



VIRTUAL LEARNING ENVIRONMENT: EFFECTIVENESS IN ENHANCING  
TEACHING OF VOCABULARY TO SECONDARY ESL LEARNERS

JACQUELINE LAU CHUNG LING

UTAR

A RESEARCH PROJECT  
SUBMITTED IN  
PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR  
THE BACHELOR OF ARTS (HONS) ENGLISH EDUCATION  
FACULTY OF ARTS AND SOCIAL SCIENCE  
UNIVERSITI TUNKU ABDUL RAHMAN

MARCH 2019

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### **APPROVAL FORM**

This research paper attached here to, entitled “Virtual Learning Environment: Effectiveness in Enhancing Teaching of Vocabulary to Secondary ESL Learners” prepared and submitted by “Jacqueline Lau Chung Ling” in partial fulfilment of the requirements for the Bachelor of Arts (Hons) English Language is hereby accepted.

\_\_\_\_\_

Date: \_\_\_\_\_

Supervisor

Ms. Kristina a/p Francis

## **DECLARATION**

I declare that the material contained in this paper is the end result of my own work and that due acknowledgement has been given in the bibliography and references to ALL sources be they printed, electronic or personal.

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JACQUELINE LAU CHUNG LING

## **ABSTRACT**

The aim of this study was to explore the impact of Frog VLE (Virtual Learning Online) where a class of Form 4 students engaged into the learning of vocabulary and to suggest Frog VLE as a way to improve the students' performance in vocabulary learning. Besides, English as Second Language (ESL) secondary school learners' perceptions on the use of Frog VLE in teaching of vocabulary were explored. This study had employed pre-and post-test along with questionnaires and interviews. The study was conducted in SMK Hamid Khan, Tapah, Perak for a duration of eight weeks. The major findings of this research paper showed that majority of the Form 4 students studied improved after receiving the intervention given. The respondents were giving positive feedbacks on the use of Frog VLE in teaching of vocabulary in the class. Future researchers should increase the samples size of the study, preferably to include ESL learners from whole Perak district or even every nation in Malaysia, in order to enable the findings and results of the study to be more generalizable and prove that Frog VLE is truly able to help students in learning vocabulary more effectively.

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## LIST OF ABBREVIATIONS

### Abbreviations

- 1 Computer Assisted Language Learning (CALL)
- 2 Cyber-Physical Systems (CPS)
- 3 English as Second Language (ESL)
- 4 Face to Face Classroom (F2F)
- 5 Higher Order Thinking Skills (HOTS)
- 6 Information and Communications Technology (ICT)
- 7 *Kurikulum Bersepadu Sekolah Menengah* (KBSM)
- 8 Lower Order Thinking Skills (LOTS)
- 9 Medium Order Thinking Skills (MOTS)
- 10 Ministry of Education (MOE)
- 11 Second Language Acquisition (SLA)
- 12 Virtual Learning Environment (VLE)

**Virtual Learning Environment: Effectiveness in Enhancing Teaching of Vocabulary to  
Secondary ESL Learners**

**CHAPTER 1**

**INTRODUCTION**

## *1.0 Introduction*

As the introductory chapter of this study, the background of the study was discussed. The teaching of English as the second language (ESL) in Malaysian language setting is absolutely a field which needs more studies and researches to be carried out. Thus, the statement of problems were discussed before the statement of the research objectives of this study. Next, the hypothesis, research questions, theoretical frameworks, significance of this research, limitation of this research were also discussed. Last but not least, a list of definitions for the keywords related to this research were included at the end of this chapter.

## *1.1 Background of the Study*

In this era, English language plays a crucial role in the pursuit of knowledge, it is also regarded as the international language of the world. In Malaysia where many languages are used every day, English language is one of the languages spoken by its people; however, it is still a second language for most Malaysian. Yet, English language has been implemented in the education system of Malaysia starting from the primary level (Rahmat, Lau, Sungif & Yusup, 2015). The teaching of English as second language (ESL) in Malaysia is indeed a field full with challenges, with an addition that most of the Malaysians are even with multilingual background.

The twentieth century has seen the rise and fall of many approaches to English teaching. According to the Ministry of Education (2013), the students in this era of globalisation need to be equipped with skills related to e-learning to perform effective learning. Hence, the utilisation of online learning has to be adopted in order to meet the objectives stated in the blueprint. In this context, Malaysian teachers are continuously challenged by new technologies that are believed to prepare them to deliver their lesson in a more effective way. In 2013, they have been given access



to an online learning platform known as Frog Virtual Learning Environment (VLE). Shen, Zainuddin, Maarop, Yaacob, Rahim and Hassan (2017) mentioned in their study that, Frog VLE is the symbol of the revolution in education field in Malaysia as it is the first cloud-based learning platform which includes the students, teachers and parents altogether in achieving the aspiration of educational goals in Malaysia.

The history of Frog VLE starts with Frog Education, formerly known as Frog Trade, which aimed to create software for schools use, founded in 1999 by Gareth Davies and Tariq Isa in England (FrogAsia, 2018). In 2011, Frog Education secured a contract in Malaysia, with the name of FrogAsia, rolled out over 10,000 schools across Malaysia. This contract secured FrogAsia as the state procured VLE used by teachers, students and parents throughout Malaysia. In this context, Malaysia was also the first country in the world to establish a 4G network and VLE at the same moment (FrogAsia, 2018).

In the field of learning English, there are four major and basic skills, which are reading, speaking, listening and writing of English. Among all these skills, vocabulary is like the foundation to build these skills up on it. Thus, vocabulary learning is one of the prominent skills that every language learner needs to acquire and enhance at the very first place. According to Richards (2013), the teaching and learning of vocabulary have yet aroused the same degree of interest within language teaching as issues such as grammatical competence, contrastive analysis, reading or writing, which have received considerable attention from scholars and teachers. Despite of the low attention been given to vocabulary skills compared to other language skills, it has been proven in the study of Boers (2013) that increased vocabulary leads to stronger listening, speaking, reading,

and writing skills, and it is a primary contributor to effective language use (Amiryousefi & Dastjerdi, 2010; Schmitt, 2010).

According to the research by Bloem, Van Doorn, Duivesteyn, Excoffier, Maas & Van Ommeren (2014), the Industrial Revolution is regarded as a development and a concept that has fundamentally changed our economy and society. The term ‘development’ does signify a rapid and fundamental change, and these transformations occurred within a relatively short period of time. Dating from 1784, we can distinguish four stages throughout the ongoing process of the Industrial Revolution (Bloem et.al., 2014). The first revolution occurred toward the end of the 18th century: mechanical production on the basis of steam and water. Then, the second revolution is placed at the beginning of the 20th century, which is the mass production with the introduction of the conveyor belt. The third revolution is the digital automation of production with the means of IT and electronics (Bloem et.al., 2014).

At present time, we can find ourselves at the beginning of the fourth stage of the industrial development, characterised by so-called “Cyber-Physical Systems” (CPS), forming a basis of intelligent network systems and processes. Just like what Bloem et.al. (2014) mentioned, we all are living in the era that ‘enormous Internet acceleration of industry which comes from the explosive growth of digital devices’. Internet devices like video cameras, tablets, smartphones and all variety of computers improve the quality, security and efficiency of production and process operations. It is becoming easier to connect these intelligent devices to the Internet. In this context, governments, educators and parents must question how they can prepare the present and future generations to thrive in this fast-transforming world. Graham (2017) mentioned it is undeniable that education is at the heart of preparing our generations to thrive. As a result, it is vital that we

have an education that develops humans to be capable in applying knowledge and performing collaborative problem-solving in life. Thus, the education industry has to adapt to the digital revolution, which results in the transformation of the world of education from traditional classroom instructions to e-learning.

According to Arshavskiy (2013), e-learning is a form of learning conducted through Internet, Intranet, network, or CD-ROM. Besides, she also mentioned that successful e-learning courses are interactive, energetic, dynamic and appealing to the learners' auditory, visual, and tactile senses. In this context, the adoption of a Virtual Learning Environment (VLE) will be a great choice to include all these criteria in performing e-learning effectively. Thus, the Ministry of Education in Malaysia (2013) introduced the 1BestariNet project. According to them, it is a project where an effort is made to connect over 10,000 government schools across Malaysia to the Internet with the powerful YES 4G connectivity. It provides an online learning platform with the Frog VLE that is simple, fun, and engaging. Referring to the official website of Frogasia (2018), Malaysia is the first country in the world to connect all its schools on a single learning platform. To date, it serves over 10,000,000 people, which includes 5,000,000 students, 500,000 teachers and 4,500,000 parents (Frogasia, 2018).

According to the study on teachers' perceptions of e-learning in Malaysian secondary schools by Cheok, Wong, Ayub & Mahmud (2017), it is believed that the Frog VLE is an initiative of the Malaysian government to leverage ICT usage in primary and also secondary schools in Malaysia. The previous initiative, which is to improve ICT usage in schools known as the Smart Schools' project despite having a huge consumption of expenditure, resulted with 80% of the

teachers used ICT less than one hour per week, plus this was also mostly limited to word-processing (UNESCO, 2013).

### *1.2 Statement of Problems*

Most of the recent researches indicate that teaching of vocabulary may be problematic because most of the teachers are not confident about what are the best practices in the teaching of vocabulary, while also not clear about where to start with in order to form an instructional emphasis on word learning (Berne & Blachowicz, 2008). Besides, there is also research mentioned that conventional vocabulary teaching strategies which emphasise on rote memorisation will lead to comprehension and retention problems among ESL learners (Zabidin, 2015).

Besides that, according to the research by Cornell, Dean & Thomas (2016), the main problem which most ESL learners, especially novice learners will encounter during the process of learning new vocabulary is the over-reliance on memorisation and translation method. It is also mentioned that memorisation and translation are the most salient strategies used by most ESL learners. For example, the researchers have discovered that when the learners are learning new vocabulary, they will write the new vocabulary several times and test themselves by writing definitions and then check their answers afterward. If the answers are wrong, they will repeat the quiz until they get all of them correct.

Despite the heavy reliance on ability in memorisation to consolidate vocabulary learning, it is also found that there are still limitations on the use of memorisation and translation method in the English language learning. These limitations are either the learners will forget most of the vocabulary and barely able to recognise the words after a certain time or they will encounter mixed

feelings of overwhelming by memorising the long list of vocabulary at most of the time (Cornell et.al., 2016).

On the other hand, there were also some problems arose regarding the negative perceptions of the teachers, students and also parents on the launching of VLE, In the news written by Aziz (2016), it has been mentioned that the usage of the VLE platform among students, parents, and teachers was very low, with less than five percent of students utilising the e-facilities. In this context, it has been elaborated that many parents feel that computers are not an educational tool and they will prohibit their children access to computers for their homework. Teachers were also lacked of readiness to access Frog VLE as they appear to have a fix mind-set that it will be a waste of time to utilise Frog VLE while teaching.

Aziz (2016) stated that technology will not magically make the students smarter unless teachers use technology properly and in a way that encourages learning. Besides, as an education editor of New Straits Times, she also mentioned that e-learning can only be successful if there is a revolutionary move away from replicating traditional classroom-based practices of teaching, not just a copy-paste substitute for old methods. Lastly, she concluded that only when teachers are exposed to new digital teaching approaches, while utilise the platform to experiment with technology, then a generation of students who can think and create without being prodded will be produced.

### *1.3 Research Objectives*

There were two research objectives that have been formed in order to find out the solutions for the statement of problems of this study:

1. To investigate the effectiveness of using Frog VLE to enhance the teaching and learning of vocabulary among ESL secondary school learners.
2. To find out the perceptions of the students on the use of Frog VLE in the learning of English vocabulary.

#### *1.4 Hypothesis*

This study was conducted based on a provisory hypothesis, which was the utilisation of VLE will provide positive effects in terms of effectiveness in vocabulary learning among secondary school ESL learners and will also improve their positive perceptions on VLE.

