CHAPTER 1
INTRODUCTION

This chapter provides the introduction to this dissertation research. It starts by presenting the background of the study, laying out the context of the research, the development of the research topics, positioning them in current trends, and explaining the research space. It will later be followed by the statement of the problems, where the issues are identified and defined. This would be the starting point for the development of the research questions. This chapter will also highlight the purpose and significance of the research, highlighting the rationale of the issues. Finally, this chapter will provide the structure of this research report, where the whole content of the dissertation will be briefly overviewed.

1.1. Background

Motivation has been long identified as one of the key factors in the success of students' learning. High motivation will positively impact the students, while lower motivation would be detrimental to the learning process. Therefore, to build high motivation among the students in a classroom might be a good solution for the students' success in their learning. However, research shows that motivation is a complex subject (Dörnyei, 2005). This implies that motivation is not easy to understand. In fact, the discussions on motivation are thousands of years old.

The discussions on motivation began in the era of Socrates, Plato, and Aristotle in the Ancient Greek. Their debates mainly relied on the sources of motivation, whether reason or desire (Cooper, 1984; Reshotko, 1992). The same arguments went on after the renaissance with Descartes, Hobbes, and Hume, still with the same topics, arguing that it was reason or desire as the cause of motivation (Greenberg, 2007; Morris & Brown, 2021; Smith, 1987). In the 19th century, the debates on whether it was desire or reason that could be the source or cause of

motivation started to be neglected as new approaches emerged. For example, motivation was seen to be caused by, among others, human instincts (James, 1890), drives (Hull, 1943), physiological needs (Maslow, 1970), social cognitive aspects (Bandura, 1977), basic psychological needs (Deci & Ryan, 1985), and engagement (Czikszentmihalyi, 1990). This brief history on motivation studies and discussions could serve as a rationale for the complexity of the conception of motivation. This also applies to language motivation or L2 motivation (these two terms will be used interchangeably in this manuscript).

Particularly with language motivation, the complexity can be seen with the changes in approaches and conceptions since its introduction (Gardner & Lambert, 1959) in the middle of the 20th Century. This was when language motivation took a different course from motivation studies in general educational psychology. Correspondingly, various theories have been proposed on how to understand language motivation. For example, from learners' perspectives, language motivation could be affected by learners' attitudes towards the target language communities (Gardner, 1985), ideal L2 self (Dörnyei, 2005), social contexts (McGroarty, 2001), and intrinsic motivation (Brown, 1994). Some grand theories on language motivation were also introduced, such as integrative motivation (Gardner, 1985), L2 Motivational Self System (Dörnyei, 2005), and L2 Self (Csizér, 2019). In the history of language motivation, these theoretical frameworks, in terms of their period of occurrence, could be grouped into three major timelines (Dörnyei, 2005; Dörnyei & Ushioda, 2011; Dörnyei & Ryan, 2015): the social psychological period, the cognitive situated period, and the process-oriented period. These three periods highlight the development of the studies on language motivation in the course of the history.

Each period along with the name it carries suggests the different focus of the research and theories in each timeline. Firstly, the social psychological period presents the birth of language motivation. It is the period when language motivation took a new path and moved away from the motivation in general educational psychology. It was the time when Gardner and Lambert (1959) first introduced their

