CHAPTER I

INTRODUCTION

Chapter I presents the research background, identification of the problem, the research scope, research problem, research objectives, specification of the developed product, and the significance of the study.

1.1 Research Background

Indonesia has made enormous strides to improve the quality of its education system. It is proven by the effort of the Indonesian Government to develop smart and internationally competitive Indonesia citizenship by the year 2025. It is written on the vision of the Indonesian Long-Term National Educational Development Plan (RPPNJP) 2005-2025. It encourages individuals to compete successfully for jobs and other opportunities in the global world by the year 2025 (Afandi et al., 2019; Rosser, 2018). As a result, for more than a decade, the Ministry of Education and Culture has planned to make Indonesia's education system 'work' and exceed the needs of the global demands.

The initial idea has been stated in Indonesian Regulation from the Ministry of Education and Culture Number 20, 21, 22, and 24 the Year 2016 which covers the competency standards of graduates (attitudes, knowledge, and skills), content standards, process standards, and core and basic competencies, which are the prominent principle of 21st-century education standards. The principal standard that refers to 21st-century education standards can be seen on the competency standards of graduates in the skills dimension. It is stated that the graduates are

expected to have the skill to think and act creatively, productively, critically, independently, and collaboratively. The graduates are also expected to be able to learn independently from other resources (Afandi et al., 2019; Howlett & Waemusa, 2019; Rosser, 2018).

In the sense of achieving educational quality and better learning outcomes, Indonesia has undergone several changes along with the changing of 21st-century education paradigm (Afandi et al., 2019; Rosser, 2018; Susilo, 2015). According to the Law Number 36 the Year 2018, the Ministry of Education and Culture has envisaged preparing the students for success on their career and life skills domain of the new learning paradigm by implementing and intensifying the use of technology in the process of learning. It embodies the Indonesian Partnership 21st-Century Skills Standards or IP-21CSS framework that covers 4Cs skills (critical thinking, creative thinking, collaboration, and communication), ICTs (technology, media, and information literacy), spiritual values (religious beliefs and spiritual awareness), and character-building (Afandi et al., 2019; Kivunja, 2014; Perubahan Atas Peraturan Menteri Pendidikan Dan Kebudayaan, 2018).

The standards and initiatives are notably introduced globally by the Common Core State Standards and Partnership for 21st-Century Skills (P21). These standards represent the adaptability through the advancement of technology in the global era to promote a framework incorporating with 4Cs (critical thinking, communication, collaboration, and creativity) and digital literacy skills (National Governors Association Centers for Best Practices & Council of Chief State School Officers, 2010; Partnership for 21st-century Skills, 2012).

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Along with this, the new learning paradigm demands language learners to develop digital literacy skills. Son et al. (2017) also highlight that developing digital literacy skills and strategies are essential for language learners and teachers in digitally connected environments. In this context, teachers need to implement effective language learning strategies on technology-enhanced language learning (TELL) environments to prepare learners in the complex and competitive 21st Digital age (Kivunja, 2014).

In the Indonesian context, several challenges faced by teachers and learners in embedding 21st-century learning. The challenges can be seen from the analysis towards current situations of the premature changing of the curriculum in Indonesia (Retnawati & Nugraha, 2016; Sukasni & Efendy, 2017; Sundayana, 2015; Rosser, 2018) and the analysis of cultural and philosophical values hold by the teachers and learners (Ardi, 2016; Benson, 2016; Dardjowidjojo, 2001, 2006; Santosa, 2017).

Several studies reveal that the curriculum in Indonesia has significantly changed over time. The problem happens in its implementation. Some studies reveal that teachers' readiness to implement the curriculum has a low correlation to their competence (Retnawati & Nugraha, 2016; Rosser, 2018; Sukasni & Efendy, 2017; Sundayana, 2015).

Teachers' competency in Indonesia needs support and improvement for their professional and pedagogic skills. Teachers' Competency Test Result Nationally in 2015 shows that teachers need to develop greater professional capacity and be held more accountable for the result of *Hasil Ujian Kompetensi*

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(UKG) Nasional they achieved (Hendarman, 2016). Rumahlatu et al., (2016) also add that not only their readiness which is not yet optimally prepared, but there is also an inhibiting factor that the lack of handbooks to equip the 21st-century learning and innovative skills in the classroom for teachers and students.