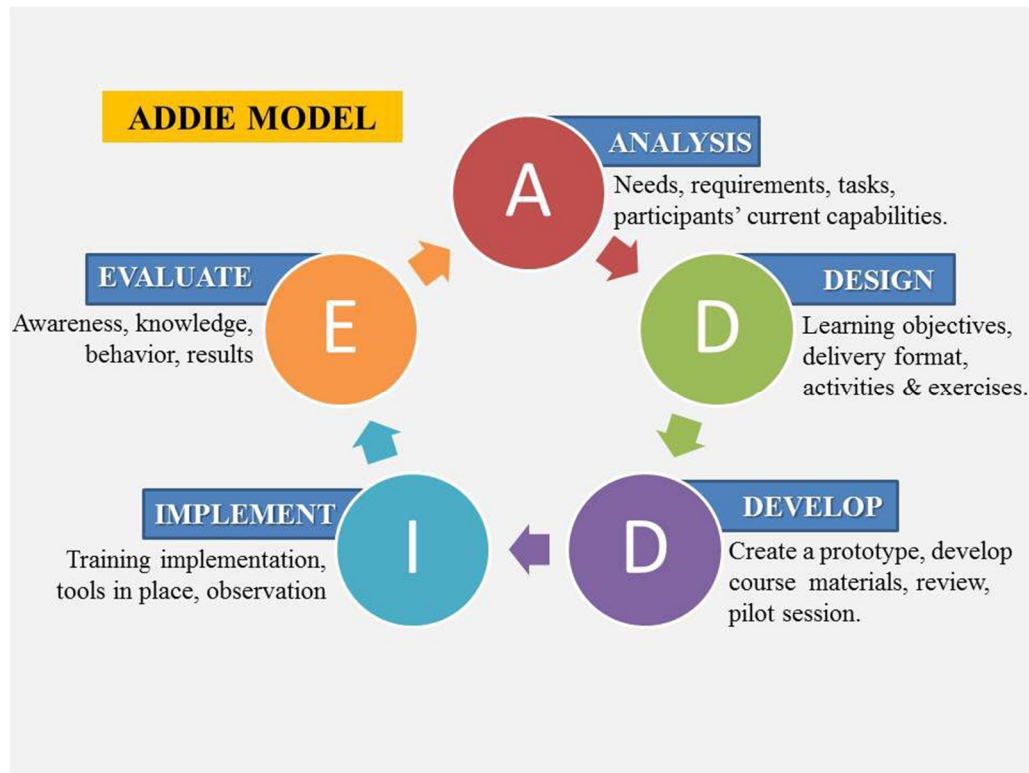
#### *1.5 Research Questions*

In this study, there were two research questions which were formed in accordance with the research objectives mentioned in the previous section:

1. Is VLE effective in enhancing the teaching and learning of vocabulary among secondary school ESL learners?
2. What are the perceptions of students on the utilisation of VLE in enhancing the learning of English vocabulary among secondary school ESL learners?

## 1.6 Theoretical Frameworks

### 1.6.1 The ADDIE Model



**Figure 1.1 The ADDIE Model (Arshavskiy, 2013, p.11)**

The theoretical framework of this study was mainly based on the ADDIE model. Figure 1.1 illustrates the process of this classic model that most instructional designers used. ADDIE is an acronym that stands for Analysis, Design, Development, Implementation and Evaluation respectively.

Based on the clarification of Arshavskiy (2013), the 'Analysis' phase starts with the clarification of problems, goal and definition of objectives, and also the collection of necessary data prior to the planning of the lesson. Besides, the audience's characteristics will also be defined along with the contents to be included, the learning environment, and the technical requirements.

In the context of this study, the ‘Analysis’ phase started with the goal to test the effectiveness of utilising VLE in the teaching of vocabulary to secondary school learners in ESL context.

In the ‘Design’ phase, the things that need to do are the writing of objectives, and crafting of the structure and sequencing of the study. At the end of this phase, there will be a blueprint for the study and its delivery methods. In this study, the design of the research was based on the triangulation method, which included a pre-test and post-test along with an intervention in between, questionnaire surveys and semi-structured interviews were given to the student respondents who were involved in the study.

In the ‘Development’ phase, the design will bring to life by using text, storyboards, graphics, audio, and/or video (Arshavskiy, 2013), and by assembling all these elements into a compelling lesson. In this study, the design of the lesson also included some of the functions in VLE like quizzes with games in the process, watching of videos and graphics and also included game-based platform like ‘Kahoot!’

In the ‘Implementation’ phase, the lessons were delivered to the audiences or the secondary school ESL learners. The students carried out their learning activities and utilised VLE in the learning of English vocabulary.

Lastly, in the ‘Evaluation’ phase, the effectiveness of the lesson was assessed by measuring the level of the learners’ learning and retention, which in this study were the result of the post-test, the surveys and the perceptions collected during the semi-structured interview.



### 1.6.2 Lab Rotation Model in Blended Learning

Blended learning has its root in online learning. As mentioned by Horn and Staker (2014), online learning is improving steadily and predictably, as it seeks to solve difficult education situations while meeting the demands of the users. They further stated that ‘blended learning is any formal education program in which a student learns at least in part through online learning, with some element of student control over time, place, path/pace’ (p.34). Thus, rather than just the use of digital tools from the classroom teacher’s perspective, it is believed that the technology used for the online learning must shift content and instruction to the control of the students in at least some way for it to qualify as blended learning, from the students’ perspective. Thus, we can conclude that blended learning is generally the mix of brick-and-mortar approaches and also online learning instructions, as shown in the diagram below.

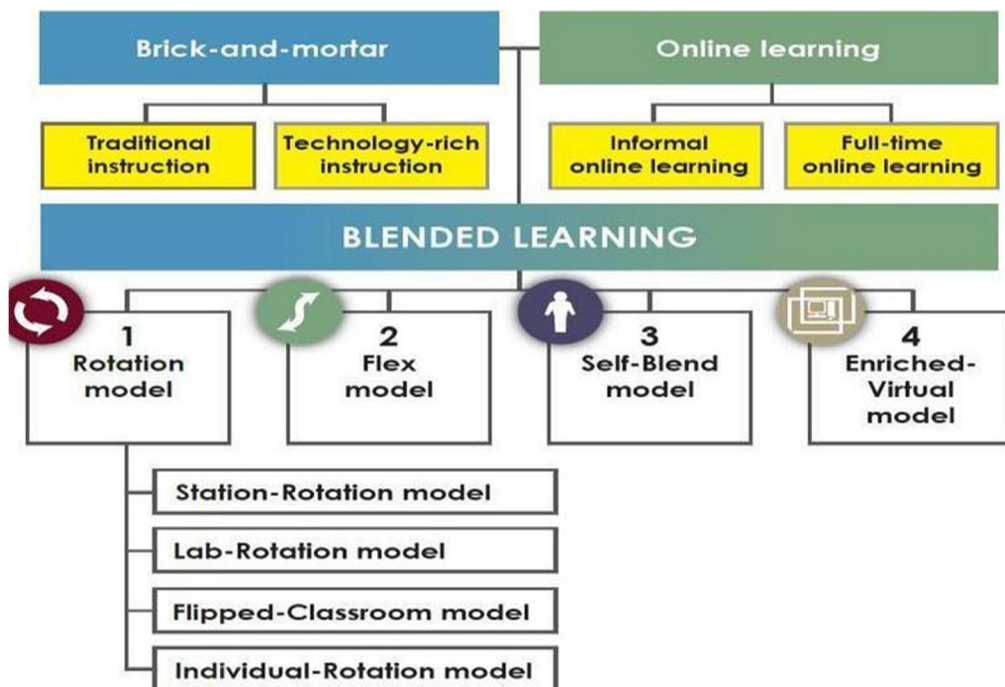
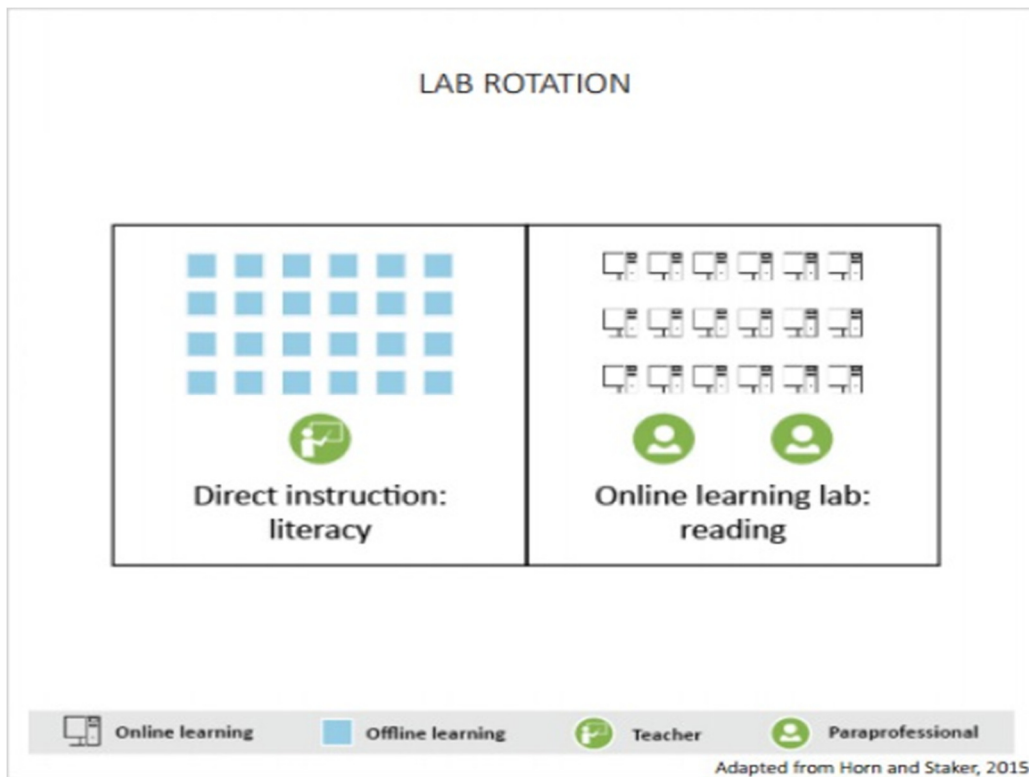


Figure 1.2 Blended Learning Model (Horn & Staker, 2014, p.38)

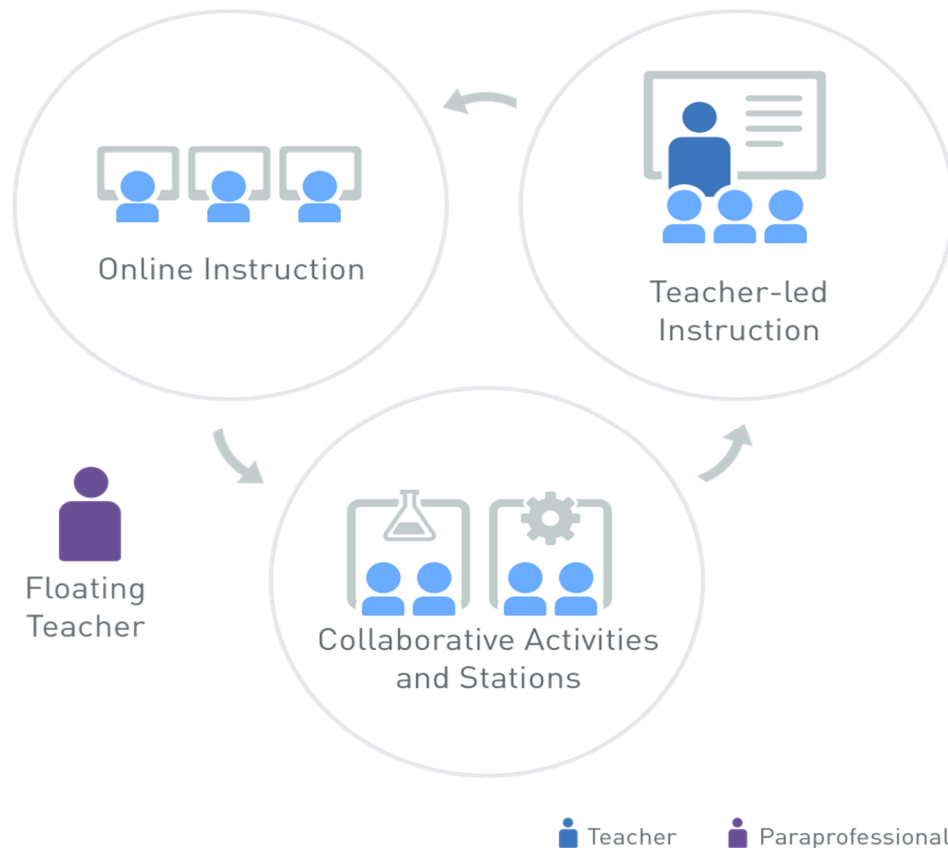
Figure 1.2 shows the four main models of blended learning, which are Rotation, Flex, A La Carte, and Enriched Virtual along with the relationship between these models. Among the models, The Rotation model is a model where classroom teachers, in particular, tend to be attracted to at the first place. It includes the subject in which students rotate either on a fixed schedule or at the teacher's preference. This includes online learning with the traditional mode of classroom learning. Under the category of Rotation model, Lab Rotation, as shown in Figure 1.3, was the main model for this study. The adoption of VLE Frog once per week during the English lesson for secondary school students clearly adhered to the characteristic of a Rotation model in blended learning.



