PERSPECTIVE OF DGBL IN ESL CLASSROOM AMONG PRIMARY SCHOOL
TEACHERS IN JOHOR BAHRU

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# DEDICATION

Specially and humbly dedicated to my beloved parents, siblings, and my loved ones.

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# ABSTRACT

The advancement of educational technology has crafted a pathway for the integration of various teaching methods that has been considered as a beneficial and effective tool for pupils. "Game-Based Learning" (GBL) is one of the teaching methods in assisting language teaching pedagogy. This initiation of language teaching pedagogy of using games at the nascent stage has led to the development of "digital game-based learning" (DGBL) as it incorporates "digital games" as a technological teaching kit in language learning environment. Past studies have revealed the utilization of "digital games" in in language learning process. However, limited research conducted on the usefulness of DGBL in ESL classroom, especially in Malaysia. Hence, the purpose of this study is to know teacher's perspective on the usefulness of "Digital game-based learning" (DGBL) in ESL classroom among primary school teachers in Johor Bahru. The objectives of the study are to explore the teachers' perspective on the usefulness of "Digital Game-Based Learning" (DGBL) in ESL classroom, to discover the teachers' perspective on the barriers of "Digital Game-Based Learning" (DGBL) in ESL classroom and to find out the teachers' perspective on the support needed to adopt "Digital Game-Based Learning" (DGBL) in ESL classroom. Case study research design was employed to know perspective of 9 ESL teachers in Johor Bahru. The data were collected from semi-structured interview, teacher's journals, and observations. The findings of the study revealed usefulness of DGBL. Nonetheless, the study disclosed the barriers faced by teachers in utilising DGBL. Implications of the study revealed the role of school in achieving successful integration of DGBL in ESL classroom.

# ABSTRAK

Kemajuan teknologi pendidikan telah menjadikan jalan untuk penyatuan pelbagai kaedah pengajaran yang telah dianggap sebagai alat yang bermanfaat dan berkesan untuk murid. "Pembelajaran Berasaskan Permainan" (GBL) adalah salah satu kaedah pengajaran dalam membantu pedagogi pengajaran bahasa. Permulaan pedagogi pengajaran bahasa menggunakan permainan pada tahap baru telah menyebabkan pengembangan "Pembelajaran berasaskan Permainan Digital" (DGBL) kerana menggabungkan "permainan digital" sebagai alat pengajaran teknologi dalam lingkungan pembelajaran bahasa. Kajian terdahulu telah menunjukkan penggunaan "permainan digital" dalam proses pembelajaran bahasa. Walau bagaimanapun, kajian terhad yang dilakukan mengenai kegunaan DGBL di bilik darjah ESL, terutama di Malaysia. Oleh itu, tujuan kajian ini adalah untuk mengetahui perspektif guru mengenai kegunaan "Pembelajaran berasaskan Permainan Digital" (DGBL) di bilik darjah ESL dalam kalangan guru bahasa Inggeris sekolah rendah di Johor Bahru. Objektif kajian adalah untuk meneroka perspektif guru mengenai kegunaan "Pembelajaran Berasaskan Permainan Digital" (DGBL) di bilik darjah ESL, untuk mengetahui perspektif guru mengenai halangan "Pembelajaran Berasaskan Permainan Digital" (DGBL) di bilik darjah ESL dan untuk mengetahui perspektif guru mengenai sokongan yang diperlukan untuk menerapkan "Pembelajaran Berasaskan Permainan Digital" (DGBL) di kelas ESL. Reka bentuk kajian kajian kes digunakan untuk mengetahui perspektif 9 guru ESL di Johor Bahru. Data dikumpulkan dari temu ramah separa berstruktur, jurnal guru, dan pemerhatian. Hasil kajian menunjukkan keberkesanan DGBL. Walaupun begitu, kajian itu mendedahkan halangan yang dihadapi oleh guru dalam menggunakan DGBL. Implikasi kajian mendedahkan peranan sekolah dalam mencapai kejayaan integrasi DGBL di bilik darjah ESL.