integrative motivation and dominated the studies on language motivation in this era. Integrative motivation refers to a favourable attitude toward the target language community, possibly a wish to integrate and adapt to a new target culture through use of the language (Gardner, 1985, p. 54). In other words, integrative motivation could be described as the interplay of a number of social and psychological elements in language motivation. The primary principle here is students' attitudes towards L2 community that play an important role in their L2 learning. In addition to Gardner and Lambert's (1959) Integrative Motivation, some other prominent theories emerging in the social psychological period were Acculturation Theory (Schumann, 1978), Social Context Model (Clément, 1980), and Intergroup Model (Giles & Byrne, 1982). Following that era was the cognitive situated period. This period occurred as the critique to integrative motivation. It started in the beginning of the 1990s when Crookes and Schmidt (1991) called for L2 motivation to be reviewed and revisited. It was stated that social and psychological elements were not sufficient in the studies on language motivation. Cognitive elements and actual classroom contexts were later involved in understanding students' motivation in language learning. Regarding the cognitive and real classroom aspects, some prominent theories were offered in this era. Among others, they were Self Determination Theory (Deci & Ryan, 1985), Attribution Theory (Weiner, 1992), Autonomy Theory (Ushioda, 1996), and L2 Motivational Self System (Dörnyei, 2005). The third period, or the process-oriented period, was characterised by the dynamic character and the temporal variation elements of motivation. The dynamic character shows the evolution of language motivation studies, involving both affective and cognitive aspects. The temporal variation indicates that motivation could happen in a continuum and might change over time. Some examples of the prominent theories in this period were Motivation Process in Language Learning (William & Burden, 1997), Process Model (Dörnyei & Ottó, 1998), and Directed Motivation Currents (Dörnyei et al., 2016).

The historical analysis in the previous paragraph multiplies the complexity of language motivation. Adding to this complexity, other aspects are also available

to consider. For example, one aspect that could also influence learners' motivation is language learning tasks (Dörnyei, 2002). How teachers design the learning tasks for EFL students could also affect their motivation. A well-designed learning task has the possibility to increase students' motivation. On the other hand, learning tasks with poor pedagogical design might deteriorate the motivation of the students to learn their lessons. Moreover, another aspect that is also significant to language motivation is technology (Egbert, 2003). This study would focus more on the roles of technology in language motivation. The use of technology in language learning has shown significance developments, but studies looking at technology language and language motivation are still limited (Al-Hoorie, 2017; Henry, 2019). Therefore, this study would provide more understanding of the importance of technology in language motivation studies.

In language education, technology integration into language learning is under Computer-Assisted Language Learning (CALL) as coined by Davies and Higgins (1982). Studies on CALL have also evolved significantly along with the development of technology. Warschauer (1996) highlights the three stages of CALL in the course of the history. The first stage of CALL, called structural CALL happened during the 1970s-1980s where mainframe computers were mostly used in drills of grammatical exercises. The second stage of CALL, known as communicative CALL, used PCs through communicative language teaching. Finally, the integrative CALL, started around the beginning of the 21st century, began to use multimedia and the internet. Regarding these three stages, however, Bax (2003) proposes similar but different categories. They are restricted CALL, open CALL, and integrated CALL. The former two categories share similar principles with the ones of Warschauer's (1996). Structural CALL is similar to restricted CALL, while communicative CALL shares similar characteristics with open CALL. The difference lies between integrative CALL and integrated CALL. For Bax (2003), integrated CALL is known as the normalisation stage. It is a condition where technology has become a common phenomenon in language classrooms. Bax (2011), moreover, insists that this normalisation stage refers to a

future state. However, this may not be true or be accepted globally. In certain parts or the world, a particular form of technology may have been normalised.

With the development of technology, the complexity of motivation described earlier heightens. Technology has been used in the language classroom since the 1960s (Warschauer & Healey, 1998), since the introduction of language laboratories (Davies et al., 2011) and continued to the use of computers in the 1970s-1980s, but mainly for drill and practice (Warschauer, 2000) or rote learning (Bax, 2003). Levy (1997) suggests that audiolingual methods made computers good assistance to language learning. During 1980s-1990s, computers started to be used as medium for communication, especially after the introduction of the internet in the 1980s (Healey, 2016). The internet has brought a new type of learning, called e-learning or online learning. The term "online" simply means "connected to the internet" (TESOL, 2008). Moreover, the 21st century gave birth to a new form of the internet, the social web or Web 2.0 (Kelly, 2012), and with its combination with mobile technologies, Mobile-Assisted Language Learning (MALL) (Chinnery, 2006) was then introduced. The developments continue and with the integration of Artificial Intelligence (AI) technologies now we have AI injected e-learning (Montebello, 2018), which could further be applied to language education as Intelligent Computer-Assisted Language Learning (ICALL) (Tafazoli, 2019) and Intelligent Mobile-Assisted Language Learning (IMALL) (Taher & Hussain, 2019).