**Figure 1.3 Lab Rotation Model in Adopting VLE in English Lesson**

Students who were involved in the blended learning in the form of Lab rotation attended English lessons in a computer lab, or commonly known as the 'Chrome Lab' in the Malaysian

context, in order to attend the online-learning portion of the English lesson. Horn and Staker (2014) also mentioned that schools have been using computer labs for decades; the key difference is that teachers today are starting to integrate the online learning with classroom learning to create seamless lessons. Thus, in this study, the Lab Rotation Model had been adopted in designing lessons for teaching of English among the secondary school learners, in which the lessons given to them had a fix weekly schedule of conducting traditional classroom (teacher-led instruction) and online classroom (online instruction) using VLE in the Chrome Lab, as shown in Figure 1.4 below.



**Figure 1.4 Flow of Adopting Lab Rotation Model in Teaching of Vocabulary**

### *1.7 Significance of Research*

The findings of this study were expected to assist the society in Malaysia to create a better understanding on the benefits of adopting VLE in teaching and learning of English, considering that all the Malaysian will become more alert about the revolution in the 21<sup>st</sup> century teaching industry, which is the blended teaching and learning. This subsequently showed that there are more effective teaching and learning process in comparison with the traditional or conventional way of classroom instructions.

By finding out the effectiveness of utilising VLE in enhancing the teaching and learning of vocabulary among secondary school ESL learners in Malaysia, and positive results were collected from the study, it is believed that the English teachers will somehow get what they expect to achieve in the 1BestariNet programme. Since the introduction of 1BestariNet in 2011 by the Ministry of Education for schools to be equipped with the Frog VLE, an integrated solution allows teaching, learning, collaboration and administrative functions to take place through the Internet. However, the implementation of such ambitious technology in the field of education has since sparked controversy. Thus, the study of the effectiveness in utilising VLE in enhancing the language of the students will be very significant in proving the successfulness of the Frog VLE in creating an effective online learning platform.

In addition, globalisation in this era greatly demands e-learning to be included to the teaching approaches and also justifies the needs for creating a learning environment with reality and also virtuality, which are the traditional classroom teaching and online learning. In relevance to this, blended reality and its diverse applications in education are highly emphasised these days (Bower, Lee & Dalgarno, 2017).

### *1.8 Limitation of Research*

This study had a few limitations and constraints. The first limitation was the time constraint. As this study adopted an experimental research design which included a pre-test, intervention and a post-test, a total duration of 14 weeks of the internship was difficult for the study to collect a near-accurate result. Moreover, the intervention was only given once per week in the Chrome Lab of the school. Also, the 14 weeks stated were also inclusive of public holidays in Malaysia. In this context, the students needed more time to be familiarised with VLE.

On the other hand, the experimental research method also consisted of some weaknesses. The grouping of the students into a controlled group and an experimental group might bring ethical issues as the intervention was given only to the experimental group. Lastly, the site of research was also one of the limitations of this study. This was due to the insufficient online learning background of the respondents because of their underdeveloped area of living. The students were relatively insufficient in having good proficiency in English as their ability to comprehend multiple languages had been limited to the heavy usage of their mother tongue in the rural area. Besides, the socio-economic status of these students also affected the proficiency levels of the students in comprehending English as their target language.

### *1.9 Definitions of the Keywords*

#### *1.9.1 Virtual Learning Environment (VLE)*

VLE is a web-based communication platform that allows students, without limitation of time and space, to access different learning tools, such as course content, discussion board,

program information, teacher assistance, document sharing systems and learning resources. (Martins & Kellermanns, 2004)

### *1.9.2 Frog Virtual Learning Environment (Frog VLE)*

Frog VLE is an online learning platform that is used to enhance teaching and learning in Malaysia government public schools since 2012. Frog VLE has become the prominent mechanism in supporting online education in primary and secondary schools in Malaysia (Mamat, Yusoff, Abdullah & Razak, 2015).

### *1.9.3 E-Learning*

E-learning is an abbreviation of electronic learning. It is defined as a delivery of learning materials through any electronic media like the Internet and CD-ROM. It covers the applications and processes which use these electronic media to distribute instructions in a more flexible way (Surjono, 2011).

### *1.9.4 Blended Learning*

Blended learning is a combination of face to face (F2F) classroom and integration of online technology. The term 'technology' can refer to a wide range of recent technologies. For instance, the Internet, CD ROMs and interactive whiteboards. It also includes the usage of computers as a means of communication such as email and chat room, and a number of environments which enable the teachers to enrich their courses, for example like virtual learning environments, blogs and wikis (Sharma & Barrett, 2007).

### *1.9.5 English as a Second Language (ESL)*

According to Norton & Christie (1999), ESL stands for English as a second language. An ESL program is a coursework designed to help students who are interested to learn English as their second, third, or in some cases, the fourth language. These programs hire teachers that are often bilingual who are there to help the students to develop their speaking, writing, reading and listening skills.

### *1.10 Summary*

This study strived to investigate the effectiveness of utilising VLE in enhancing the teaching of vocabulary among ESL secondary school learners. Besides, the perceptions of the students regarding the utilisation of VLE in enhancing their language skills had also been discussed. While expecting positive results from the effectiveness of utilising VLE in enhancing the language skills of the learners, this study was suggested to provide educators and learners an insight to perform a more effective teaching and learning of ESL in the future.

## **CHAPTER 2**

### **LITERATURE REVIEW**



## *2.0 Introduction*

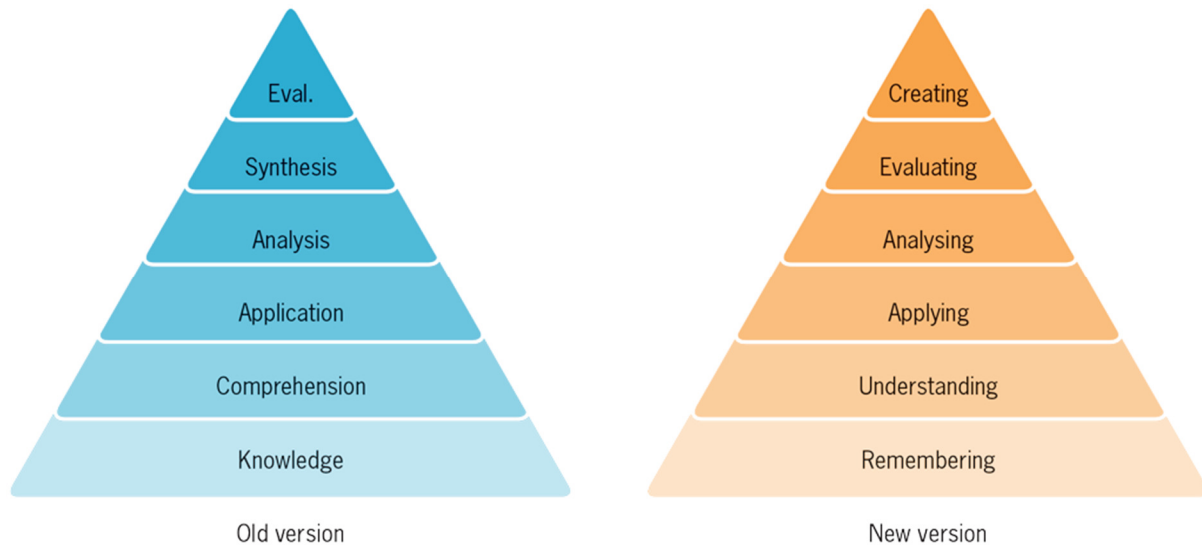
In this chapter, the major theories that have been included and build up this study were discussed. Some of the prominent theories were related to blended learning, the utilisation of VLE in the education industry and how the technology affects the teaching and learning of English in Malaysia language setting. Besides, this chapter also discussed the gap in the literature and the areas that have not yet been explored or are under-explored in the current research about VLE in education field around the world.

### *2.1 What Theories are Related?*

#### *2.1.1 The Bloom's Taxonomy*

Bloom's Taxonomy is a multi-tiered model of classifying thinking according to six levels of cognitive complexity (Forehand, 2005), which starts with knowledge, comprehension, application, analysis, synthesis to evaluation. According to Anderson & Sosniak (1994), many of the curriculum planners, administrators, researchers and classroom teachers at all levels of education have adopted Bloom's Taxonomy in their researches.

In 1956, educational psychologist Benjamin Bloom identified three learning domains in his taxonomy, which are cognitive (knowledge), affective (attitude), and psychomotor (skills). Later in the mid-90s, Lorin Anderson, who is also Bloom's former student, revised the learning domain and reflected a more active form of thinking, has made the taxonomy more relevant to meet the modern needs. Forehand (2005) mentioned that the two major modifications are the change of names from noun to verb forms, and the rearrangement of the levels in the pyramid of the taxonomy, as shown in Figure 2.1.



**Figure 2.1 Old and Revised Bloom's Taxonomy (Forehand, 2005, p.3)**

### ***2.1.2 Bloom's Taxonomy in ESL Classroom***

For this study, the revised Bloom's Taxonomy can be related to the process of language learning among the secondary school ESL learners. Firstly, they remembered the spelling of the vocabulary taught to them, then they understood the meaning or definition of the vocabulary. Lastly, they applied the vocabulary they understood into the assigned work as given in the VLE.

As for the higher order thinking skills included in the revised Bloom's Taxonomy, like analysing, evaluating and creating, these skills were used when the students are answering the quizzes on VLE. The questions prepared in the quizzes tested the vocabulary of the students, some of the questions required the students to analyse, evaluate and create a sentence by using the vocabulary they had learnt.

Besides, the pre-test and post-test of this study also applied Bloom's Taxonomy in designing the questions. The marks that the participants got in the three sections included in both the tests identified the improvements of the students in their lower order thinking skills (LOTS),

medium order thinking skills (MOTS) and also higher order thinking skills (HOTS). This was because the worksheets prepared for the pre-test and post-test have two sections of different types of questions which were multiple-choice questions and fill-in-the-blanks questions with choices of words given, in order to test the different levels of thinking skills among the participants, according to the Bloom's Taxonomy.

### ***2.1.3 VLE in ESL Classroom***

The adoption of VLE in an ESL classroom can be related to the Interactionist Second Language Acquisition Theory. In the research of Chapelle (2006) which studied the significance of interaction in second language learning and how interaction is supposed to promote second language acquisition (SLA), it is believed that the interactionist theory would predict a greater potential for language development than activities in which interaction does not take place.

The online learning platform, VLE Frog has a lot of functions which promote interactivity among the students themselves and also between the students and the teachers. As Shen et.al. (2017) mentioned in their study, VLE is a web-based communication platform that allows students, without the limitation of space and time, have the chances to access different learning tools, such as course content, discussion board, teacher assistance, document sharing system and a vast amount of learning resources. As shown in Appendix B, is the view of the Frog Play application which promotes interactive learning.

The Frog Play application provides students with enhanced quiz selection, games and it also includes an advanced analytics function. The advanced analytics function can measure the performance of the students, which includes the recording of their answers on a question level and is able to compare the students' performances over time. When a student launches Frog Play, they

will enter the Student Room, which is a customizable homepage and also a reward-based interface, where the level of customization is dependent on how much work a student completes. In this student room, clicking at the different items will allow the students to access different features. For example, clicking the computer will enable the students to access the quizzes and choose what they wish to undertake, as shown in Appendix C.

The interpersonal interaction will not only take place when students are having a face-to-face conversation in a classroom, but also electronically over a computer network. Chapelle (2006) outlined the benefits according to the interactionist theory when there are three basic types of interactions, which are between people, between person and computer and within the person's mind, as shown in Table 2.2 below.

Basic types of interactions		Benefits according to the interaction hypothesis
Inter-	1) between people	Negotiation of meaning
	2) between person and computer	Obtaining enhanced, or modified, input
Intra-	3) within the person's mind	Directing attention to linguistic form in the input

(Adapted from Chapelle, 2006)

**Table 2.1 Benefits hypothesized by the interaction hypothesis of 3 types of interaction**

One thing to be highlighted in the interaction between person and computer is that there is a research on Computer Assisted Language Learning (CALL) has found evidence supporting the hypothesis that such learner-computer interactions are beneficial to the acquisition of vocabulary (Plass, Chun, Mayer & Leutner, 1998). Moreover, the intrapersonal interaction that takes place in the students' mind will also engage their type of deep mental processing that may promote the acquisition of language.