Regarding to the analysis above, Rosser (2018) conducted a comprehensive analysis of Indonesian Students for their educational performance. In his report, Indonesia's performance in the Program for International Student Assessment (PISA) in 2015 showed that 42 percent of Indonesian failed to meet the minimum standards in three tests like reading, mathematics, and science. Rosser (2018) also reports the result from TIMSS (Trends in International Mathematics and Science) and PIRLS (Progress in International Reading Literacy Study) which has shown that Indonesia has left behind from neighboring countries such as Malaysia, Vietnam, and Thailand. Those assessments reveal that Indonesia continues producing graduates who lack the skills that employers need in the 21st-Century Learning.

Another contributing problem faced by the learners in Indonesia can be seen from the analysis of the cultural and philosophical perspectives. Considering its cultural dimension, Indonesian learning orientation is based on the Chinese Confucian view, in which students show high respect and obey towards authorities like their teachers. They tend to be passive and to perceive one right answer practice in their learning (Santosa, 2017). It shows that existing culture and philosophical values strongly influence students' learning in Indonesia

In Java, it is believed that the higher rank, social status, and age, the higher respect given. He points out three concepts such as *manut-lan minurut* (to obey and to follow)*, éwuh-pekéwuh* (uncomfortable and uneasy to oppose)*, sabda-pendita-ratu* (listen and obey to the words of priestly king). These cultures and philosophical values bring a pivotal impact on the development of students' autonomy (Dardjowidjojo, 2001, 2006).

In Bali, Santosa (2017) highlights three cultural views such as *koh ngomong* (being reluctant to talk)*, sekadi merebut balung tanpa isi* (like quarrelling for something unworthy)*,* and *de ngaden awak bise depang anake ngadanin* (never raise yourself, let others do that). Despite growing awareness of the importance of and progress in implementing autonomous learning, this culture and philosophical values infuse and educate learners to perceive that total obedience is the only way to be good learners. However, obeying teachers' instructions without questioning and being reluctant to talk are not applicable in the 21st-century learning (Sujak & Ratih, 2019).

Based on the analysis above, it can be concluded that there are numerous challenges factors faced by both teachers and students in Indonesia when infusing 21st-century learning. Teachers' readiness and competency are not yet optimally prepared showed by the result of *UKG Nasional* in 2015. Students' cultural and philosophical values, students' performance based on several international assessments also result in a gap between the skills graduates and the demands of the 21st-century learning. The lack of handbooks to equip the 21st-century learning for teachers and students is also mentioned as the contributing factor.

To scrutinize these learning situations, further research was conducted through observation, interview, and document analysis of senior high schools in Singaraja, Bali. Six out of ten teachers in Singaraja Bali admitted that applying 21st-century skills, digital literacy, and technological practices were challenging tasks. Eighty percent of teachers admitted that they rarely used or enhanced the utilization of technological practices although Wi-Fi, Projector, and other ICT tools are already provided in every classroom. Teachers only use slide presentations and share the materials through Whatsaap feature.

Seminars or workshops on EFL learning about digital literacy skills or technology practices in teaching to promote 21st-century learning was not optimized yet. Sixty percent of teachers revealed that they attended and participated in seminars related to 21st-century learning. However, in the implementation, there were only 20% of teachers integrate technological practices into their learning. Two teachers already used an interesting quiz to engage the students' involvement by using *quizziz* and *kahoot*. However, the integration of these apps was only on the surface learning approach to build their vocabulary only. Students were allowed to use their smart phones, but merely used it to access information through the internet.

Based on the document analysis of textbook used by the students of the tenth grade, there were several limitations found such as (1) the learning materials did not represent the advancement of the 21st-century learning and innovation skills (4Cs) and the integration of digital literacy and technological practices (2) learning activities provided in the textbook were monotonous and still on the level of Lower Order Thinking Skill (LOTS).

Related to this, the results of interview show that teachers' expectation toward the learning material was to provide the exploration of 21st-century learning skills and the integration of technological practices. The various learning activities also suggested to be provided in the textbook and can be accessible through the internet and various format so the students do not rely heavily on the textbook only.

Considering these issues, the new demand urges the teachers and students to be able to face new different learning paces, styles and needs in order to accomplish the 21st-century learning (Santosa, 2017). Along with this, the demand for developing innovative instructional material to aid the teaching and learning process increases as technology advances (Funa & Ricafort, 2019).

The real condition of the present study showed that students get used to the utilization of technologies, but rarely explored the subject knowledge deeply since they merely accessed the information or just translating. The textbook used by the students already use and integrate the curriuculum 2013, but lack of the exposure on digital literacy, technological practices, and 21st-century skills. Therefore, it is a need to develop innovative instructional materials as a tool-geared in embedding subject knowledge with 21st-century skills, digital literacy, and technological practices.

