

# CHAPTER I

## INTRODUCTION

The first chapter provides general outlines of the study, including the background of the study, research questions, research purposes, research scope, and research significance. The background presents the context and relevance of the study. The research questions outline the specific objectives of the research. The research purposes define the goals and aims of the study. The research scope sets the boundaries and limitations of the research. Lastly, the research significance highlights the potential contributions of the study to the field. Overall, this chapter serves as an introduction, laying the foundation for the subsequent chapters and providing a clear understanding of the study's context and objectives.

### **1.1 Background of the Study**

Current trends in education have demonstrated the dynamic use of microlearning that caters to the learners needs as digital natives. Studies suggest that microlearning promotes student-centred learning and encourages active learning (Leong et al., 2020; Olivier, 2021). These benefits particularly important in the post-pandemic learning context of distance, online, and blended learning, where learners need to be autonomous (Iskandar, 2021). A microlearning approach provides opportunities for learners to obtain knowledge and information at their own pace (Arnab et al., 2021; Zhou, 2021), which promotes the notion of self-directed learning and enhances learner autonomy. These traits align with today's learners needs, where information and knowledge are abundant.

Moreover, microlearning has been used in English language teaching and learning (Almazova et al., 2018; Miloserdova & Belyaeva, 2019; Mohammad Hosseini et al., 2020; Wang, 2019; Wenhui et al., 2020), revealing the positive impact of microlearning on students' outcomes and reveal that students' language competence is gradually improving. These studies covering the context of higher education indicate there is a rising interest and urgency in exploring the use of microlearning in English teaching and learning at higher education context.

In addition, English has been made a compulsory subject for students in higher education institutions, including non-English majors, to prepare them to face global challenges. The demand for English language competence for non-English major students is increasing (Tolstikh et al., 2021), leading to continuous improvement in this field, particularly in reading skills. In academic context, reading is one valuable skill since it is closely related to students' literacy development.

However, despite being correlated with the academic achievement, university-level students have low reading habits (Balan et al., 2019; Dorji, 2020). In Indonesia, despite lecturers' efforts to increase reading habits at university, the students' reading levels and English competence are still unsatisfactory (Poedjiastutie et al., 2018). This demonstrates the needs to make improvement in accommodating students to develop their English reading skills, particularly in the digital age where students may get distracted easily as pointed out by Dorji (2020) in looking at how social media decreased students' reading habits.

Moreover, learning materials are one of the core elements of English language teaching. Due to the essential functions of learning materials, it is important to continuously develop them following the current trends and needs of learners in the context of global development. For instance, Zhou (2021) conducted research on the teaching English reading using microlearning and revealed its high efficiency in stimulating learners' interests. The short bite-sized learning content allows students to focus on one specific information at a time (Drakidou, 2018; Major & Calandrino, 2018; Nilsson, 2021), so they will not get distracted and feel overwhelmed during the learning process. These findings demonstrate the potential of microlearning in supporting English reading lessons in higher education.

Furthermore, in accommodating students in higher education, 21<sup>st</sup>-century skills are considered mandatory to be acquired to compete in global competition. Therefore, problem-solving is one potential added value of 21<sup>st</sup>-century skills to be infused into the English reading materials. The ability to solve problems is considered one of the most important 21<sup>st</sup>-century skills sought by employers (Clark & Mayer, 2016). Having problem-solving skills and applying them to real-life situations are important traits to develop students' competences. For instance, Singh (2021) used problem-solving to help students develop their thinking skills and found that it positively affected them. Similarly, Ghaith and Sanyoura (2019) examined the role of problem-solving in increasing learners' higher-order reading comprehension. Ali (2019) also promotes learning through solving real-world problems so that learners can learn principles and concepts. Hence, these studies have demonstrated the implications of problem-solving skills in improving students' high order thinking skills.



In the Indonesian context, concerning the implementation of the Indonesian National Qualification Framework in Higher Education, Presidential Regulation Number 08/2012 and the Regulation of the Minister of Education and Culture of the Republic of Indonesia Number 73/2013 both mention problem-solving skills. Based on the document of the Directorate General for Higher Education (2013), undergraduate degrees are equivalent to level 6 in the framework, i.e., being able to adapt to situations encountered in solving problems and able to make strategic decisions in choosing various alternative solutions. The framework bridges the world of employment and education; hence, it confirms the importance of infusing problem-solving into learning materials for higher education students to equip them with skills needed for the work world.