Moreover, the forums area on Frog VLE also promotes the interactionist theory in learning a language. The Forum will display the School Forum which is visible by both teachers and students. Besides, discussion forums can be created for group discussions regarding school specific topics. In these forums, the students will be encouraged to discuss their ideas and share their experience in learning vocabulary.

Another application on Frog VLE that is very useful in teaching and learning of English is 'Boost', as shown in Appendix D. 'Boost' is a Frog application that contains hundreds of curriculum aligned, subject-based credible sites. These sites are created by award-winning teachers with the baseline of resources from credible FrogAsia partners such as Pelangi publishing group. The students can access and download Boost Sites directly, or the teachers can also share or assign Boost Sites as assignments to the students.

#### ***2.1.4 Learning Styles of the Learners in Practising E-Learning***

In this era of globalisation, the Internet becomes more influential and it also becomes the global media in sharing a vast amount of information. In accordance with the advancement of Internet technology, there is also a rise in types of learning experience and style among the students. The term 'learning styles' refer to qualitative differences among individual students'

habits, orientation or preferences towards learning and studying (Stenberg, 1997). Each of us has a natural preference for the way in which we prefer to receive, process and convey information.

Surjono (2011) mentioned in his study that web-based instruction that is now recognised as e-learning is a perfect example of the Internet applications which has been used to deliver learning materials. In this study, it is necessary that learning styles among the learners are targeted as many as possible for the successful designing of solid eLearning experiences. Even though all people have their own preferred learning style, but in order to maximize the quality and efficiency of learning, all learners must be exposed to a variety of learning styles to one extent.

According to the VAK Model which stands for Visual (seeing). Auditory (listening) and Kinaesthetic (hands-on) learners, the learning styles of the individual learners should be considered and included in the learning activities set up by a teacher in order to support effective learning. On Frog VLE, the learning styles application, as shown in Appendix E, allows students and teachers to find out their preferred learning styles based on their response to a series of questions. Once a student has taken the test, the students' preferred learning styles will be visible to the teacher. The information will be very useful for the researcher to decide the kinds of materials that need to be prepared for the teaching of vocabulary lesson, in order to maximise and enhance the students' learning processes.

### ***2.1.5 Teaching of Vocabulary in ESL Classroom***

Rashid, Abdul Rahman and Yunus (2017) pointed out in their research that many students in Malaysia still have limited vocabulary despite spending many years learning English in primary and secondary education. In the field of English language teaching in Malaysia, the initial Direct Method which emphasises on grammar-translation had been replaced with the SLT approach

which, according to Richards and Rodgers (1986), emphasises the mastery of high-frequency vocabulary.

Vocabulary plays a crucial role in English language acquisition. However, learning and mastering the vocabulary is not an easy job. Schmitt and Schmitt (1995) mentioned that vocabulary learning strategies knowledge is very important. There is a variety of vocabulary learning strategies that can be adopted by using VLE in enhancing the learning process of the ESL learners, which are the keyword method, incidental vocabulary learning strategy and also the repetition strategy which have been developed by Nation (2001).

One of the most influential strategies of vocabulary learning is the keyword method (Nation, 2001). By using this method, the learner must find a part of the word which is similar for them in sound, shape or meaning to something in their mind or language, and use it as a keyword. In this context, the teacher can provide a picture that is related to the vocabulary through VLE application like Boost Site or Quiz. Besides, the teacher can also adopt incidental vocabulary learning, which is the guessing from context method. It can help the students on learning how to guess from the context and using clues in the text. In addition, as the last important strategy, is to use the repetition strategy. Nation (2001) believes that Pimsleur's model of repetition is very applicable for vocabulary learning. The students will be exposed to the vocabulary for multiple times with a gradually increasing time span. This strategy can be combined with the usage of the keyword method in order to yield a better result in comprehending the vocabulary.

## *2.2 Gap in the Literature*

In the book by Walker and White (2013), they mentioned that there are two very remarkable features of VLEs In educational institutions. The first feature is that these VLEs are so

identical to each other no matter where in the world they occur, and the other feature is that they tend to be completely ‘teacher led’. They further mentioned that the reason behind the uniformity of these VLEs’ features is that the software has been almost entirely developed in Anglophone and Europe countries, such as the United States, plus that many ‘big players’ tend to dominate the market for VLE software and design, affecting others. Thus, the introduction of Frog VLE in Malaysia is indeed a revolutionary move in the field of e-learning among all the Asian countries, and yet it still demands a lot of researches and studies to be done on investigating the Frog VLE in different aspects.

According to another researcher, Godwin-Jones (2012), these VLE designs assume Western models of learning like linear reasoning, open, individualism and frank communication, which might not be appropriate for other kinds of society. Godwin-Jones (2012) stated that VLEs are unlikely to be very appealing or vivifying to students, because they are ‘far removed from the vibrant, ever-changing online world in which our students are fully engaged’ (p.6). The issues of students been constantly distracted by other fun elements on the Internet is still a topic which needs to be discussed.

On the other hand, Walker and White (2013) also suggested that if the structure of VLEs can be discouraged to teachers, they can also find individual software tools difficult to integrate into their own, already developed teaching style. Last but not least, there are indeed not many studies are on teaching and learning of language aspect by using VLE, moreover most of the researches which about the usage of VLE took university students as their samples, the researches which target secondary level ESL learners as samples are really difficult to be encountered.



### *2.3 Other Studies Conducted*

In the recent study by Yim, Moses & Azalea (2018) which investigates the effects of psychological ownership on teachers' beliefs about VLE, it has been found out that psychological ownership is slowly becoming an occurrence in technology implementation research, which indicates people are feeling psychologically attached to a specific technology. This paper studied how the psychological ownership shaped teachers' beliefs about using a cloud-based VLE. As research design, this research used two main determinants that serve as inspiration for technology use among the users of Frog VLE, and explains the behaviour across the broad spectrum of computing technologies in adopting Frog VLE. The main determinants mentioned earlier are the perceived usefulness and the perceived ease of use of the Frog VLE. Perceived usefulness defines the belief that adopting a specific technology can develop job performance, while perceived ease of use, according to Davis (1989), is referring to the beliefs that by adopting a particular technology will be free of effort.

In this significant research, it has been mentioned that the perceived usefulness and perceived ease of use are deal with on the concrete experience of use among the teachers. In the context of relating this study to the current research, the perceived usefulness describes the point to which teachers have confidence in that adopting Frog VLE can enhance their teaching performance. On the other hand, perceived ease of use refers to the extent that the teachers trust such technology can be used without difficulty (Wang & Wang, 2009). These beliefs have been declared with their significant impact on users' attitude, system usage, satisfaction, their purpose to use and lastly their sustained purpose to use the Frog VLE (Wu & Zhang, 2014). In brief, this recent study which have been done by Yim, Moses & Azalea (2018) provides us with the insights

that, with manipulation of system design and policy strategies, the cultivation of teachers' long-term commitment to adopt Frog VLE in their lesson still demand the experiences of regulate and knowing further about the Frog VLE among the teachers themselves.

Additionally, there is another study by Cheok & Wong (2016) which explored the teachers' involvements of adopting Frog VLE in their classes. There was a total of 12 teachers who had been interviewed in order for the researchers to understand the scenario in different schools that had brought to the low usage of the Frog VLE. In this research, all the participants are from diverse states and location of schools. Despite that, it appeared to be resonated in the aspect of the limitations and challenges they encountered. In contrast with all the limitations and challenges faced, still, no one disagrees the strengths and benefits of the e-learning methodology for the improvement of our Malaysian education system. In this context, this study also elaborates the teachers' worries and obstructions, besides giving recommendations for enhanced employment of VLE to enhance the teaching and learning processes.

In this study, it has been mentioned that there are three stages in implementing ICT in education, referring to the Education Blueprint 2013-2025 which is developed by the Ministry of Education (2013). From 2013 to 2015, the first stage will see the launching of the 1BestariNet programme for building up the foundations for ICT in schools. The second stage will be expecting the teachers to be more skillful at practicing and organising e-learning, carried out from 2016 to 2020. Lastly, the last stage from 2021 to 2025 will expect e-learning to be fully set in and implemented in all the classroom throughout the country.

As mentioned by Cheok & Wong (2016) in their study, most teachers in Malaysia accepted that the Frog VLE has produced high students' attentiveness. They also identified the benefits of

Frog VLE in providing easy access to a vast amount of materials which can help to enhance the learning outcomes besides motivating the students to be more autonomous in learning. The students can perform flexible learning regardless of time and place besides becoming more motivated to learn new things. Throughout the process of learning, the adoption of Frog VLE will also improve their usage in ICT and alertness towards the potential of ICT as a distinctive mode to learn new things. It is highlighted by the researchers that this modern approach of learning will delivers the students with higher chances of acceptance when they are searching for an occupation, as they will be more prepared with the highly demanded 21<sup>st</sup>-century skills for work.

The teachers who have been interviewed in this study mentioned a lot of facts and experiences that are very meaningful in providing insights into the current study. The interviewed teachers appealed that the Frog VLE offers ‘hands-on’ activity for the learners, they can watch, listen, reflect and comprehend fresh things that they wish to acquire easily, which in some extent is providing a supportive answer for the second research question of this study. Besides, a great amount of teachers appreciate Frog VLE in making teaching job easier as compared to the traditional approach. The teacher mentioned that the system also saves their time when updating and locating for specific materials. They are also pleased that they need not print and distribute hand-outs and this also reduces the cost related substantially. The researchers concluded their study by providing the view that is very meaningful, which is the real revolution always arises with creative destruction, risks and uncertainties (Hanna, 2013). Therefore, with the challenges present and minimal support available, the teachers must not be left groping in the dark; they have to be exposed and understand the real teaching and learning that will happen in a virtual learning environment like Frog VLE.

On the other hand, although the teachers recognized the benefits and strengths of Frog VLE, the deprived application of the VLE still reveals that attention are needed for the factors of constraints. One of the main concerns about the constraint on the implementation of e-learning is the lacking of time. The teachers mentioned that the heavy amount of work in school is the reason that prevented them from exploring and mastering the system further. Moreover, a few teachers also articulated a crucial need for higher degree of exposure and training regarding the system, the lacking of ICT skills among the teachers is still an issue in implementing e-learning project.

Last but not least, in the study by Shen et.al. (2017), the aesthetics perspective of the Frog VLE instead of its usability and acceptance has been discussed. The researchers are very determined in improving the usage of Frog VLE among teachers. This paper presented a research model for designing an aesthetic e-learning platform for Frog VLE. The main components of the research model are visual aesthetic, pleasure emotion and visual design elements. Meanwhile, the main elements to be measured are text, layout, typography, colour and graphic. In short, this study found out that they are able to identify and weight the potential values in the context of aesthetic of the Frog VLE. Besides, they also believe that the findings of the research can help to create a higher degree of aesthetic awareness towards the aesthetic factors that will affect the willingness of the teachers to use Frog VLE.

## *2.4 Summary*

In conclusion, this chapter discussed the major theories that have been included and build up this study, which included the Bloom' Taxonomy and also the Interactionist Theory in Second Language Acquisition (SLA). Some of the prominent theories were related to blended learning,

the utilisation of VLE in the education industry and how the technology affects the teaching and learning of English in Malaysia language setting. Besides, this chapter also discussed the gap in the literature and the areas that have not yet been explored or were under-explored in the current research about VLE in the education field.

## **CHAPTER 3**

### **RESEARCH METHODOLOGY**

### *3.0 Introduction*

In this chapter, the methodology that was used to conduct the research was discussed. These included the research site, research design, sampling method and sampling procedures, the participants of the study, sources of data and procedures of data collection, and lastly the validity and reliability of the study. Lastly, ethical issues were also discussed in the subsequent sections so as to account possible issues that might occur.

