljraiwi (2019) gamification in learning has the benefit to enhance educational awareness, providing useful enrichment information, increasing productivity, creates a healthy competitive spirit in the participants.

The use of gamification as the method in the learning process can be applied using the use of game as the learning media. It is a suitable collaboration between the method and the learning media used. As we know, modern students tend to interest with the learning process that assisted with technology especially games. Students need to be trained to use another learning media that based on technology so they do not only get learning experience from the conventional learning process with the use only textbooks but also get new experience from technology. In the 21st century, students need to be more aware of and accustomed to technology. Involving technology in education is expected to obtain creative, innovative and competitive students to face the Fourth Industrial Revolution Era (Delipiter Lase, 2019). It is also can give both teachers and

learners new knowledge, skills, and experiences through the use of technology in classroom (Ramaila & Molwele, 2022). Choosing the right learning media also can give a lot of impact to the learning process itself. The learning media can be works to attract students' interest to keep up with the learning process (Pambudi, 2018). Learning media has a great potential to get students' motivation in learning and participate to build creative communication (Satria & Herumurti, 2021). However, not all types of learning media are suitable for implementation, especially for young learners. That is why teachers need to understand the characteristics of different learning media and the specific needs of their students (Wahyuni & Tantri, 2020). Therefore in this case, the suitable learning media to be implemented that based on technology, especially for young learners to learn English language is game.

Games are usually known as an activity to fill spare time without any specific purposes (Timothy et al., 2020) but now they can be used as a learning media in the learning process. Games become more important for learners and also the teacher not only because it provides enjoyment while playing them but it is also because they can encourage and motivate students to think creatively and use their language in a communicative manner.

In addition, the idea of simplifying and enhancing the use of technology has led many programmers to develop a web-based game. These games are created to provide a seamless and accessible experience for users. Instead of requiring users to download and install games on their devices, web-based games can be played directly through a web browser. One of the primary advantages of web-based games is their ease of access. Players do not need to go through the process of

downloading and installing large game files. They can simply click on a link or type in a URL to access the game instantly. The convenience makes it easier for both casual and dedicated gamers to jump into the action without any delays.

There is some previous researches from different resources that the result showed using game for the implementation of gamification is the best way to support the learning process in this era. Some of the research said that it can increase student's motivation, make the learning process more fun and make the learning process more student-centered and based on technology.

The previous research is conducted by Camilleri & Camilleri, (2019), that use serious games to obtain students' opinion and perceptions about the utilization of electronic games in education. The result of this research showed that students can be more active in developing ideas and construct relationship with their own minds through this gameplay. Pambudi et al., (2018) conducted the same research that developing a learning media device called Megie (Media Gamification in Education) and has been successfully installed in Android. The result of this study showed that the combination of gamification and mobile learning are able to increase students' motivation. Using some kind of educational games in the learning process allows students to be more independent and take more active role and not always rely on the lecturer. This research also showed that using game application will lead the learning process into student-centered learning. Another research conducted by Audia et al., (2021) that developing a learning media called Smart Card using the ADDIE development. The findings indicated that the created product is suitable for implementation, as it effectively enhances student motivation and prevents them from experiencing tedious learning situations.

From those studies that have been explained, it can be concluded that using game in the learning process give a lot of benefits. It can support the learning process and turned the conventional learning process into technology-based learning and also turned the activities into student-centered.

With so many advantages of using game in learning process, there is still a few teacher that using technology such as game as their supporting learning media because most of them still use conventional learning where the learning process is only using textbooks. Based on Andika et al., (2023) out of a total of 98 elementary school teachers sampled in Buleleng Regency, 52 teachers (53.06%) were categorized as having a sufficient level of proficiency in using digital games as a learning medium. Additionally, 2 teachers (2.04%) were categorized as using digital games very frequently in the learning process. The research findings also revealed that the most commonly used application for the teaching process is Quizziz, which allows teachers to easily copy and paste questions that have already been prepared in a Word document.

Furthermore, that case also occurred at SD Negeri 1 Astina, which was the setting of the research. Based on the results of observation and interviews, the use of games or technology as learning media is still rare. The teachers still focus on conventional teaching methods and only use textbooks as the main source for teaching English. As a result, many students feel unmotivated and bored during the learning process. Some of them play and joke around with their friends, paying little attention to the teacher.

Based on the case, the researcher conducted design and development research to develop game. This research aims to develop a web-based English

game that can support elementary school students in learning English in the current era. The development of this game aims to make the teaching and learning process more enjoyable and interactive for both teachers and students.

## **1.2 Problem Identification**

Based on the research background, the researcher observed several problems that were identified in SD Negeri 1 Astina, the setting of the research. The problems are as follows:

- a. The utilization of technology is still limited and has not been fully optimized by the teacher.
- b. The teaching methods that still rely on traditional approaches which also only focus on the use of textbook as the learning media.
- c. The students' access to digital resources for learning is limited.
- d. The lack of student motivation and enthusiasm towards learning due to the absence of innovative and interactive teaching method.