Furthermore, concerning the English reading materials and the infusion of problem-solving skills, the use of videos to facilitate learning is claimed to promote learner autonomy, raise motivation, and enhance their learning experience (Albó, Hernández-Leo, Barceló, et al., 2015; Olivier, 2019). As instructional videos are intended to educate the audience, they can provide alternative learning materials to support learners in improving their reading competence.

However, while lecture videos are considered the most used multimedia in higher education (Inman & Myers, 2018; Smolle et al., 2021), one common issue in using them as learning sources is the length of the duration, particularly if the video is a recording of a synchronous teaching session. This issue does not match today's learners' attention span in using digital tools or gadgets with a significant possibility of distractions (Yu & Gao, 2022), and it does not cover the actual learner needs to extend their learning beyond the synchronous sessions.

Therefore, the production of short instructional videos can be the proposed solution, which is closely related to the concept of the microlearning approach; hence, the term video-based microlearning. Video-based microlearning has become one of the most dominant trends (Satyarthi, Pandey, Singh, & Dubey, 2021). Atef et al. (2022) explain microlearning object materials as a small and specific instructional role to facilitate learners in acquiring knowledge and skills more enjoyably. Pandey (2020) argues that the combination of microlearning and videos provides learners with the right amount of learning input as a part of the whole learning process by providing short learning resources or tools available anytime they need.

Similarly, Javorcik (2019) argues that video-based microlearning can help educators produce attractive learning materials for students, particularly to maintain the learners' interests during the learning process and increase their engagement. In addition, some other advantages are their functions to introduce concepts and skills, are easy to produce and reuse, facilitate knowledge transfer and retention, and are widely accessible (Beheshti et al., 2018; Boateng et al., 2016). Studies also suggest that the use of video-based microlearning as instructional materials also promotes active and productive learning (Alshraideh, 2021; Brame, 2016; Kalyuga, 2009; Lackovic, 2020; Olivier, 2021) by presenting visual elements that can enrich learning, maintain learner attention, interest the learners, provide enjoyable learning and digestible knowledge.

Hence, existing evidence supports the use of video-based microlearning as English learning materials for students in higher education. Nonetheless, according to Gerbaudo et al. (2021), despite the pervasive use of technological devices with internet access that has transformed the way people acquire information and knowledge, this field has yet to be explored much in the context of producing and designing educational content. While some studies have shown the effectiveness of microlearning as a teaching method incorporated into online and digital learning, they have not addressed the design and development of microlearning as practical and accessible learning materials. More specifically, Smolle et al. (2021) also suggests that the microlearning content of videos still has room for improvement to enhance learning. Therefore, to contribute to the literature, this research aimed to design video-based microlearning English reading materials infused with problem-solving skills for non-English major students.

Meanwhile, Redondo (2021) highlights that integrating microlearning content can promote lifelong learning by breaking down new concepts into smaller contents allowing learners to learn progressively at their own pace. While Redondo adopted microlearning in a training program for employees, along with So, Lee, and Roh (2020) and Arnab (2021) who reported the use of microlearning for working adults, he pointed out that the university-level also needs to adopt this approach. Moreover, existing studies also confirm the relevance of incorporating a microlearning approach to a higher education context (Leong et al., 2021; Shatte et al., 2020) and its importance as instructional learning object materials (Alqurashi, 2018; Javorcik & Polasek, 2019). This insight signifies the importance of designing microlearning object materials for students at the higher education level.



Subsequently, based on the overview of existing literature, more studies on the microlearning approach and video-based microlearning in language materials development are still needed, particularly on the infusion with the added value of problem-solving as one of the 21<sup>st</sup>-century skills in the higher education context. Therefore, this research intends to conduct a research and development study on designing video-based and problem-solving-infused microlearning English reading learning materials for non-English major students. To specify the research scope, this study designs the video learning materials intended for pre-reading and post-reading stages in English reading course in order to maximize the potential of microlearning video-based materials in facilitating students' autonomous learning.