As a response to this global standards and new paradigm shift in the process of learning, the new ways of learning equipped with digital literacy and technological practices need to be applied. The frontier of new approaches, gamification, is one of the powerful ways to be implemented in the classroom. In

gamification, learners are able to figure out meaningful connections of the content subject through the elements of game. There are five important purposes of gamification such as (1) using learning principles, (2) providing engagement for the learners, (3) fostering autonomous learning opportunities, (4) enhancing the acquisition of 21st-century learning, and (5) providing technology-enhanced language learning (TELL) environments for authentic and relevant assessment (Ling, 2018).

A number of studies towards gamification in education have been developed over the past years and have shown success. Kim (2015) investigated the impact of gamification in learning. The study conducted by implementing gamification activities in Charter school New York. The implementation of gamification through *Quest2Learn* revealed positive impact to the students like making choices, solving complex problems, searching content knowledge, getting constant feedback, and considering perspectives from other learners. The implementation of gamification fosters the 21st-century learning.

Kingsley and Grabner-Hagen (2015) also created a unique way to teach science and literacy skills through gamification by utilizing various apps and available online tools to promote 21st-century students. *3D Lab Game* was choosen as a Gamification platform and the use of various apps like *Notability, Padlet, moodle, BrainPOP, YouTube,* etc. The study revealed that gamification in the processs of learning become a powerful way in education to support the new literacies and technological practices along with 4Cs Skills.

Funa and Ricafort (2019) developed gamified instructional materials in genetics for grade 12 STEM. This study developed gamified materials which was comprised of two parts such as students' portofolio and gamified lesson plans. The development of gamified instructional materials was recommended to be used by the teachers in the process of learning. This study revealed that gamified instructional materials help students in evaluating the materials critically and enhancing the acquisition of 21st-century skills needed for their future.

Kaplan University also infused gamification through gamified platform to run a pilot project for their courses. Through its implementation, gamification gained success in which the result shows that students' grade improvement about 9 % and their involment in completing the tasks also increased 16 %. This study also reveals that gamification has adjusted rapidly to the profile of the 21st-century learner. It changes the learning experience where the 21st-century learner become more engaged and motivated in their learning (New Media Consortium, 2014).

The study of gamification was also already conducted in Singaraja Bali. Dewi (2017) conducted an explanatory sequential mixed method design about the effect of gamification on learning engagement of eleventh grade students in SMA N 1 Singaraja through *Schoology*. The result showed that there was a significant difference on student's level of learning engagement between those who was taught by using gamification and students who was taught by using conventional media.

The aforementioned studies show the success implementation of gamification to foster students' critical thinking, problem solving, and the acquisition of 21st-century learning, digital literacy, and technological practices. Above-mentioned studies also utilized various gamified platforms like *Quest2Learn, 3D Game Lab, Schoology* and a number of apps along with the integration of gamified learning. Another study developed an instructional gamified material to equip the acquisition of 21st-century skills needed for learners. Therefore, the concept of gamification can be used as the bridge to venture into 21st-century learning.

The results of gap analysis that has been previously discussed presents the drawbacks in the implementation of 21st-century learning and digital learning in the EFL classroom, in which only 20 % of teachers implemented it, students' low involvement in learning that incorporates with their socio-cultural passivity in learning, and the available learning material did not present the advancement of 21st-century learning and innovative skills. Therefore, an interactive learning material is essential to be developed in order to help both teachers and students to forge out into the new learning paradigm, 21st-century learning. Along with this, numerous studies portray the success of gamification that can be used as the learning framework in the development of learning material.

In the Indonesian EFL context, especially in Bali, the development of gamified-based learning materials has not been widely exposed. Learning materials that integrate 21st-century learning, digital literacy, and technological practices are not available yet, especially in the secondary level in Bali. Considering the demands

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that need to be fulfilled in 21st-century learning with the problems found in the real situation, the present study aimed to develop gamified-based learning materials in the form of handbook for 10th grade of senior high school of literacy skills and specific technology skills coupled with effective pedagogy that can foster the acquisition of 21st-century skills. The development of gamified-based learning handbook can be used as a supplementary material for the teacher and the students that aid teaching and learning process that works in tandem with the demand of 21st-century learning.

In a nutshell, the development of gamified-based learning materials for 10th grade of senior high school in this present study is a new way to align meaningful instruction for blending the content knowledge with 21st-century learning, technological practices and the ethos of digital literacy skills. The development of gamified-based learning material aimed to fill the gap of the drawbacks found like the low integration of 21st-century paradigms in learning, students' socio-cultural passivity, and the monotonous, teacher-centered learning materials and bridge them to the demands of the 21st-century learning such as interactive teaching and learning activities, students' autonomous learning, and innovative personalised-real tasks activities in the learning materials.