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DGBL    -    Digital Game Based learning

ESL     -    English as Second Language

TAM     -    Technology Acceptance Model

ZPD     -    Zone of Proximal Development

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# CHAPTER 1

## INTRODUCTION

### 1.1    Introduction

Language is a significant element that influences real life communication. Ahmadi (2007) affirmed that language learning requires a significant method to facilitate language learning process. He believed appropriate methods used by educators would enable learners to acquire language. Information and communication technology (ICT) have undergone rapid advancement and influenced the learning environment in the educational field has undergone significant evolution over the years. It can be said that technology plays an essential role in learning experiences and a significant tool for teachers to implement in their classroom (Eady & Lockyer, 2013). Moreover, it also helps teachers to enhance teaching and learning pedagogy. This was further supported by Solanki and Shyamlee1 (2012) and Pourhosein Gilakjani (2017) as they believed language learning has evolved due to the advancement of technology. Significantly, integration and advancement of technology in classroom has evolved the environment from textbook based teaching to computer-based teaching approach in English as Second Language (ESL) classroom (McLoughlin & Lee, 2010). It can be said that various methods of teaching pedagogy have emerged in accordance with the advancement of technology.

Educational technologies are becoming increasingly significant and enhance teaching and learning pedagogy (Dudeny & Hockly, 2008). Information, communication, and technology are vital catalyst that aids educators in educational setting and considered to be an effective method in developing language skills. Besides, it also influences the proficiency of language learners in the classroom (Chang & Lehman, 2002). In addition, the advancement of educational technology in ESL classroom has evolved as educators examine and attempt to use technology to facilitate learning and as an educational tool. Katwibun (2014) mentioned technologies

are the required teaching aids as it becomes one of important aspect in this current learning environment. Therefore, the exploitation of educational technologies is prevalent and been exploited in teaching and learning. Bull and Ma (2001) highlighted educational technologies caters limitless means for ESL teachers to discover and implement in the classroom. Moreover, educational technology promotes teachers' information and technology literacy and encourages pupils to adopt learner-centred approaches. Besides, educational technology has also been considered as a beneficial and effective tool for pupils. Hence, advancements in technology have crafted a pathway for the integration of various teaching methods in the ESL classroom.

There are plenty of teaching methods that have been implemented in this 21st century. "Game-Based Learning" (GBL) is one of the teaching methods in assisting language teaching pedagogy. "Game-Based Learning" (GBL) is the teaching approach in which games are utilised as media to convey learning contents (Nor Azan & Wong, 2008). This approach allows learners to practice and learn English language via games. Game-based learning (GBL) is the most communicative and collaborative method that is encouraged by many researchers in which learners show active participation in acquiring language in ESL classroom (Ghazal & Singh, 2016). Researchers believed that game-based learning activates learners' participation in the classroom. This initiation of language teaching pedagogy of using games at the nascent stage has led to the development of "digital game-based learning" (DGBL) as it incorporates "digital games" as a technological teaching kit in delivering knowledge and engaging pupils in ESL classroom.

"Digital game-based learning" (DGBL) is formed when "digital games" amalgamated in language teaching pedagogy (Yang, Lin, & Chen, 2018). Ibharim, Yatim, and Masran (2015) believed that "digital games" are one of the technological tools that has been used as a strategy in learning methods. It can be perceived that "digital games" also act as an effective teaching aid for educators. Moreover, researchers believed that "digital games" enhance learner's performance in learning and at the same time it functions as an efficient teaching and learning tool (Su & Cheng, 2015; Wang, Chen, Chang, & Chan, 2016). In addition, "digital game-based learning" (DGBL) has the potential to increase learners' performance in acquiring

language and a useful teaching and learning approach for educators to be used in ESL classroom. Wu, Hsiao, Wu, Lin, and Huang (2012) highlighted "digital game-based learning" (DGBL) is an effectual and efficient to implement in ESL classroom. This was supported by Huizenga, Admiraal, Akkerman, and Ten Dam (2009) claimed that "digital game-based learning" (DGBL) able to enhance learner's language learning motivation. It also offers instantaneous response from learners (Yang, Lin, & Liu, 2017). Teachers were able to get immediate response from learners and able to make necessary amendments in their teaching and learning. Moreover, DGBL foster learners to resolve problem that arises in the classroom in any circumstances (Eseryel, Law, V., Ifenthaler, Ge, & Miller, 2014). DGBL boost learning performance of learners in ESL classroom. This is because DGBL enable learners to actively participate during teaching and learning. Hence, "digital game-based learning" (DGBL) has been used in language learning environment (Yang, Chen, & Jeng, 2010).