Artificial Intelligence (AI) is, in fact, not a new technology. Its current developments, however, are disrupting many aspects of humans' lives, including education and language classrooms in particular. One prominent feature of AI technology is automation. With its automation feature, in language and linguistics contexts, AI now has the ability to analyse, comprehend, and produce human language (Lu, 2018). These are the abilities that can be further explored and utilised in language teaching and learning. In fact, there has been evidence indicating that AI is changing how teachers teach and learners learn in language classrooms. As AI technology offers automation, currently there are apps that could do highly

automated tasks relevant to language learning. For example, there are apps that could provide grammatical feedback on students' writing and the feedback is accompanied by brief but thorough explanations and examples. In addition to grammar, similar apps are also available for other language learning areas, such as speaking, writing, and vocabulary learning. These apps have been tested and proven to have benefits for language learners.

However, there have been debates over the benefits of AI technology in language classrooms. There are contradicting ideas regarding the advantages that AI technologies could offer to language learners. Regarding the benefits, many studies praise the positive impacts that AI could bring into the language classrooms. For example, AI tools have been found to have the capabilities in checking students' grammar and give relevant feedback (Nagata, 1996), processing language input of the students (Holland et al., 1993), assisting students' error remediation (Dodigovic, 2007), conducting communications that are meaningful (Lu, 2018), reducing speaking anxiety (El Shazly, 2021), improving students' listening skills (Ghoneim & Elghotmy, 2021), improving students' confidence in speaking (Haristiani, 2019), assisting students' writing process (Sumakul et al., 2022b), promoting students' soft skills development (Sumakul et al., 2022a), and increasing students' motivational levels in learning (Haryanto, 2019; Yin et al., 2021). Although there have been positive findings on the use of AI in language classrooms, some other studies reported otherwise. They came up with opposite results. In its introduction to language learning, the promise brought by AI for language learners were regarded as misunderstood phenomena (Last, 1989) and the positive results were claimed to be exaggerating (O'Brien, 1993). Furthermore, Salaberry (1996) even had doubts whether AI could bring benefits to language learners and teachers. Similarly, a recent study found that, in fact, AI only shows moderate impact on language learning process (Steenbergen-Hu & Cooper, 2014). Despite the debates, however, AI technologies continue to develop and effort are being done to makes that AI would improve and would provide greater impact to education, including the language classroom. Among the many things that AI has promised, one important

feature of it offers is the personalised learning. With AI learner could learn in a personalised manner.

Personalisation is the distinguishing feature offered by AI to education. Stone et al. (2016) point out that AI will enhance education due to this personalisation feature. Many other experts agree that the roles of AI in education are quite significant. For example, Montebello (2018) claims that AI is the future of online education and proposes the AI-Injected e-Learning model. Furthermore, using design fiction method, Cox (2021) also comes up with some scenarios on how AI could be beneficial for education, not only in teaching learning processes, but also in extracurricular activities and administrative works. Tuomi (2018) explores how AI could affect education and points out that "AI will not only make existing education more efficient but that it will also change the context where learning occurs and where it becomes socially relevant" (p. 29). He further highlights some education policies to work on when integrating AI in education. Similarly, Karsenti (2019) calls the urgency to prepare teachers to anticipate the impacts brought by AI applications to education. The anticipation could come in several ideas, such as a specific type of teachers' skills (Sumakul, 2019) or a new kind of code of practice (Newton & Newton, 2019). In short, current trends indicate that AI will be the prominent characteristic of education, but many things still need to be prepared and many areas still need to be explored. The same case should be true for language learning.

