

CHAPTER I

INTRODUCTION

This chapter reveals the background of the study, research questions, purpose of the study, scope of the study, and significance of the study.

1.1. Background of the Study

Cognitive foundations consist of two competences: literacy and numeracy. As for literacy, it enables someone to read, write, speak, and listen in order to communicate effectively and comprehend the world; and it establishes human communication through oral or written language systems (OECD, 2019). More specifically, literacy entails thinking processes and skills that incorporate an array of interests, knowledge, attitudes, and habits, functioning in different contexts (DSE/CEOV, 1994). Hence, literacy is regarded as a dynamic tool that fosters individuals' growth and learning experiences (Educational Testing Service, 2002). Over the years, literacy has been developing and forming new literacies namely political literacy, financial literacy, policy literacy, media literacy, information literacy, and the latest, digital literacy (Kurnia & Astuti, 2017).

In this fourth Industrial Revolution (IR 4.0) era, where the advancement of Information and Communication Technology (ICT) grows rapidly, digital literacy as a branch of literacy plays an important role in everyday life: personal, social, and work. On a similar note, Techataweewan & Prasertsin (2018) divide digital literacy into two levels: the basic level and the deeper level. The basic level is where the utilization of digital literacy is for daily life, whilst the deeper one utilizes digital literacy for the development of one's career. Speaking of the importance of digital literacy, it lies on the improvement of quality life of the population posed by digital literacy, as the competence itself is required in the acts of finding, generalizing, and analyzing digital resources on a daily basis (Yashalova, Shreider, & Yakovleva, 2019).

Studies concerning the requirement of being digitally literate conducted by Polizzi (2020) and Techataweewan & Prasertin (2018)

resulted in a variety of factors to determine whether or not an individual is digitally literate. Polizzi (2020) concludes the ability relies on: (1) reflection on the nature and origin of information, (2) using multiple sources, (3) contextual knowledge, (4) operation skills and knowledge about the internet, and (5) knowledge about the broader digital environment. Alternatively, Techataweewan & Prasertin (2018) exhibits four factors of digital literacy comprising operational skills (cognition, invention, presentation), thinking skills (analysis, evaluation, creativity), collaboration skills (teamwork, networking, sharing), and awareness skills (ethics, legal literacy, safeguarding self).

Indonesia is regarded as one of the biggest (in amount) internet users around the world with 132.7 million users out of 256.2 million Indonesian population (KEMENDIKBUD, 2017; Kurnia & Astuti, 2017). Approximately 70 million users are younger generations who spend time surfing the internet for about five hours using ICT tools namely smartphone, personal computer, and laptop (Kementrian Pendidikan dan Kebudayaan, 2017). In the case of Indonesian students, they surf the internet for three main purposes: (1) entertainment, (2) socializing with friends, (3) searching for information regarding their school works (Benaziria, 2018). However, digital skill performed by Indonesian active population is claimed to be at an intermediate level by 60.0% (World Economic Forum, 2020). A survey conducted by KOMINFO (2020) involving 1670 Indonesian people across 34 provinces exhibits an identical finding: index score for digital literacy in Indonesia is 3 out of 5 (average).

Studies pertaining to Indonesian students' digital literacy revealed the deficiency of their ability (Eryansyah, 2019; Perdana et al., 2019). Perdana along with his colleagues (2019) in their study of Yogyakarta students' digital literacy assessment, indicate that the students are at a deficient level with knowledge assembly as the challenging factor. Underpinning this finding, a study conducted in Sumatra also shows the deficiency of digital literacy of two state-owned universities students due to lack of facilities, supporting devices, and relevant training (Eryansyah,

Erlina, Fiftinova, & Ari, 2019). Whereas a study found that a steady access to reliable digital information sources and digital literacy training will give a positive impact on students' academic experiences (Bawack & Kamdjoug, 2020). Easy and steady access causes the use of digital technology to become frequent. Frequent use of technology will enhance one's digital literacy as they gradually become used to it (Saripudin, Budiyanto, Listiana, & Ana, 2021).

Limited supporting devices has been either an issue for a school in an Indonesian suburban area as the digital devices the teachers utilize are merely their own smartphones, and school equipment like computers and projectors (Pratolo & Solikhati, 2020). Nevertheless, their students did not get the same opportunity due to the prohibition upon using smartphones in the classroom.

The lack of digital literacy education has the possibility to generate serious issues which can jeopardize relevant individuals or even bigger, communities (Susilo, Afifi, & Yustitia, 2020). Hoax dispersion is caused by the absence of the ability to process digital resources. The receiver will be more likely to perceive the hoax as a fact and eventually act as a spreader, making more people with similar to lower levels of digital literacy digest it without a second thought. In the Indonesian case, most of the hoaxes are associated with politics, health, religion, using mainly *Facebook* as a medium to spread them widely (Katadata Insight Center, 2020). Moreover, inadequacy of this education causes many Indonesian students to have a little to no knowledge of using social media in wise and responsible manners (Supratman & Wahyudin, 2017). Supratman & Wahyudin (2017) also claim that without proper safety guidance in conducting digital activities, students are at risk of negative exposure that leads to the worst-case scenario, cybercrime.