### *3.1 Research Site*

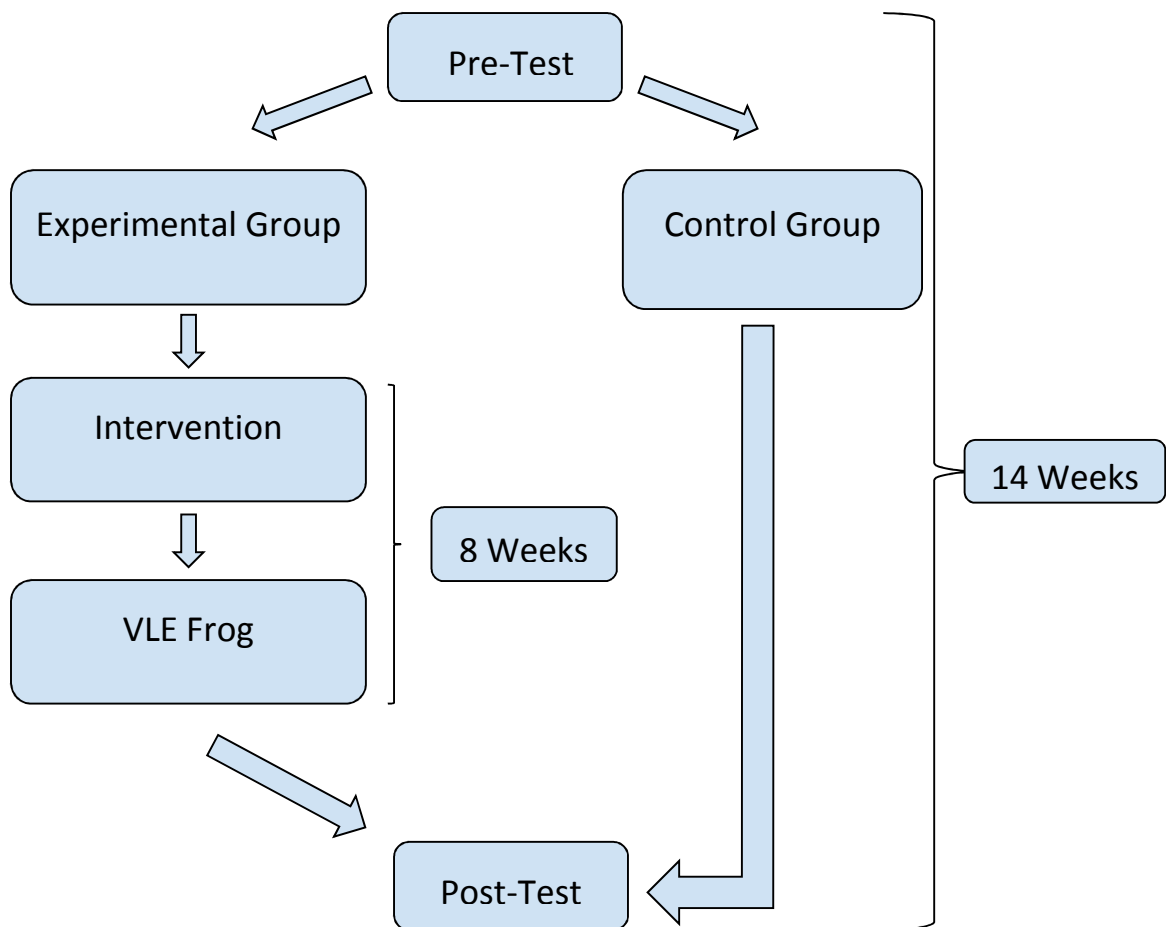
This study was conducted in a secondary government school located at a district in Perak, Malaysia, which was SMK Hamid Khan, Tapah. Two classes of students from Form 4 were selected, one as the controlled group and another as the experimental group. The school is equipped with a 'Chrome Lab' where the English online lessons were carried out once per week for each class.

### *3.2 Research Design*

To answer the two research questions, a triangulation approach with mixed method research design has been employed. In the research of social sciences, triangulation means the use of multiple, different approaches to generate a better understanding of a given phenomenon or theory (Burton & Obel, 2011). Meanwhile, according to the research by Amaratunga, Baldry, Sarshar & Newton (2002), a mixed method approach is described as the combination of theoretical perspectives and methodologies which are used interchangeably in the process of conducting a research. In this study, triangulation in methodology was achieved by adopting pre and post-tests, surveys, and interviews for the data collection.

In order to answer the first research question, a quantitative method was employed, which was to administer a pre-test and post-test that was adapted from Yim, Moses, and Azalea's (2018)

study. Referring to Figure 3.1, the pre-test and post-test were conducted for both the control and experimental group within the duration of the study, which was 14 weeks. Throughout the tests and the intervention, the English vocabulary that were included were taken from the English vocabulary list as set by the Ministry of Education in the curriculum specification of Form 4 English syllabus. There were two justifications for the inclusive of this vocabulary. First, this was to ensure that the vocabulary included in this study were appropriate and suitable for the overall English proficiency level among all the Form 4 ESL students in government secondary school; Next, the use of this vocabulary incorporated into VLE also helped in teaching the students the necessary vocabulary they should master by the end of their instructional period.



**Figure 3.1 Experimental research design to answer the first research question**



In the pre-test, each respondent had been asked to answer a worksheet with two sections of vocabulary questions. Section A was comprised of 13 multiple-choice questions; Section B was comprised of 12 fill-in-the-blanks questions with words given. The researcher marked all the worksheet for pre-test and recorded the marks of each individual respondent.

The test was prepared in such a manner so as to fit with the Bloom's revised taxonomy. With reference to the sections stated earlier, Section A of the pre-test looked at the term remembering, where participants had to retrieve knowledge from their long-term memory to answer the questions (Forehand, 2011); Section B looked at the term understanding, where students had to interpret the questions on their own through the act of inferring and explaining (Forehand, 2011), and Section C referred to the term applying, where students had to execute the action of answering the questions by referring to the keywords or context clues available in the questions (Forehand, 2011). The similar terms employed from Bloom's revised taxonomy in the pre-test were administered to the post-test as well. Once the pre-test was administered, the intervention occurred subsequently.

After the pre-test, the researcher designed lesson plans that adopted VLE in the teaching of vocabulary. The lesson plan was taken based on the standardized lesson plan template taken from the Department of Language and Linguistics, Faculty of Arts and Social Science UTAR. The lesson plan template is attached in Appendix F. With reference to the lesson plan template, lessons were designed based on the *Kurikulum Bersepadu Sekolah Menengah* (KBSM) or also known as the Curriculum Specification for Form 4 English. As mentioned earlier, the English vocabulary that had been tested were taken from the curriculum itself and integrated into two sections of the

tests. Thus, a total of eight lesson plans were written, with sixty minutes per lesson, and four hundred and eighty minutes throughout eight weeks of lessons.

The intervention were given once per week, adhering to the Lab Rotation Model. Additionally, since the students from the experimental group had to attend the English lessons in the Chrome Lab, a schedule was prepared so students had to attend the classes accordingly. Table 3.2 below shows the schedule for the experimental group students, and that they were to follow the schedule accordingly.

Day/Time	7:40a.m.- 8:10a.m.	8:10a.m.- 8:40a.m.	8:40a.m.- 9:10a.m.	9.10a.m.- 9: 40a.m	9:40a.m.- 10:10a.m.	10:10a.m.- 10:40a.m.
Monday						
Tuesday			Conventional Lesson in Classroom			
Wednesday						
Thursday	Conventional Lesson in Classroom					
Friday			Frog VLE Lesson in Chrome Lab			

**Table 3.1 Tentative timetable for the experimental group students**

The researcher had a fixed schedule in giving online learning along with the traditional mode of classroom learning. The details in the adoption of VLE in the teaching of vocabulary lessons were included in the previous chapter. To restate, each session of the intervention lasted for sixty minutes, which means the participants in the experimental group had a total of four hundred eighty minutes of intervention throughout the research.

After eight weeks of intervention, both the participants from the experimental and control groups undergone the post-test, which was a worksheet comprised of the same questions similar to that of the pre-test but in a different sequence of questions instead. The worksheets were marked and the marks were recorded by the researcher as well.

Next, for the second research question, which is to find out the perceptions of the students on the use of VLE in the learning of English vocabulary, both qualitative and quantitative data were needed. Thus, both surveys and semi-structured interview were employed and conducted among the students.

In short, this research used a mixed method research design, which is also known as triangulation approach, as both qualitative and quantitative data were collected. This research design had led to the increase of the validity of the data as triangulation was achieved.

### *3.3 Sampling and Sampling Procedures*

To select the samples for the purpose of this study, the convenience sampling method were employed. According to Etikan, Musa and Alkassim (2016), the convenience sampling method is also called as accidental sampling. It is a type of non-probability sampling where participants required for the study are easy to access, as the target population may be selected near to where

the researcher will be conducting the data collection. Thus, in this study, convenience sampling were employed and the samples of this research were selected from the secondary ESL students in a government secondary school in Perak district., which was SMK Hamid Khan, Tapah.

Besides, the students who were involved in the semi-structured interview were selected based on their own will, thus volunteer sampling was involved in this context. According to Mertens (2014), the volunteer sampling in short, as the name of the term itself suggests, is where the samples are taken based on their own will, or through voluntary actions itself to participate in the research process or anywhere relevant. This form of sampling method is also a form of the non-probability sampling method. Based on the two sampling methods as discussed, two non-probability sampling methods were adopted for the purpose of this study, as the respondents were not randomly selected.

### *3.4 The Participants of the Study and Participants Involved*

In this study, there were an experimental group and a control group comprised of Form 4 students that were involved. A total of forty students which were of different races and language background were taking part in the research. All the student participants were from the same age group as they are all from the same secondary level, which was Form Four level. Most of the participants were comprised of Malays and minority of Chinese and Indian, as the research site is a government secondary school in Perak district, which has a higher population of Malay people. Thus, the first language of the participants were varied according to their respective races.

Besides, the participants of this study were also diverged in their preferred learning styles, which the VLE classified the participants into different learning styles of either major in visual, auditory or kinaesthetic, right after the VLE collected the data from their activities on VLE. This

can be made possible through the Learning Style Report available on Frog, as included in Appendix E. The last criteria that would differ the participants from each other were their familiarity with the usage of ICTs. As their knowledge on ICTs were varied, their process in learning of vocabulary through VLE were also affected. As their interests in using VLE were different also, their motivation in the continuous usage of VLE in learning vocabulary were also different.

### *3.5 Sources of Data and Procedures of Data Collection*

For the first research question, which aimed to determine the effectiveness of the intervention, true-experiment method were used. The true-experiment was used as it involves an experimental and a controlled group, where the presence of the controlled group will directly display if the intervention or treatment introduced showed the effects expected. In this study then, since the controlled group went through the conventional English vocabulary lessons while the experimental group had undergone lessons conducted through VLE, the effectiveness of implementing VLE were measured by comparing the test scores of both the controlled and experimental groups. The test scores were then be analyzed in Microsoft Excel and T-test were carried out to evaluate the hypothesis of the study.

As for the second research question, which was to find out the students' perception of the intervention (VLE). Surveys and semi-structured interviews were conducted on the experimental group. The survey form was adapted from the study of Chiu (2014). After the post-test, semi-structured interviews were carried out on three research participants from the experimental group. As stated earlier, the research participants that were involved are selected based on the volunteer sampling. The participants' responses were recorded with the researcher's phone. The recordings

were then be transcribed and coded according to the common themes found in the responses for each interview question.

Quantitative data was collected from the pre-test, post-test and survey questionnaire, whereas the interviews yielded qualitative data. A research that uses both qualitative and quantitative data is known as mixed-method research. Triangulation refers to the use of more than one method of data collection in a study. Thus, mixed-method research is often conducted to achieve triangulation. This research employed a sequential explanatory design, by first collecting quantitative data before qualitative data.

### *3.6 Research flow*

In order to conduct the study, it involved multiple stages arranged in a specific order. A better description of the stages to conduct the study is as shown in Table 3.3.

Stage 1	The researcher selected two Form 4 classes from a secondary school located in Perak district through convenience sampling method. A total of 48 students were selected from the two Form 4 classes in that school.
Stage 2	The researcher assigned one class as the controlled group and the other as the experimental group. Once the groups were assigned, the pre-test which comprised of vocabulary questions were administered to all the students involved. The pre-test was based on Bloom's revised taxonomy and the pre-test were marked and graded accordingly for data analyzing purposes later.

Stage 3	Once the pre-test was conducted, the intervention was followed. A schedule was planned for the experimental group where they attended VLE English vocabulary lessons for eight weeks. A standardized lesson plan template taken from Department of Language and Linguistics from the Faculty of Arts and Social Science, UTAR, was used. The controlled group learned English vocabulary in a conventional method.
Stage 4	After eight weeks, both groups were sitting for the post-test administered by the researcher. The post-test was similar to the pre-test administered in Stage 2. Similar to Stage 2, the post-test were marked and graded accordingly for data analyzing purposes later.
Stage 5	Upon the completion of the tests and interventions, surveys and semi-structured interviews were conducted. The data were collected based on the themes available from the responses of the respondents. For the semi-structured interview, volunteer sampling method was used where respondents participated in the interview session voluntarily.
Stage 6	Data analysis was conducted using Microsoft Excel 2013 and be presented in Chapter 4, Findings and Discussion.