## **1.2 Research Questions**

This study attempts to answer the following research questions:

1. To what extent are the existing English reading learning materials for non-English major students developed based on microlearning and infused with problem-solving skills?
2. How are video-based and problem-solving-infused microlearning English reading materials for non-English major students designed?
3. How is the design of video-based and problem-solving-infused microlearning English reading materials for non-English major students?
4. How are the validity and employability of video-based and problem-solving-infused microlearning English reading materials for non-English major students?

### 1.3 Research Purposes

In accordance with the research questions, the research purposes of this study are as follows.

1. To explore how the existing English reading materials for non-English major students are developed based on microlearning and infused with problem-solving skills.
2. To explain the procedures of designing video-based and problem-solving-infused microlearning English reading materials for non-English major students.
3. To describe the design of video-based and problem-solving-infused microlearning English reading materials for non-English major students.
4. To measure the validity and employability of video-based and problem-solving-infused microlearning English reading materials for non-English major students.

### 1.4 Research Scope

The research focuses on designing video-based and problem-solving-infused microlearning English reading materials for non-English major students. The scope of this study revolved around the research and development of video-based and problem-solving infused English reading materials specifically designed for non-English major students at the higher education level. The research involved the creation of video-based materials by incorporating reading passages and texts that are relevant and engaging for the target learners. Additionally, problem-solving skills are infused into the materials to foster students' analytical thinking abilities.



This can be achieved through the inclusion of comprehension questions and prompts that require students to apply problem-solving strategies to understand and analyse the text. An evaluation phase was conducted, where feedback and data were collected to evaluate the materials' employability and relevance for the target learners. The results of the evaluation inform recommendations for further refinement and enhancement of the materials, as well as suggestions for potential implementation strategies in English language teaching contexts.

### **1.5 Research Significance**

This research is expected to contribute to the field of English language education in general, both theoretically and practically. The results of this research may be used as guidance for further research, particularly on research and development studies and material developments. Hence, this study hopefully contributes to the literature on microlearning approach and video-based learning in Indonesia's English language education since it is still developing. Practically, this research intends to improve the existing pedagogical activities by providing alternatives of teaching experience using microlearning content. In addition, students may benefit from the video-based and problem-solving-infused microlearning materials to enhance their English reading competence and problem-solving skills more flexibly.

## **1.6 Clarification of Key Terms**

### **1.6.1 Microlearning**

Microlearning is a learning approach that delivers small and short learning objects by covering a single learning objective for each object. It is also related to the use of digital-formatted content as instructional learning materials that are easily accessible to learners. Due to its time efficiency and accessibility, microlearning content is a promising alternative to facilitate self-learning for learners. This study adopts microlearning as instructional learning object material to be designed according to the learners' needs in learning English as a foreign language.

### **1.6.2 Video-Based Learning Materials**

Video-based learning materials refer to the use of videos to transfer knowledge and skills through audio and visual cues. Video-based learning materials can be designed and developed in segments to cover the learning objectives using appropriate equipment and instruments. The video-based learning materials include presenting visual representations, textual explanations, and narrative audio, so that learners can learn at their own pace through various digital devices.

### **1.6.3 Problem-Solving Skills**

As one of the 21st-century skills, problem-solving is defined as the ability to identify problems, analyse situations, and find solutions to problems. In infusing problem-solving skills into learning materials, real-world problems in authentic situations should be provided to facilitate learners practicing and enhancing their problem-solving skills. Through this infusion, learners are encouraged to use what they learn and recall their prior knowledge accordingly. Problem-solving is also

perceived as a learning objective in which learners are expected to propose solutions to the given problem-solving learning scenarios. This particularly stimulates learners' analytical thinking skills and decision-making skills. Subsequently, this is a valuable skill to equip today's learners and prepare them for future challenges.

#### **1.6.4 Non-English Major Students**

This study uses non-English major students as the target learners. Non-English major students are students in higher education institutions who are not majoring in the English department. Meanwhile, English is a compulsory subject in most higher education institutions in Indonesia, including in the context of this study. The English subject is categorized as a Common Core course for first-year students, in which students of various departments gather in the same classrooms. This course focuses on enhancing learners' character qualities, and the 21<sup>st</sup>-century skills (critical thinking and problem solving, creative thinking, collaboration, and communication) are being developed and practiced. Hence, English lesson for non-English major students offers not only language skills but also cross-curricular skills to improve the university students' personal development.