Vocational high schools aim to prepare their students for the workforce. This calls for the institutions to cater to students' requirements by infusing digital literacy in the learning materials. Gerakan Nasional Literasi Digital (GNLD) SiBerkreasi established by the Indonesian

government also encourages the incorporation of digital literacy in the learning materials since digital-based technologies adopted by companies as well as digital-based emerging roles in Indonesia are at the peak (World Economic Forum, 2020).

Technologies such as *Robotic, Artificial Intelligent, 3D Printing, Augmented Reality, Virtual Reality, Cloud Computing, and Internet of things* (DitPSMK, 2019), *Encryption and Cyber Security, E-commerce and Digital Trade, Big Data Analytics* (World Economic Forum, 2020) are designed to do human's work. In order to comply with this disruptive change and compete with these machines, vocational high schools must be oriented to tailor these qualities: knowledge combination, technical and social skills, positive etiquette, and digital competence to their students (DitPSMK, 2019). The emerging roles in this IR 4.0 including digital marketing and strategy specialist, internet of things specialist, digital transformation specialist (World Economic Forum, 2020) are closely related to digital technology, resulting in individuals equipped with digital literacy are high on demand.

Various studies in regard to digital literacy in vocational high school have been conducted prior to this present study. The studies that focus on students are about the attempt to improve vocational high school students' digital literacy using a certain learning model which indicates a positive result (Patmanthara & Hidayat, 2018); and the effect of digital literacy on vocational high school students' entrepreneur behavior which shows the effect is significant on students' entrepreneur behavior as digital technology is perceived as a means to facilitate the business process (Mudasih, Subroto, & Susanti, 2021).

There are also studies that put emphasis on the teacher concerning vocational high school teachers' digital literacy based on their age, gender, working period, ability to use digital technology and create learning media (Saripudin, Budiyanto, Listiana, & Ana, 2021); and the practices of ICT integration in English lessons by vocational high school English as a

Foreign Language (EFL) teachers by utilizing a myriad of ICT tools—both hardware or software tools (Rodiyah, 2018).

Saripudin and colleagues (2021) found that male teachers own a higher level of digital literacy due to their curiosity about new things, than female teachers who solely use digital devices when needed. In terms of age, the younger teachers show more immense enthusiasm in learning digital technology compared to the older teachers. Teachers with a longer working period are likely to possess a lower-level digital literacy as most of them fall into the older teacher category. Moreover, the findings indicate that teachers are equipped with the required ability and knowledge of ICT and make use of these standards on a daily basis.

Study conducted by Rodiyah (2018) exhibits teachers familiarity with ICT tools which implies their adequate digital literacy in the sense that they knew and were able to operate the digital tools. However, these teachers only utilize a few ICT tools in teaching and learning activities, indicating a lack of optimization in utilizing the tools. In terms of attitude, they had a positive one toward ICT because—according to their perceptions—it would have a positive impact on their teaching practices. Their motivations in using ICT are varied: (1) their interests in ICT, (2) the today's world demands, (3) ICT as a students' motivation booster in learning, (4) the use of ICT to effectuate learning, (5) their confidence in utilizing ICT for teaching and learning purposes.

The previous studies above focus on vocational high school students' and teachers' digital literacy, yet this study attempt to investigate digital literacy in English learning materials for vocational high school students. KEMENDIKBUD (2017) points out that students' digital literacy can be enhanced by infusing digital technologies as media for learning. Therefore, the present study attempts to fill the gap by investigating the incorporation of digital literacy in English learning materials, specifically for vocational high school students. The aim is to provide an insight on to what extent digital literacy is incorporated in English learning materials for vocational high school students.

1.2. Research Questions

Based on the problems above, this study focuses on gaining insight for these questions:

1. To what extent is digital literacy incorporated in the English learning materials?
2. How is digital literacy incorporated in the English learning materials for vocational high school students?

1.3. Purposes of the Study

According to the research questions above, this study serves purposes which are to investigate the extent to which digital literacy is incorporated and to describe the ways digital literacy is incorporated in English learning materials for vocational high school students.

1.4. Scope of the Study

This study focuses on the incorporation of digital literacy and the way it is incorporated in the English learning materials for vocational high school students from the grade X, XI, and XII. The schools from which the data are retrieved are restricted to vocational high schools located in Central Jakarta.

1.5. Significance of the Study

This study is expected to contribute significantly in the area of digital literacy. In a theoretical way, it can be a reference for future researches pertinent to the incorporation of digital literacy, particularly, in English learning materials. The indicators compiled by the researcher can also be utilized by education stakeholders or fellow university students majoring in English education to select materials that incorporate digital literacy within. In a practical way, the presence of this study is expected to raise the awareness of the cruciality to incorporate digital literacy in any kind of learning materials.