## **1.3 Problem Limitation of the Study**

This study will only focus on the development and implementation of the English learning media in the form of game for 6<sup>th</sup> grade elementary school students in the second semester. The development of the product will use the Design and Development (D&D) method and supported by ADDIE (Analysis, Design, Development, Implementation and Evaluation) model.



#### **1.4 Research Question**

This study aims to develop English game-based learning media and implement it to 6<sup>th</sup> grade on second semester students. Based on the description stated above, the following question can be formulated as follows:

1. How is the development process of an English web-based game for 6<sup>th</sup>-grade elementary students in an English lesson?
2. What is the quality of English web-based game as learning media for 6<sup>th</sup> grade students in the second semester?

#### **1.5 Research Objective**

Based on the research question that has been stated above, the research objective of this research is as follow:

1. To identify the developing procedures of gamification as the educational learning media in the form of English web-based game for 6<sup>th</sup> grade students in elementary school for English lesson.
2. To analyse and evaluate the quality and feasibility of the English web-based game as learning media for 6<sup>th</sup> grade.

#### **1.6 Significance of the Study**

The significance of this study will explained both theoretically and practically in the following:

##### **1.6.1 Theoretical Significant**

- a. This study is expected to give a contribution for the future study that has the same topic concerning the development of learning media in the form of English web-based game.

- b. The result of this study is expected can be used as a reference and give information related to development web-based game application for English lesson.

### **1.6.2 Practical Significant**

This study is expected to give a beneficial contribution for all participants as follow:

#### **a. For Students**

This research aimed to give a benefit for 6<sup>th</sup>-grade students of elementary for using an attractive learning media. Furthermore, this study is expected to help students to enhance their motivation and interest in the learning process, especially in English learning.

#### **b. For Teacher**

This study is expected to give a contribution to the English teacher in order to inspire them to develop an appropriate game-based learning media or using technological tool such as game to support the learning process.

#### **c. For Other Researcher**

The result of this study is expected can be used as a reference or resource for other researchers that conduct a similar study about developing web-based game as educational learning media.

## **1.7 Definition of Key Terms**

In this sub-chapter, the key term will be defined as the guidelines in conducting the research. There are two definition of key terms that will be explained which are conceptual definition and operation definition. The further explanation of conceptual definition and operational definition will be explained as follow:

### **1.7.1 Conceptual Definition**

#### **a. The 21<sup>st</sup> Century Skill**

The 21<sup>st</sup> century skill is consist of four skills that need to be mastered by the students, namely critical thinking, communication, collaboration, and creativity as well as mastering technology, information and communication (Hikmat, 2022). Furthermore, these skills enable students to effectively solve the problems they encounter in their lives (Ratama et al., 2021). In addition, this era is characterized by rapid advancements in science and technology (Panggabean et al., 2021).

#### **b. Gamification**

According to Hidayatulloh et al., (2021), gamification is the implementation of game design principle to attract attention, enhance enjoyment and engagement. Some part of the game that usually used are point, badges, leaderboards, rewards, and punishment systems.

#### **c. Game as Learning Media**

Games can indeed serve as a supporting medium for traditional teaching methods, providing students with new and engaging learning experiences. In addition to subject knowledge, games can help develop a range of important skills, including problem-solving, critical thinking,

creativity, teamwork, and adaptation (Zirawaga et al., 2017). Furthermore, using game as learning medium can make the learning situation more enjoyable and alleviate the fear and anxiety often associated with traditional lessons (Usta et al., 2017 as cited in Eltem & Berber, 2021).

#### **d. Web-Based Game**

Web-based games have become an alternative solution to support the learning process, as they rely on technology and can be easily accessed.

Web-based game is an application that placed on internet servers that helps people to access the game with just an internet connection and a web browser so users do not need to install or download the game to play it (Hanafie et al., 2022).

### **1.7.2 Operational Definition**

#### **a. The 21<sup>st</sup> Century Skill**

The 21st century skills, consists of the 4C skills (critical thinking, communication, collaboration, and creativity), are indeed crucial for students. In today's era, the use of technology in the learning process plays a significant role in helping students enhance these skills. Therefore, the aim of this study is to develop a web-based game as a learning medium that leverages technology.

#### **b. Gamification**

Gamification can be implemented to support the learning process that can increase students' motivation and attention using some gamification elements. This study was developed the web-based game

using gamification elements such as point, badges, rewards, and punishment systems.

**c. Game as Learning Media**

Game as learning media is important as a supporting learning medium for traditional teaching method. As such, this study aims to develop a web-based game as a learning medium to support traditional teaching method and enhance the overall learning experience for students.

**d. Web-Based Game**

A web-based game is a game hosted on a website. To access the game, users only need an internet connection and can simply type the game's URL or address into a web browser. The use of web-based games in education provides ease of access since users do not need to install or download the game.