Technology has been part of the language learning processes and has furthermore changed the face of today's language learning (Richards, 2015). In relation to that, realising the vast development of technology and understanding the inseparable connection between language and technology, Chapelle (2003) suggested that teachers should reflect the changes impacted by technology to the area of English Language Teaching (ELT) in particular, and applied linguistics in general. It means that these changes could also affect all the subsequent elements of the field, including language motivation. This should inevitably add the complexity of language motivation studies discussed earlier. To start with, despite

the criticism (e.g., Bennet et al., 2008; Selwyn, 2009; Helsper & Enyon, 2009), the terms Millennials (Howe & Strauss, 2000) and Digital Natives (Prensky, 2001) can be used as the conceptions to link technology and motivation. Today's learners are Digital Natives, who enjoy the use of technologies. They were raised with digital technologies and always bring their gadgets to their classrooms. They are also already familiar with the various apps to help them with their learning and to help them with their class assignments (Fuhrman, 2015; Selwyn et al., 2017). Today's students and technology are inseparable.

Moreover, with the current trends in technology developments where almost everything is connected to the internet, learners should also enjoy online learning activities. Similar to AI, online learning practices have started to invade language classrooms. The combination of these technologies has helped the students to be the new generation of the Digital Natives and could serve as the examples of a new type of student proposed by Henry (2013). This phenomenon is supported by Chapelle and Sauro (2017) who say that, "...technology has become integral to the way that most language learners in the world today access materials in their second and foreign language, interact with others, learn in and out of the classroom, and take many language tests" (p. 1). As online leaning has now become a common practice and AI is starting to become more prevalent, AI assisted online learning could be one underlying motivational concept to elaborate on. In relation to that, in Montebello's (2018) AI injected e-learning model, there are three key pillars, and one of them is motivation. It is interesting to see how AI contributes to motivation studies.

One motivational construct that is suitable to look at technology and L2 motivation is intrinsic motivation. Intrinsic motivation is a conception described under Self Determination Theory (Deci & Ryan, 1985), often abbreviated as SDT in various literatures. In general, SDT is about one's ability to make choices in their own life. Being self-determined implies that one is in greater control of what they are doing. SDT is, in fact, a theory of motivation in general psychology that offers three major types of motivation. They are intrinsic motivation, extrinsic motivation,

and amotivation. Intrinsic motivation concerns the performance of a behaviour caused by internal rewards. People with intrinsic motivation do an action because of the satisfaction of performing the action not because of external rewards. In contrast with intrinsic motivation, extrinsic motivation is driven by external rewards. With extrinsic motivation, people perform an action to earn promised rewards from external factors or to avoid negative consequences for not performing the action or punishment. The key to distinguishing intrinsic and extrinsic motivation is the inherent satisfaction. When it the reason of performing an action implies inherent satisfaction and enjoyment (Deci, 1975; Ryan & Deci, 2000; Ryan & Deci, 2017), it could then be labelled as intrinsic motivation. If there is no indication of inherent satisfaction nor enjoyment, it could most likely be regarded as extrinsic motivation. Meanwhile, amotivation, the third type of motivation in SDT, happens when one is not willing to perform the behaviour. It could be referred to as the lacking of intentionality (Ryan & Deci, 2020) that could be caused by various reasons including the feeling of incompetence or if people consider that performing the action would bring no benefits to them.

These three major types of motivation could also be explained by their position in the SDT continuum. Ryan and Deci (2000, 2017) explain that in the SDT continuum, these types of motivation resemble the motivational orientations; self-determined or not. For example, intrinsic motivation is considered the most self-determined motivational form, amotivation is the least self-determined motivational form. For extrinsic motivation, it lies somewhere in between intrinsic motivation and amotivation. Some forms of extrinsic motivation could be regarded as more self-determined. In contrast, some other forms of extrinsic motivation are located in the less self-determined form positions in the SDT continuum.