In Malaysia, educational setting has been dynamically transformed over the years because of the advancement of Information, and Communication Technology (ICT). It was the first few countries in the world to establish an ICT strategy for the education scheme Malaysia (Ministry of Education, 2015). The motive is to utilise technology in assisting language learning in ESL classroom and at the same time enhance the quality of education. Malaysian Education Blueprint 2013-2025 has included information and communication technology as one of the eleven shifts in Malaysia (Ministry of Education, 2015). Hence, technology has created a platform for educators to enhance, adopt and modify their educational environments. This shift has led to the integration of "digital games" in the ESL classroom. There are several new strategies that have been highlighted including learning methods through "digital games" (Ibharim et al., 2015). "Digital games" are one of the effective tools as they were integrated in the teaching and learning to promote learner's engagement and joyfulness in ESL classroom (Prensky, 2003). Consequently, "digital game-based learning" (DGBL) developed. Nonetheless, the integration of "digital games" is restricted in ESL classroom Though, there are some methodologists revealed that utilization of "digital games" has benefitted language learning process in ESL classroom (Yang, Lin, & Liu, 2017; Chen & Lin, 2016; Eseryel, Law, Ifenthaler, Ge, & Miller, 2014; Peterson, 2010; Wang & Chen, 2010; Squire, 2002, 2008). This can be concluded that there are studies conducted to know the implementation of "digital

games" in teaching practise but lacks on the current studies conducted on the usefulness of "digital game-based learning" (DGBL) (Hung, Yang, Hwang, Chu, & Wang, 2018; Peterson, 2016). Hence, the purpose of the study is to know teacher's perspective of "Digital game-based learning" (DGBL) in ESL classroom among primary school English language teachers in Johor Bahru.

## 1.2    Background of the Research

Rafiq and Hashim (2018) highlighted the implementation of technology in educational setting has been evolving for the past few years. The implementation of information and technology is to educate pupils to become computer literate citizens and acts as an educational technological tool for teachers to incorporate in their teaching practice. Abunowara (2016) emphasized educational technologies were introduced to influence teaching approach of teachers in classroom. It can be deduced that the advancement of educational technologies has led teachers to utilise digitalise educational games in their classroom. This approach has drawn the attention of academics around the world. Researchers have highlighted that "digital games" help pupils to acquire language and at the same time enhance their language skills namely reading, listening, speaking, and writing (Milton, Jonsen, Hirst & Lindenburn, 2012; H.-M. Lu, Lou, Papa & Chung, 2011; deHaan, Reed & Kuwada, 2010; Ranalli, 2008). Although there was myriad research done to know the effectiveness of "digital games" in ESL classroom, teachers' perception on "digital game-based learning" is relatively less explored. Therefore, it is important to know teachers' perception as they are agents in schools.

Teo (2008) and Albirini (2006) believed that teachers play a pivotal role in exploring educational technologies and integrate in their teaching practice. It can be deduced that teachers play a significant role in incorporating educational technology in the classroom. Bullock (2004) highlighted that teachers' views influences the integration of educational "digital games" in the classroom. This was also verified by Kersaint, Horton, Stohl, and Garofalo (2003) as he believed teachers who portray optimistic approach able to use educational "digital games" as their teaching tool in their classroom. Therefore, it is crucial to know teachers' perception as they can

influence the effectiveness of educational "digital games" in educational setting. However, to date limited experiential researches have been carried out to know the teachers' perceptions of effectiveness of using "digital game-based learning" in ESL classroom. Hsu and Chiou (2011) stated that extremely limited researches have been carried out to know teachers' views on the usefulness of using "digital game-based learning" in ESL classroom. Teachers as practitioners can recognise the significance of using "digital games" in ESL classroom as it influences teachers' perception in encompassing educational "digital games" in ESL classroom. Even though some studies have surveyed have been conducted to know teacher's perception of games they contain some limitations (Baek, 2008; Blume 2019; Koh, Kin, Wadhwa, & 229 Lim, 2011; Noraddin & Neo 2014; Noraddin 2015; Pastore & Falvo, 2010; Razak, Connolly, & Hainey, 2012; Schrader, Zheng, & Young, 2006). This is because most of the prior research failed to define the term game that contains educational value, which could mislead the purpose of the article. Moreover, most of the previous researchers have used quantitative methods to achieve research purposes, which might not reflect the teacher's perspectives of "digital game-based learning" (DGBL) in ESL classroom among in depth. In addition, most previous researchers have been employed in other countries, which covers limitations in generalizing in Malaysian ESL classroom. Hence, this research could aid to fill this literature gap and potentially stipulate sufficient and authentic information for further research in the study.