**Table 3.2 Stages in conducting the study**

### *3.7 Validity and Reliability*

As mentioned earlier, this research collected both qualitative and quantitative data, thus triangulation was achieved in the adoption of the mixed method research design. The validity and reliability of this research were very crucial to ensure that the findings are valid and reliable. McGrath (1982) mentioned in his research that the use of methodological triangulation is a research strategy in gaining knowledge about related research questions. This reflects the view that the use of multiple methods in data collection can produce results with higher validity as the strengths of one method can offset the limitations of the other method (Scandura & Williams, 2000).

In order to develop a mixed methods research which involving triangulation, Molina-Azorin (2007) mentioned that the theoretical purpose which is closely related to the research questions of the study must be considered first. In the context of this study, the theoretical purpose was to investigate the effectiveness of using Frog VLE in enhancing the vocabulary of secondary ESL learners and also to obtain their perceptions towards the utilisation of Frog VLE. Thus, the triangulation of the methodology was achieved by firstly collecting data through experimental research, which were the results from the pre-test and post-test. Secondly, the survey forms were collected afterward. Lastly, the semi-structured interviews with the students had also been carried out.

### *3.8 Ethical Issues*

In order to conduct a study, ethical issues must be addressed as there might be unforeseen circumstances that might occur before, during, or after the study. The researcher must acknowledge all possible circumstances that might occur in the study. In reference to the ethical



issues addressed in the subsequent paragraphs, the respective consent forms and approval letters were included in Appendices.

First, a consent form was prepared and sent to the school management. This was where the topic of the study, methodologies involved and implications related will be briefed to the respective authorities in the school. Once the signature is obtained, the study can be conducted.

Additionally, as there were students involved in the study, another consent form had been given to the students. This was where the students must understand the process and study that they will go through throughout the study conducted and they have the rights to understand the possible implications that they might face. Also, they were briefed on the rights that they possess and to make use of the rights where applicable.

Lastly, in order to conduct an interview session, consent forms related had been distributed as well. This was where the researcher gained approval from the respondents whether if, they permit the researcher to use and quote them accordingly in the findings, or to put up an anonymous, made-up name for the respondents. The consent form had been signed and checked by both sides before the interview session was to be conducted.

To conclude, four aspects of ethical issues were discussed in this section. These aspects were seeking approval in consent form from the school management, consent form for involving the students into the study and lastly, interview consent form had also been administered as well. The templates for all consent form were to be included in Appendices.

### *3.9 Summary*

In conclusion, this chapter discussed the methodology that were used to conduct the research. The methodology included the details on the research site, the adoption of convenience sampling as the sampling method, the participants of the study, the sources of data, the procedures of data collection, the research flow, the validity and reliability of the study and lastly the ethical issues of this study.

## **CHAPTER 4**

### **DATA ANALYSIS AND FINDINGS**

#### ***4.0 Introduction***

This research aimed to study the effectiveness of using Frog VLE in the teaching and learning of ESL secondary learners in Malaysian context. By giving the respondents pre-test and post-test on testing their vocabulary knowledge before and after the intervention given. Besides, survey questions had also be given to them for collecting their perceptions on the utilisation of Frog VLE in enhancing their process of vocabulary learning. In order to collect more detailed information on their personal views and opinions on Frog VLE, interview sections had also been carried out with three of the students who had undergone the intervention. In this context, the two research questions that guided the researcher in order to complete the study were:

1. Is VLE effective in enhancing the teaching and learning of vocabulary among secondary school ESL learners?
2. What are the perceptions of students on the utilisation of VLE in enhancing the learning of English vocabulary among secondary school ESL learners?

These two research questions also led to the generation of two related hypotheses, which guided the overall process of conducting the study.

H<sub>0</sub>: There is no statistically significant relationship between the use of Frog VLE and the students' vocabulary skills.

H<sub>1</sub>: There is a statistically significant relationship between the use of Frog VLE and the students' vocabulary skills.

The null hypothesis denoted that there is no statistically significant relationship between the use of Frog VLE and the students' vocabulary skills, meanwhile the alternate hypothesis

denoted that there is a statistically significant relationship between the use of Frog VLE and the students' vocabulary skills. Thus, if the null hypothesis is rejected, then the use of Frog VLE will help in the improvement of the vocabulary skills among the students and vice versa.

In this chapter, the demographic background of the participants, the results of the pre-test and post-test, the perceptions of the students on the use of Frog VLE in the teaching and learning of vocabulary through the results of surveys and interviews had been shown accordingly.

#### ***4.1 Demographic Background of the Participants***

The demographic background of the participants included in this study were gathered and presented in different aspects, including their gender and race. The research participants involved in this study were 48 Form 4 ESL students from SMK Hamid Khan, Tapah. To elucidate, the gender and race of the research participants were depicted in the form of tables. A total of 48 Form 4 ESL students were distributed into two groups, which were the experimental group with 25 students and the controlled group with 23 students. The gender and race distribution among all the participants were portrayed clearly in the tables followed.

##### ***4.1.1 Genders***

Gender	Experimental Group		Controlled Group		Total in Study	
Male	9	36%	10	43.5%	19	36.9%
Female	16	64%	13	56.5%	29	60.4%
Total in Group	25		23		48	

**Table 4.1: Gender distribution among research participants**

Based on Table 1, it was obvious that the number of male participants included in this study was low compared with the female participants. There was only 36% of male participants in the experimental group and 43.5% of male students in the controlled group, with an overall of 39.6%, which was also a total of 19 male participants in this study. Meanwhile for the female participants, the 64% of them from experimental group and 56.5% of them from the controlled group contributed to the total of 60.4%, which was also 29 female participants in this study.

#### **4.1.2 Races**

Race	Experimental Group		Controlled Group		Total in Study	
Malay	15	60%	12	52.2%	27	56.3%
Chinese	6	24%	4	17.4%	10	20.8%
Indian	4	16%	7	30.4%	11	22.9%
Total in Group	25		23		48	

**Table 4.2: Race distribution among research participants**

By referring to Table 2, it can be seen that the participants of this research study consisted of students from all the three different races which are Malay, Chinese and Indian. Both the experimental and controlled group of this study had the highest distribution of Malay students, which were 60% and 52.2% respectively. There was 24% of Chinese students in the experimental group and 17.4% of the students in the controlled group are also Chinese. On the other hand, there was 16% of Indian students in the experimental group and 30.4% Indian students in the controlled group. In general, there were 56.3% of Malay participants, 20.8% of Chinese participants and 22.9% of Indian participants who had taken part in this research study.

The data mentioned above depicted the demographic data of all the Form 4 ESL students who had been included in the study, but the gender and races of these participants had not been explored on how they are related to the study.

***4.2 Research Question 1: “Is VLE effective in enhancing the teaching and learning of vocabulary among secondary school ESL learners?”***

***4.2.1 Results of Pre and Post-Tests for Experimental Group and Controlled Group***

In order to answer the first research question, this study was conducted by giving the participants a pre-test to find out their initial level of proficiency in English vocabulary. After the pre-test, interventions were given to the participants of the experimental group, meanwhile the controlled group will learn English vocabulary in a conventional method. After eight weeks, they were given a post-test. Both the pre-test and post-test required the students to answer two sections of vocabulary-related questions, with a total of 25 questions, which the first section comprised of 13 multiple-choice questions and the second section comprised of 12 fill-in-the-blanks questions with words given. After the collection of data, the data was then interpreted statistically and further elaborated.

In the following section, the research participants had been labelled in number instead of their names due to ethical issue. The initials “E” or “C” before the labelled number of every student (e.g. C1, E1 and E2) represented the groups of the students, which were the experimental group and controlled group. The tables showed the results obtained from the pre-test and post-test of the research participants from both the experimental group and controlled group. The differences between their scores for pre-test and post-test had also been converted to the form of percentages.

Student	Pre-Test	Post-Test
E1	32%	40%
E2	36%	28%



E3	32%	48%
E4	48%	52%
E5	36%	56%
E6	40%	60%
E7	44%	60%
E8	48%	40%
E9	56%	52%
E10	44%	72%
E11	44%	60%
E12	32%	48%
E13	36%	40%
E14	44%	44%
E15	48%	36%
E16	36%	60%
E17	20%	40%
E18	48%	36%
E19	68%	72%
E20	32%	44%
E21	44%	48%
E22	44%	52%
E23	52%	68%
E24	36%	52%
E25	44%	44%

**Table 4.3: Results of pre-test and post-test for the experimental group**

Student	Pre-Test	Post-Test
C1	60%	56%
C2	40%	36%
C3	52%	28%
C4	56%	44%
C5	48%	52%
C6	52%	56%
C7	68%	36%
C8	48%	32%
C9	52%	64%
C10	36%	32%
C11	52%	60%
C12	48%	36%
C13	44%	40%
C14	44%	32%
C15	36%	44%
C16	40%	52%
C17	16%	24%
C18	64%	52%
C19	48%	52%
C20	52%	48%
C21	36%	36%
C22	32%	36%
C23	36%	40%

**Table 4.4: Results of pre-test and post-test for the controlled group**

#### ***4.2.2 Differences between the Results of Pre and Post-Test of Experimental Group and Controlled Group***

In this subsection, the results of the pre-test and post-test for both the experimental and controlled group had been discussed. The results of the participants in both pre-test and post-test have been depicted in Table 5 below. In the table, the findings had been tabulated into three columns, which the first and second column for each test showed the raw scores of the test which have been converted into percentage in their respective second column. In order to investigate the effectiveness of the intervention, the differences of scores between the pre-tests and post-tests for both the experimental and controlled group were calculated.

Student	Pre-Test	Post-Test	Difference
E1	32%	40%	+8%
E2	36%	28%	+ -8%
E3	32%	48%	+16%
E4	48%	52%	+4%
E5	36%	56%	+20%
E6	40%	60%	+20%
E7	44%	60%	+16%
E8	48%	40%	-8%
E9	56%	52%	-4%
E10	44%	72%	+28%
E11	44%	60%	+16%

E12	32%	48%	+16%
E13	36%	40%	+4%
E14	44%	44%	0%
E15	48%	36%	-12%
E16	36%	60%	+24%
E17	20%	40%	+20%
E18	48%	36%	-12%
E19	68%	72%	+4%
E20	32%	44%	+12%
E21	44%	48%	+4%
E22	44%	52%	+8%
E23	52%	68%	+16%
E24	36%	52%	+16%
E25	44%	44%	0%

**Table 4.5: Results for pre-test and post-test and the differences between the scores of the experimental group**

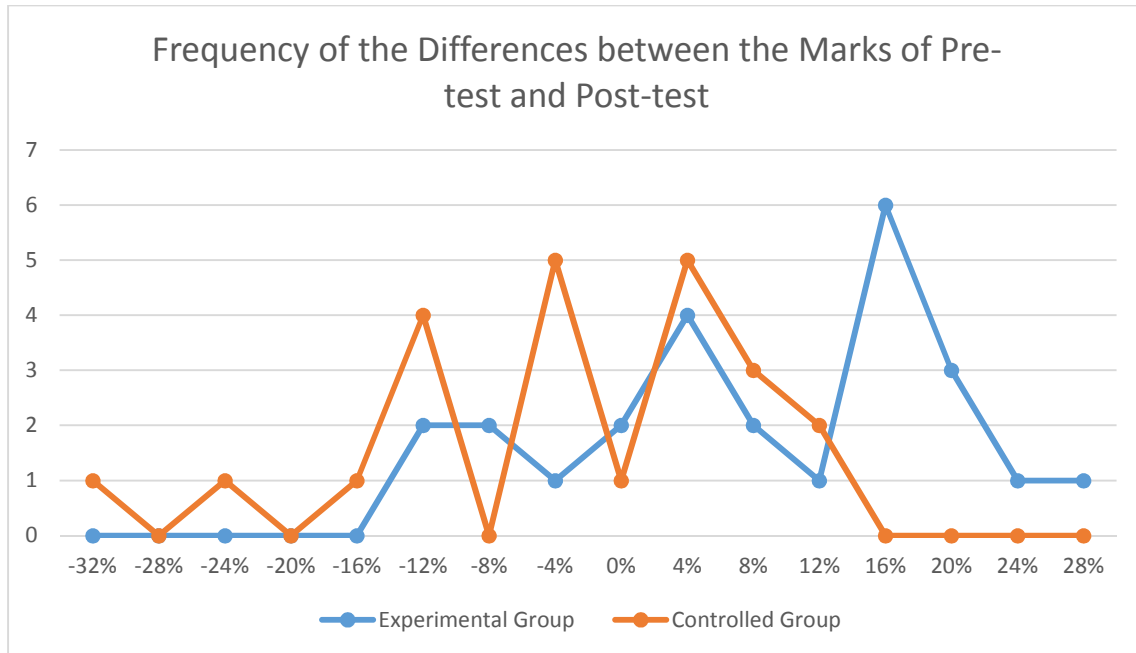
Student	Pre-Test	Post-Test	Difference
C1	60%	56%	-4%
C2	40%	36%	-4%
C3	52%	28%	-24%
C4	56%	44%	-12%
C5	48%	52%	+4%
C6	52%	56%	+4%

C7	68%	36%	-32%
C8	48%	32%	-16%
C9	52%	64%	+12%
C10	36%	32%	-4%
C11	52%	60%	+8%
C12	48%	36%	-12%
C13	44%	40%	-4%
C14	44%	32%	-12%
C15	36%	44%	+8%
C16	40%	52%	+12%
C17	16%	24%	+8%
C18	64%	52%	-12%
C19	48%	52%	+4%
C20	52%	48%	-4%
C21	36%	36%	0%
C22	32%	36%	+4%
C23	36%	40%	+4%

**Table 4.6: Results for pre-test and post-test and the differences between the scores of the controlled group**

As portrayed in Table 5 and Table 6, the differences between the scores for the controlled group ranged from -32% to +12%, meanwhile the differences between the scores for the experimental group ranged from -12% to +28%. The frequency of the differences between the

marks of the pre-test and post-test for both experimental and controlled group were depicted in Figure 4.1.