In addition to motivational orientations, SDT also introduces three basic psychological needs: autonomy, competence, and relatedness (Ryan & Deci, 2017). These three basic psychological needs have been known as the nutrients for self-determined forms of motivation to occur (Ryan, 1995). Autonomy is the need to own the action. It is the feeling regarding ownership (Ryan & Deci, 2020). When

people have the feeling that they own the action, they do it because they like to do it. They would be likely to do it with the more self-determined forms of motivation. Meanwhile, competence is about the need to have the capability to do something. It is the sense of mastery (Ryan & Deci, 2020). Similar to autonomy, when people have the feeling that they are able to do the action, it is more likely that they will experience the more self-determined forms of motivation. Regarding relatedness, it is the need to be connected to other people. It is the feeling of belonging to others (Ryan & Deci, 2020). When people feel connected to others when performing an activity, it is also more likely that there will be indications of the more self-determined forms of motivation. If these three needs, autonomy, competence, and relatedness, are satisfied, it is a pre-requisite for the existence of the more self-determined forms of motivation. If they are not satisfied, the less self-determined forms of motivation are most likely to occur.

These two conceptions, motivational orientations and basic psychological needs, are also significant in understanding L2 motivation. Exploring motivational orientations and the three basic psychological needs in EFL context could also be conducted although these terms come from the field of general psychology. SDT is a general theory of motivation, but its application has covered a wide variety of areas. This includes work, health, parenting, sport, and education. Particularly for language classrooms, there have been studies that investigated the relation between L2 motivation and technology using these SDT's terms (Bodnar et al., 2014; Hartnett et al., 2011; Henry & Lamb, 2019; Morton & Jack, 2010; Peters et al., 2018; Rigby & Ryan; 2017). Therefore, SDT could serve as an effective framework in examining L2 motivation and technology.

Henry and Lamb (2019) provide a comprehensive discussion on language motivation and technology using SDT as their underlying theoretical framework. Based on the existing studies on L2 motivation and technology, they suggest three terms worth introducing here: vision, verisimilitude, validation seeking. Although these terms are not new concepts at all, using vision, verisimilitude, and validation seeking, they could show how technology could affect language learners. Here,

language motivation can be explained in technology contexts. Vision concerns the use of digital media and its relation to L2 identities. The features of online environments have specific things to offer regarding the creation of an L2 learner's identity. Asynchronous chats and anonymity are two features that could help foster L2 identity creation. These two online features would make language learners in control of how, when, and where to present themselves in online environments. When learners are in control of their learning, their motivation could also increase. With verisimilitude, language learning in digital spaces could feel like it was in real physical classrooms. Verisimilitude is about the realness of digital activities and events. For language learners, verisimilitude could be implemented in two ways: the realness of the learning activities and the realness of the online environment. When learners perceive that the activities in their learning are real, their motivation could also be promoted. Finally, validation seeking is about the feeling to be recognised in wider social groups. In online settings, verisimilitude concerns the use of social media. The sharing feature of social media platforms could help foster motivation among the language learners. In short, those three concepts have potential impacts for the motivation of L2 learners in digital environments.

Up to this point, it has been pointed out that motivation is one important element in language learning. Motivation in language learning, or often termed as L2 motivation, could serve as one indication that could determine students' success in their learning. Moreover, there are several factors that determine L2 motivation, such as socio-cultural factors, cognitive factors, and the use of technology. In relation to the use of technology in language classrooms, there are two types of technology that have been recently getting more prevalent, they are online learning and AI. Online learning could simply mean the use of the internet, while AI is about the use of intelligent machines that could think and act like humans.

Nevertheless, there have been only few studies that look at how online learning could play positive contributions to learners' motivation (see Hartnett, 2016 for further discussion), and even fewer studies that look at AI and motivation. This is in line with Al-Hoorie (2017) who states that although research suggests

obvious correlations between technology and motivation, there has been only little research looking in this area. In other words, technologies are developing rapidly, but studies looking at motivation and technology are still very limited. Research on language motivation, particularly in EFL contexts, is still lagging on the rapid development of technology and this is a promising area for further research. This is the niche intended to be explored and elaborated in this study.