## 1.3 Statement of the Problem

Although, there are many researchers carried out to know the usage of "digital games" in ESL classroom, research on teachers' perspective on the usefulness of "digital game-based learning" (DGBL) is scarce. Therefore, the aim of the study is to know teachers' perspective on the usefulness of "Digital Game-Based Learning" (DGBL) in ESL classroom. It is vital to know teachers' perspective on the usefulness of "digital game-based learning" (DGBL) in ESL classroom. In order to comprehend DGBL better, primary school ESL teachers were selected to know the usefulness, barriers and support needed to adopt "digital game-based learning" (DGBL) in ESL classroom.

This reserach specifically studies three research questions and research objectives.

## 1.4    Objectives of the Research

This study aims to investigate teachers' perspective concerning the use of "Digital Game-Based Learning" (DGBL). Particularly, it focuses on primary school English language teachers in Johor Bahru. With the aim of the research, the following research objectives have been developed:

(a)    To explore the teachers' perspective on the usefulness of "Digital Game-Based Learning" (DGBL) in ESL classroom

(b)    To discover the teachers' perspective on the barriers of "Digital Game-Based Learning" (DGBL) in ESL classroom

(c)    To find out the teachers' perspective on the support needed to adopt Digital Game-Based Learning" (DGBL) in ESL classroom

## 1.5    Research Questions

This study aims to investigate teachers' perspective concerning the use of "Digital Game-Based Learning" (DGBL). Particularly, it focuses on primary school English language teachers in Johor Bahru. Based on the objectives and purpose of the study, research questions have been formulated:

(d)    What is the teachers' perspective on the usefulness of "Digital Game-Based Learning" (DGBL) in ESL classroom?

(e)    What is the teachers' perspective on the barriers of "Digital Game-Based Learning" (DGBL) in ESL classroom?

(f)    What is the teachers' perspective on the support needed to adopt "Digital Game-Based Learning" (DGBL) in ESL classroom?

## 1.6    Theoretical Framework

Technology Acceptance Model (TAM) is pertinent for this study as it helps the process of exploring the acceptance of technology in various field (Siti Fatimah Rahman, Melor Yunus & Harwati Hashim, 2019). It is also one of the models that explores teachers' acceptance concerning information, communication, and technology (ICT) (Blume, 2019). In addition, TAM has been recurrently used to explore acceptance of technology (Sanchez-Prieto, J. C., Olmos-Migueláñez, & García-Peñalvo, 2016). It was first initiated by David, Bagozzi and Warshaw in (1989). The goal of TAM is to study one's acceptance of technology designed by the user's behaviour based on the learner's perceived usefulness (Moss, O'Connor, & White, 2010). It comprises five constructs namely "external variables", "perceived usefulness", "perceived ease of use", "attitude", and "behavioural intention to use". "Perceived usefulness (PU)" "defined as the prospective user's subjective probability that using a specific application system will increase his or her job performance within an organizational context" (Davis, Bagozzi, & Warshaw, 1989). However, "perceived ease of use" (PEU) defined as "the degree to which the prospective user expects the target system to be free of effort" (Davis et al.,1989, p.985). Attitude towards use (A) defined as "an individual's positive or negative feelings (evaluative affect) about performing the target behaviour" (Davis et al.,1989, p.984). Behavioural Intention (BI) described as a person's intention to behave in a certain way (Davis et al.,1989). "Actual use" (AU) defined as the use of the technology.

The suggested TAM will explore attitude behaviour that associates with the target system. The main component of TAM model is "Perceived Usefulness" (PU) and "Perceived Ease of Use" (PEOU) (Abdul, 2018). These two main components are essential in the context of information technology user behaviour and acceptance criteria (Bashir, Nazirah, & Ya'u, 2015). "Perceived Usefulness" (PU) explores the users believe in using technology while "Perceived Ease of Use" (PEOU) explores the users' effectiveness in using technology. Lee, Cho, Gay, Davidson, and Ingraffea (2003) stated that the exploration of TAM will be able to indicate user's belief and approach in using technology. They believed that user's optimistic approach towards technology relies on their perception towards technology. The implementation of

technology is influenced by "one's behavioural intentions", "attitude", "perceived usefulness", and "perceived ease of use" (Park, 2009, p.151).