**Figure 4.1 Frequency of the differences between the marks of pre-test and post-test for both experimental and controlled group**

From Figure 4.1, we can know that the students in the experimental group did perform better in the vocabulary test after they undergone the intervention which lasted for eight weeks. This statement was further supported by giving that the mode of the differences between pre and post-test of the experimental group was +16% with a frequency of 6 students, higher than the mode in the controlled group, which is +4% and -4% with the frequency of 5 students.

To conclude, the results of the pre and post-test showed that the intervention carried out was successful because most of the participants in the experimental group showed improvements

in their scores in post-test, compared with the participants in the controlled group who had undergone conventional methods in teaching and learning of vocabulary.

#### 4.2.3 T-test Analysis on the Result of the Experimental Group

	<i>Variable 1</i>	<i>Variable 2</i>
Mean	0.4176	0.5008
Variance	0.009211	0.013083
Observations	25	25
Pearson Correlation	0.420749	
Hypothesized Mean Difference	0	
df	24	
t Stat	-3.64073	
P(T<=t) one-tail	0.000649	
t Critical one-tail	1.710882	
<b>P(T&lt;=t) two-tail</b>	<b>0.001299</b>	
t Critical two-tail	2.063899	

**Table 4.7: T-test on the scores the tests of the experimental group**

The scores of the tests were analysed by using paired sample t-test. Paired sample t-test was used because only a sample group is included in this study, which was the experimental group which had undergone the intervention of using Frog VLE in the teaching and learning of vocabulary. According to Kim (2015), paired sample t-test is meant to test the effectiveness of an intervention within the same group of respondents through the comparison of the differences made before and after the intervention. Thus, this research used paired sample t-test to measure the degree of effectiveness of the intervention of using Frog VLE to enhance the teaching and learning of English vocabulary.

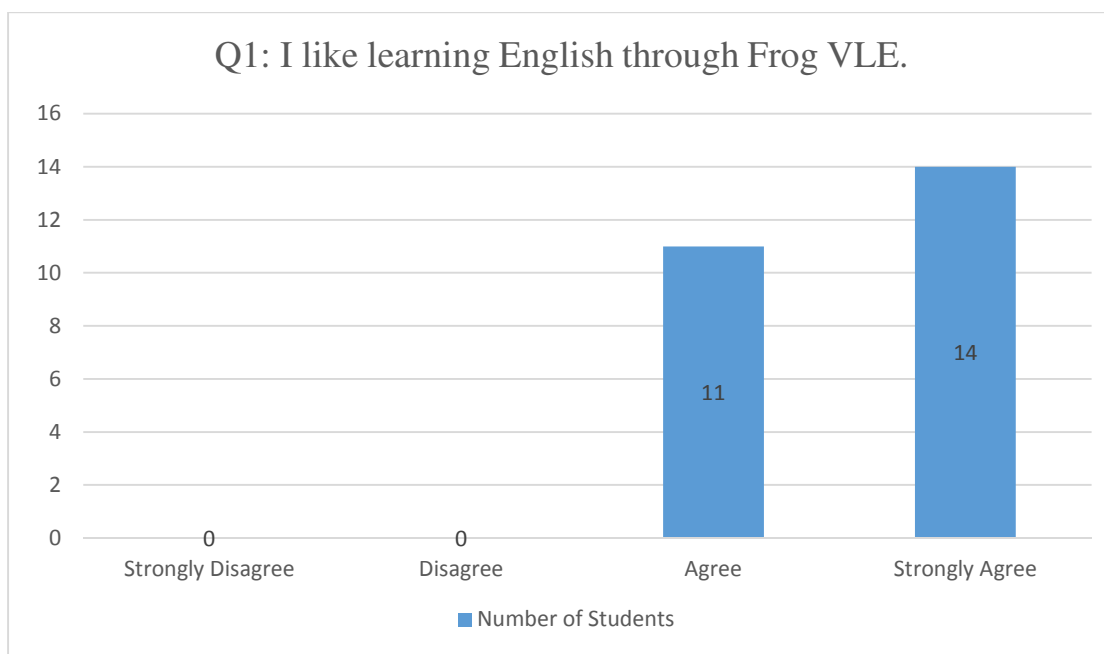
In this context, a significant difference was shown when  $P(T \leq t)$  two tail showed a value which was less than 0.005, which was also in turn, rejected the null hypothesis. With the  $P(T \leq t)$  two tail value of 0.001299, it clearly told us that the use of Frog VLE was an effective approach in teaching and learning of vocabulary. Therefore, the hypothesis which stated that there is a statistically significant relationship between the use of Frog VLE in the teaching and learning of vocabulary was accepted. The data also answered the first research question of the study, proving that VLE was effective in enhancing the teaching and learning of vocabulary among secondary school ESL learners.

#### ***4.3 Research Question 2: “What are the perceptions of students on the utilisation of VLE in enhancing the learning of English vocabulary among secondary school ESL learners?”***

##### ***4.3.1 Results of Questionnaires***

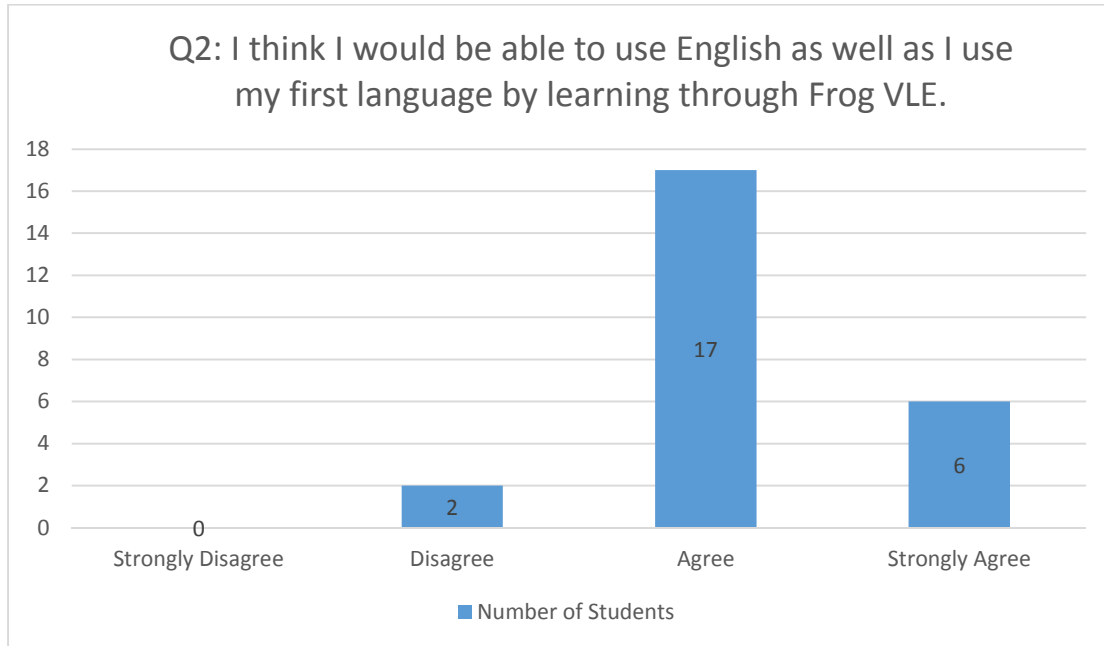


The results of questionnaires handed out to the Form 4 ESL learners from the experimental group did answer the second research question of the study. Each questionnaire contained 20 questions which were related to the perceptions of students on the utilisation of VLE in enhancing their learning of English vocabulary. The students rated the questions from a scale of 1 to 4, as 1 being strongly disagree, 2 was disagree, 3 was agree and 4 being strongly agree. All the 25 responses obtained for each question were all shown in their respective graphs.



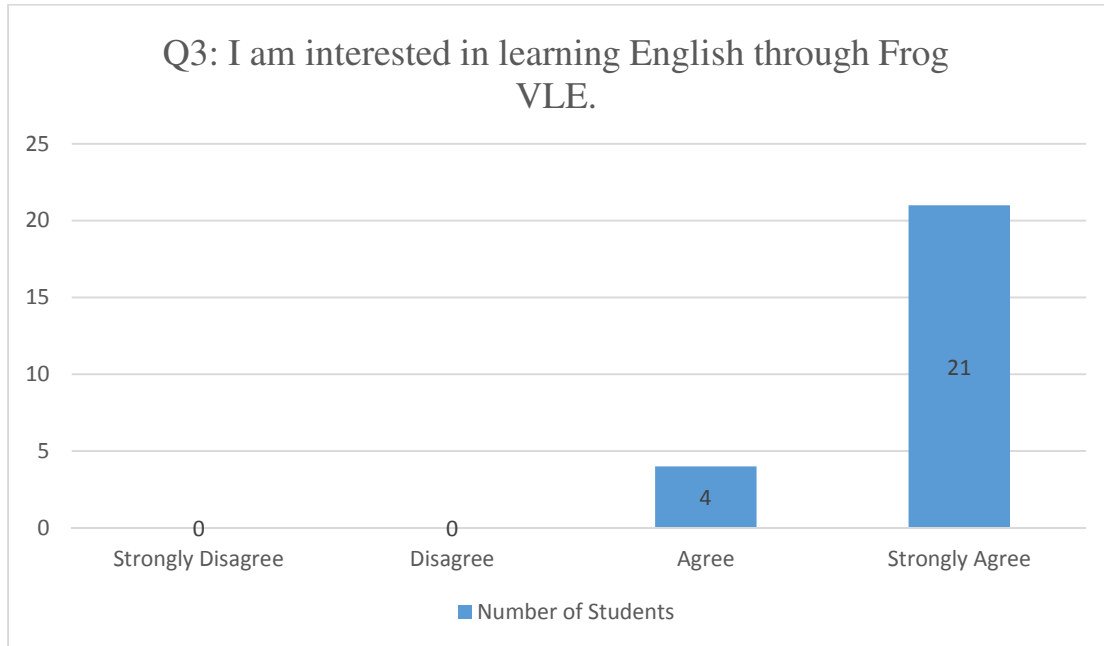
**Figure 4.3.1: Learning English through VLE**

Based on Figure 4.3.1, all the participants reacted positively that they like learning English through Frog VLE. 14 participants, which were also 56% of them strongly agreed and 44% of them, also 11 participants all felt that they like learning through Frog VLE.