1.2 Identification of the Problems

Developing gamified-based learning handbook for 10th grade of senior high school in the Indonesian EFL Context was based on a number of identified problems. Those problems are presented as follows:

1.2.1 Teachers' Problems

Based on some document studies, the obstacles faced by the teachers were their readiness to implement the national and global standards. Some studies show that their readiness is low compared to their competence (Retnawati & Nugraha, 2016; Rosser, 2018; Sukasni & Efendy, 2017; Sundayana, 2015). Teachers' readiness and competency are not yet optimally prepared showed by the result of *UKG Nasional* in 2015. Conventional learning is still used by the teachers. Applying and integrating creative and innovative learning activities through technology is still a challenging task for them.

Based on classroom observation and interview in four schools in Singaraja, Bali, 80 % of teachers admitted that they rarely used or enhanced the utilization of technological practices although Wi-Fi, Projector, and other ICT tools are already provided in every classroom. In fact, teachers only use slide presentation and share the materials through Whatsaap feature. Sixty percent of teachers revealed that they attended and participated in seminars related to 21st-century learning. However, in the implementation there were only 20% of teachers integrate technological practices in their learning.

1.2.2 Students' Problems

Cultural and philosophical values, students' performance, students' motivation in learning are some problems faced by the students. Despite fostering the autonomous learning, culture and philosophical values hold by Asian students, including Balinese students, infuse and educate learners to perceive total obedience

was the way to be good learners. Therefore, most students are still passive in their learning. This is in contrast with the demand of new standards in the 21st-century learning which empower students on their autonomous learning. Students' performance seeing from the results of some assessments like PISA, TIMSS, PIRLS, The Rate of Literacy is still far behind from other countries. Even though students are allowed to use *smart phones* to access information, digital literacy skills are still insufficient to compete in the 21st-century learning. It is because students just merely use it to access the information without having the abilities to make and share meaning, to create, collaborate, and communicate information with others.

1.2.3 Learning Materials Used

There were some drawbacks of the learning materials used in the process of learning such as the learning materials does not represent the advancement of the 21st-century learning and innovation skills (4Cs) and learning activities provided in the textbook were monotonous, teacher-centered and still on the level of Lower Order Thinking Skill (LOTS). Therefore, the learning materials used was not in line with the recent national and global standards of the new learning paradigm, 21st-century learning.

1.3 Scope of the Study

Regarding to the identified problems above, the scope of the study was only focus on developing gamified-based learning handbook for 10th Grade of Senior High School in the Indonesian EFL Context. The handbook highlights on gamifying

activities on EFL learning in order to support the acquisition of 21st-century learning. The gamification framework was used to gamify the activities. The handbook covers four chapter such as 1) Chapter I: The introduction of 21st-century learning and gamification, 2) Chapter II snapshots of gamified-based EFL activities and classroom strategies for gamified-based EFL activities, 3) tools to utilize gamification across content, and 4) Chapter IV: Closure.

1.4 Statements of the Problem

The problems of this research are formulated as follows:

1. How to develop gamified-based learning handbook for 10th Grade of Senior High School in the Indonesian EFL Context?

2. What is the quality of gamified-based learning handbook for 10th Grade of Senior High School in the Indonesian EFL Context?

1.5 Research Objectives

The objectives of this study are in accordance to the above statement of research problems. The objectives of this study can be stated as follow.

1. To develop gamified-based learning handbook for teachers to teach 10th grade of senior high school in the Indonesian EFL Context.

2. To examine the quality of gamified-based learning handbook for teachers to teach 10th grade of senior high school in the Indonesian EFL Context.

1.6 Significances of the Study

1.6.1 Theoretical Significance

The product of this study is expected to facilitate 10th grade of senior high school students and teachers through gamification learning experience. This product aimed at helping teachers and students to activate the learning process combined with gamification framework to promote the advancement of technology and digital literacy skills in the 21st-century learning.

1.6.2 Practical Significance

1. To Teachers

Generally, the product of this study is expected to optimize teachers' creativity and innovation in the process of learning through gamification coupled with the acquisition of 21st-century learning. The teachers are expected to get an insight about how to gamify the learning activities so the process of learning become effective, fun, and meaningful and in accordance to the demand of new standards in the 21st-century learning.

2. To Students

Practically, this product is expected to foster students' autonomous learning as well as subject content coupled with digital literacy skills and technological practices of 21st-century learning. It also helps the students to experience new learning in more enjoyable, fun, engaging and stress-free learning situation.

3. To Other Researchers

This study can be used as a reference for providing effective gamified-based learning activities for other researchers who want to develop further similar research.