Taher (2014) believed that the TAM model of attitude behaviour is the most appropriate for this research as it studies to know teachers' perspective on the information technology system. Bourgonjon, De Grove, Smet, van Looy, Soetaert and Valcke (2013) exploited TAM model to explore teacher's attitudes towards "digital game-based learning" (DGBL). This was also supported by Ibrahim, Khalil and Jaafar (2011) and Idris, Sin and Ya'u (2015) as the researchers utilised TAM model to explore teacher's attitudes towards DGBL. Besides, Liu, Lin, and Zhang (2017) have applied this model in their studies to understand EFL teachers' perspective on information, communication, and technology (ICT). Hence, it is a suitable theoretical framework to study the research using the TAM model. The following is the recommended theoretical framework for the research.
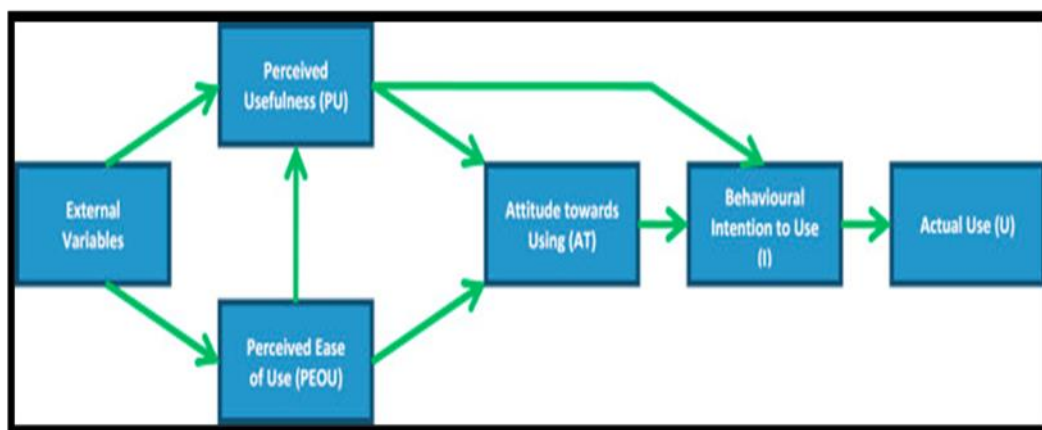


Figure 1.1  Technology Acceptance Model

## 1.7 Conceptual framework

Conceptual framework is a well-planned layout that aids researcher investigate research problem and provide a representation of ideas that relate to one another (Adom, Emad Kamil Hussein, & Joe, 2018). It also helps researcher to structure concepts on the phenomenon of the study. This study applies the TAM model to explore teachers' perspective of "digital game-based learning" (DGBL) in ESL classroom among primary school English Language teachers in Johor Bahru. The

current research investigates the effect of "perceived usefulness" and "perceived ease of use" of ESL teachers in using DGBL. The following is the conceptual framework that demonstrated in Figure 1.2.
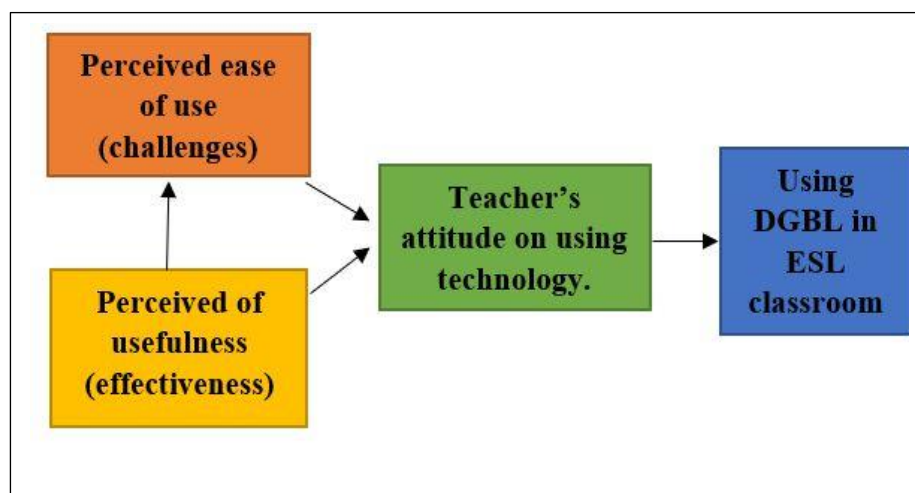


Figure 1.2 Conceptual framework developed in this research

Figure 1.2 represents the framework developed in the study. Framework was formed to study this research. The proposed conceptual framework explores the "perceived ease of use" and "perceived of usefulness" that greatly affects teacher's attitude in using technology. "Perceived ease of use" and "perceived of usefulness" are two major factors that influence a user's attitude in using technology. "Perceived ease of use" focuses on the user's perception to "digital game-based learning" (barriers) while "perceived usefulness" focuses on the user's belief towards "digital game-based learning" (usefulness). These two features could influence a teacher's attitude in using "digital game-based learning". As a result, the teacher's attitude influences using "digital game-based learning" (DGBL) in ESL classroom.