1.2. Statement of the Problem

This research is aimed at exploring how technology, in this case AI assisted online learning, affects language motivation in EFL contexts. For this purpose, this study employs the following research questions:

1. What are the motivational orientations of EFL learners in AI assisted online learning as practised in an Indonesian setting?
2. What are the aspects of AI assisted online learning that affect EFL learners' motivation?
3. How do the AI assisted online learning aspects affect EFL learners' motivation?

1.3. Purpose of the Study

The primary purpose of this study is to provide a comprehensive review of the roles of technology, AI in particular, in language motivation. The results are expected to be achieved from these research activities: 1) a look into the motivational orientations of EFL learners in AI assisted online learning activities, 2) an investigation of the aspects of AI assisted online learning that affect EFL learners' motivation, and 3) an exploration into the scientific explanation of how the aspects of AI assisted online learning could affect EFL learners' motivation.

These activities would work on various relevant data. The look into the motivational orientations of the EFL learners in AI assisted online learning activities will make use of statistical data. Meanwhile, investigating the aspects of

AI assisted online learning that affect EFL learners' motivation would rely on qualitative data, such as interviews, Focus Group Discussion (FGD) sessions, and software evaluation. Finally, the exploration into the scientific explanation of how the aspects of AI assisted online learning could affect EFL learners' motivation will be based on relevant existing studies and theoretical frameworks.

1.4. Significance of the Study

It is hoped that the results of this dissertation research would benefit the practice of language teaching and learning in general. Moreover, it is also expected that this study could offer new constructs in technology and language motivation areas by the end of its commencement. In other words, it is expected that this study would be significant to both language teachers and researchers, particularly those interested and specialised in the use of technology in language classrooms, EFL classrooms in particular.

For EFL teachers, this study should offer new discussions and approaches in the practice of language teaching and learning. As AI assisted online learning is still relatively new, it is expected that the results of this study would be helpful for teachers in designing AI assisted online learning materials and activities. Hopefully, this could help teachers in designing lessons that better suit learners' needs and foster learning. Regarding the context of this study, the results of this study could also help teachers in creating technology-supported language learning activities and materials that could also, at the same time, promote students' motivational levels.

For EFL researchers, the results of this study could open new horizons in language motivation studies, particularly their relation to the use of technology, as this field has not yet been heavily explored. Motivation is a complex subject, and so is language motivation. Language motivation is dynamic as new approaches and schemes are being introduced and implemented. With the rapid development of digital technologies, including AI, studies on language motivation are also developing fast. This study could contribute to the development of language

motivation, especially those relevant to the use of technology in language classrooms, AI in particular.

1.5. Dissertation Overview

This dissertation is structured into five chapters. Each chapter has a different focus to discuss and explore. Chapter 1 situates the research. It provides the background, research questions, and purpose of the study. Chapter 2 discusses the underlying theories relevant to this study. It elaborates theories in L2 motivation, and specific views from Self Determination Theory in particular. Moreover, theories surrounding the use of technology in language learning are also highlighted, with special attention being given to online learning and artificial intelligence. Chapter 3 highlights the important elements in the research methodology. The design of the research, research context, participants, instruments, research procedure, ethical considerations, and data analysis are discussed thoroughly. Chapter 4 presents the findings of this study. The findings are presented as the answers to the research questions. Chapter 5 sums up the main findings and their implications. In addition, recommendations for further studies are also provided in this chapter.

1.6. Chapter Summary

This chapter has presented all the necessary information to introduce the research. At the beginning of the chapter, the rationale of the study has been highlighted, exploring existing studies and theoretical foundations relevant to this study. It has been highlighted that language motivation is key in determining the success of language learners. However, the field is dynamic and technology is one of the crucial factors affecting students' motivation. Moreover, as technology is progressing fast especially with the fact that the technologies in AI are developing rapidly, an investigation into language motivation in AI assisted online learning and necessary. With that in mind, this should be a timely investigation into the issue,

providing the research gap or research space of this study. This background serves as the foundation towards the development of the research problems and the formulation of the research questions. This chapter also outlines some points regarding the benefits the study could offer to both language teachers and researchers. In the end, how this dissertation is structured has also been presented.

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