## 1.8    Significance of the Research

The purpose of this study is to assist teachers and provide some vision on the perspective of the teachers implementing "digital game-based learning" (DGBL) in ESL classroom. Through this study, they will be able to know the benefits and challenges of using DGBL and at the same time they will be able to tackle the barriers

confidently in near future. Moreover, it prepares teachers to adopt the changes in the learning environment. Buza (2017) mentioned that teachers should be accustomed to the constant advancement of technology and incorporate in their classroom. This study will prepare teachers to fulfil the requirement of Malaysian Education Blueprint 2013-2025 assimilating technologies in ESL classroom and stipulate deeper understanding on "digital game-based learning".

## 1.9 Scope of the Research

This study explores the teachers' perceptions on the usefulness of using "digital game-based learning" (DGBL) in ESL classroom. English language primary school teachers in Johor Bahru are chosen to be respondents for this study. The study highlights teachers' perspective on usefulness, barriers, and approaches to foster the usage of "digital game-based learning" (DGBL). Besides, this research will be done in a certain period of time. The study will not cover other aspects such as gender, socioeconomic and race. Besides, the analysis of the study will be based on interview, observations and teacher's journals.

## 1.10 Definition of Terms

### 1.10.1 DGBL (Digital Game-Based Learning)

"DGBL" is a strategy that can be represented through computer-based applications. Over the years, learning technologies especially DGBL has been able to fulfil the needs of learning. The term "Digital Game-Based Learning" suggested by Gee (2007) and Prensky (2001) as cited in Felicia (2011). It is a term popularized by Prensky (2001) and Gee (2007) to describe the application of "digital games" as a pedagogical tool. Prensky (2001) proposed that the development of "DGBL" begin in the in the 20th century. Prensky believed the development of these "digital natives" plays a vital role in the advancement of "DGBL". Teed (2012) defined DGBL as a virtual learning environment where students engage in a learning activity with the use

of a technological tool. Researchers believe that DGBL has made a great impact on education. DGBL able to engage learners in the classroom and motivate learners to learn and enhance their knowledge (Felicia, 2011). "Digital games" also promotes learners' self-confidence (Felicia, 2011), as a result they were able to achieve their educational goals.  To conclude, DGBL is an innovative and creative way of learning that could fulfil learners' needs. In this study, DGBL is selected to know teachers' perspective on the effectiveness, barriers, and ways to overcome the problem.

## 1.10.2  ESL (English as Second Language)

English is one of the global languages that has been used in primary, secondary, and tertiary level of education and it is crucial for learners to acquire the language (Akcay, Butner, & Arikan, 2015). "English as a Second Language" (ESL) is referred to when non-native speakers use or study English Language in an English-speaking environment. Nordquist (2018) defined ESL as the language acquired by non-English speakers in an English-speaking environment followed by their mother tongue. In Malaysia, English is recognised as a second language followed by our national language, Bahasa Melayu. It is widely used as a medium of instruction in various settings. Schools play a vital role in influencing ESL learning among learners (Akcay et al., 2015). This is because the school setting and environment influences ESL learners' language acquisition. The Malaysian Education Blueprint highlights the significance of English language and introduces various teaching strategies to enhance learners' English competency (Sidhu, Kaur,  & Chi, 2018). Hence, it is important as ESL teachers to know the importance of language and at the same time adhere to Malaysian Education Blueprint in introducing various methods in improving students' proficiency level of English.

**1.11    Summary**

This research study is divided into three chapters. Chapter I highlighted the study with introduction and background of "digital game-based learning". Statement of problem, research questions and objectives were clearly outlined in this chapter. Moreover, it also discussed the theoretical and conceptual framework of research. In addition, a description of significance of the study, scope of study and limitation of study were thoroughly exploited. Definition of terms also can be seen. Chapter II proposed review of past researches. Literature review has been divided and explained in four subpoints. Chapter III discussed methodology that has been involved in the study. Research design, sample and population, and research instruments were presented. Research procedure of instruments and data analysis were discussed at the end of chapter. Summary of chapter was added as to give overview of chapter III.

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