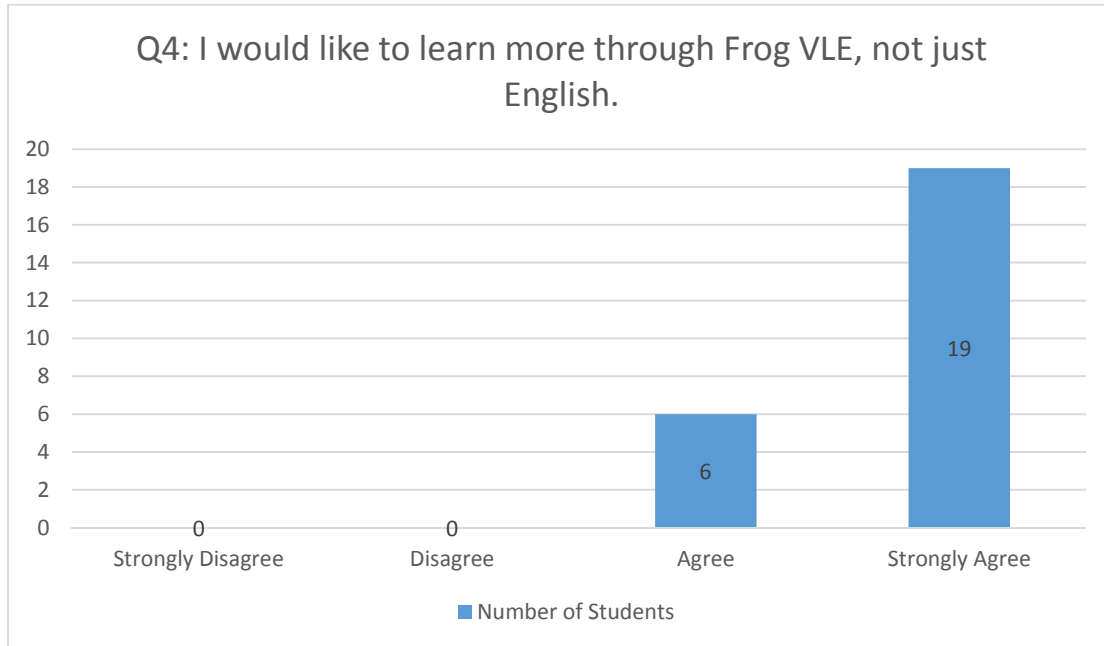
**Figure 4.3.2: Able to use English as well as I use my first Language**

According to Figure 4.3.2, 68%, which were also 17 of the students agreed and 24%, also 6 students strongly agreed that they would be able to use English as well as they use their first language by learning through Frog VLE. Meanwhile, 2 students, which were also 8% of the students felt the other way.



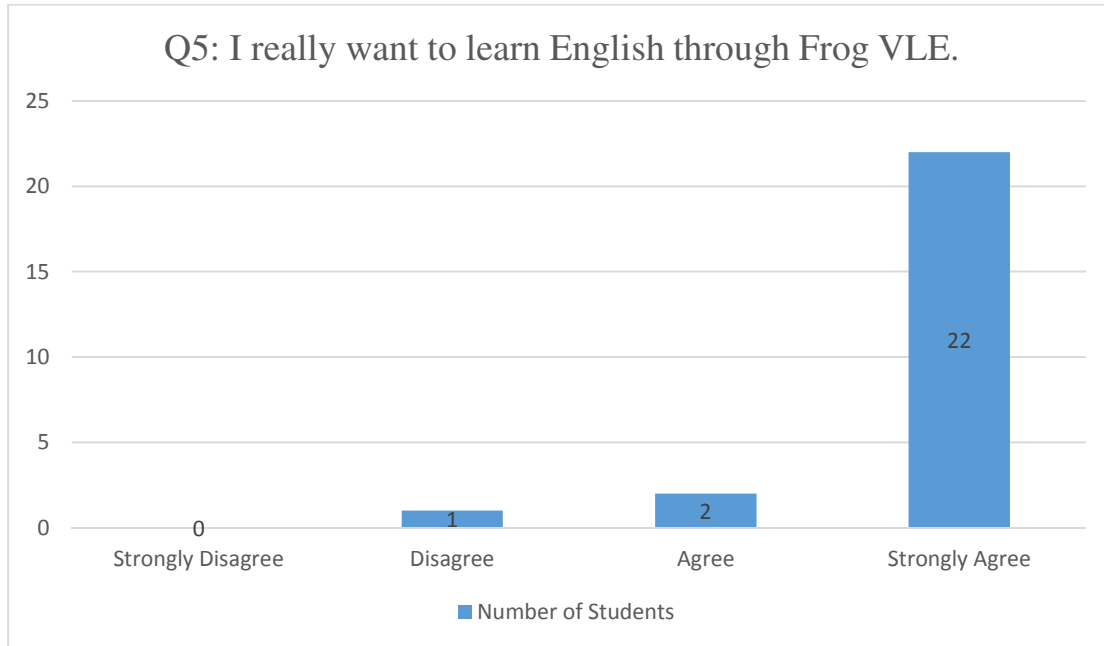
**Figure 4.3.3: Interested in Learning English through VLE**

Based on Figure 4.3.3, 16% of the students agreed and 84% of the students strongly agreed that they are interested in learning English through Frog VLE. As the graph shown, none of the students show no interests towards learning English through Frog VLE, all the 25 students showed interested in learning English through Frog VLE.



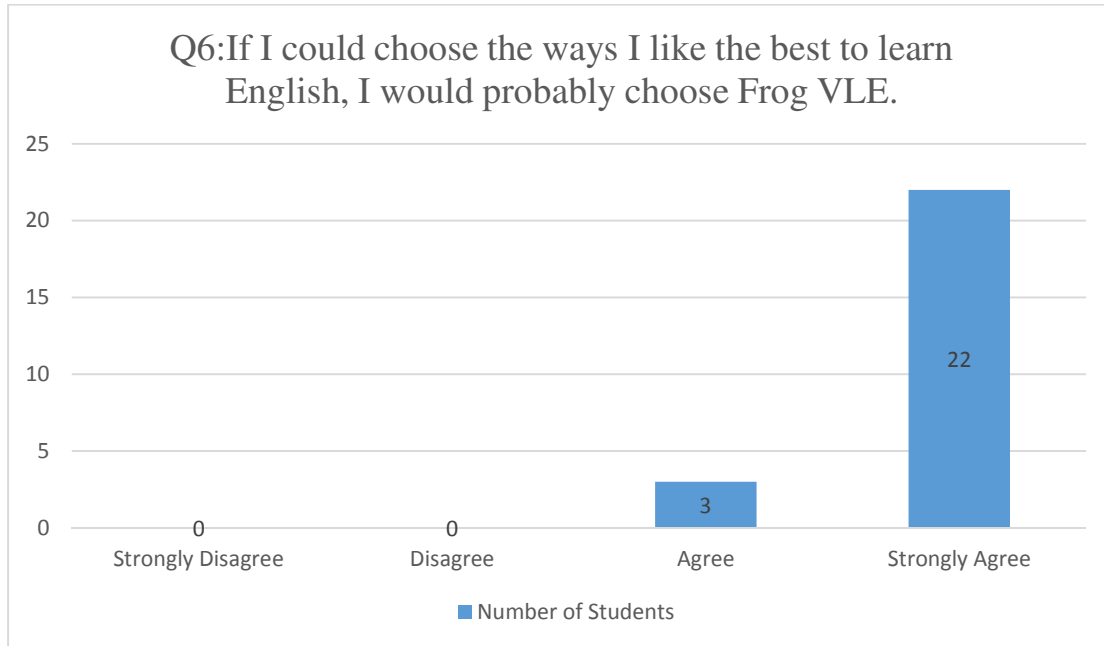
**Figure 4.3.4: Like to Learn more through VLE**

As shown in Figure 4.3.4, majority of the students showed their strong agreement on the statement that they would like to learn more through Frog VLE, not just English subject. 76% of them strongly agreed and 24% of them agreed on this statement, while none of them were reluctant to learn more through Frog VLE.



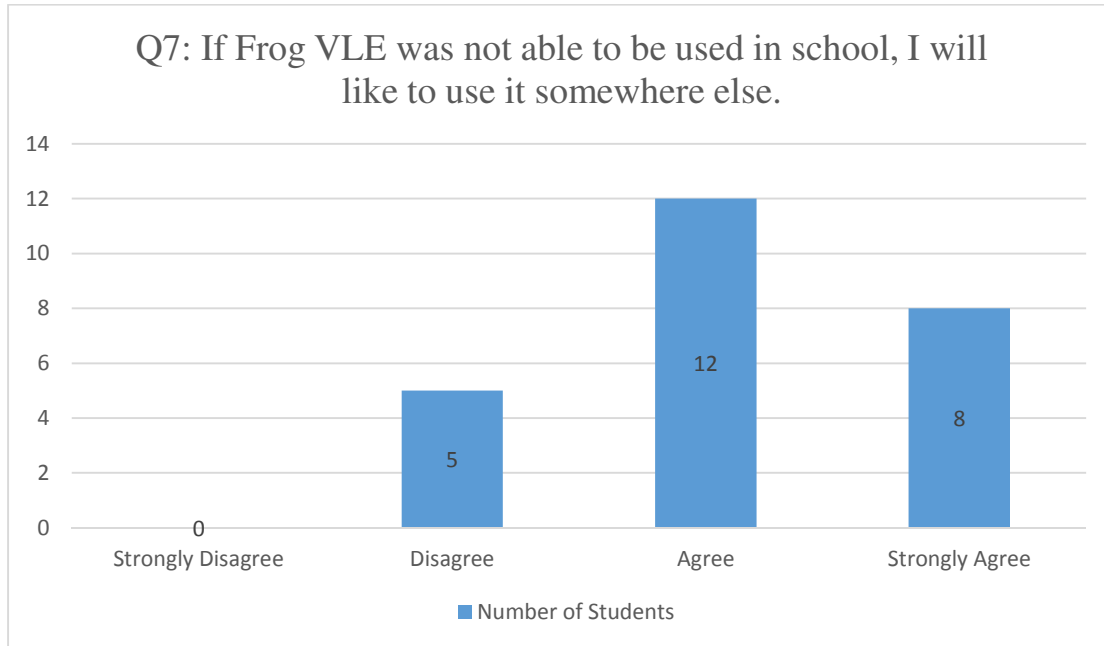
**Figure 4.3.5: Really want to learn English through VLE**

Based on Figure 4.3.5, majority of the students, which were 22 of them, strongly agreed and 2 students agreed, represented 88% and 8% of the total respondents respectively, on the matter that they really wanted to learn English through Frog VLE. On the other hand, there was one student who disagreed on the statement.



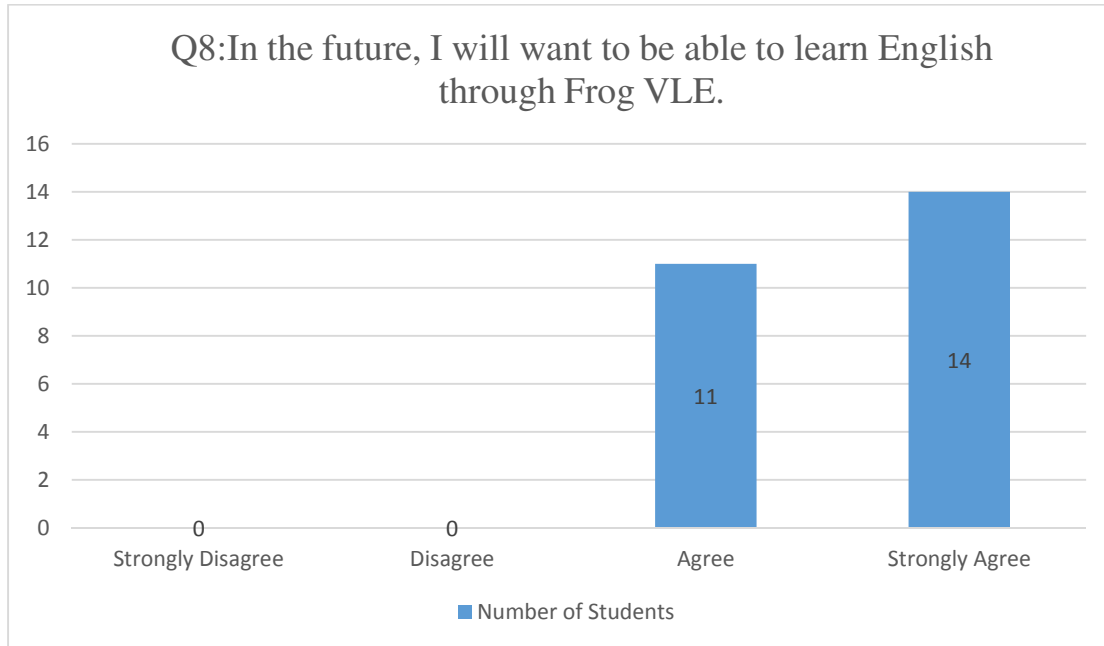
**Figure 4.3.6: Choose VLE to learn English**

According to Figure 4.3.6, it has been found that a high percentage, about 88% of the students, which were also 22 students strongly agreed that if they could choose the ways they like the best to learn English, they would probably choose Frog VLE. Plus, 3 students, who represented the remaining 12% also agreed on this statement.



**Figure 4.3.7: Will use VLE at somewhere else other than School**

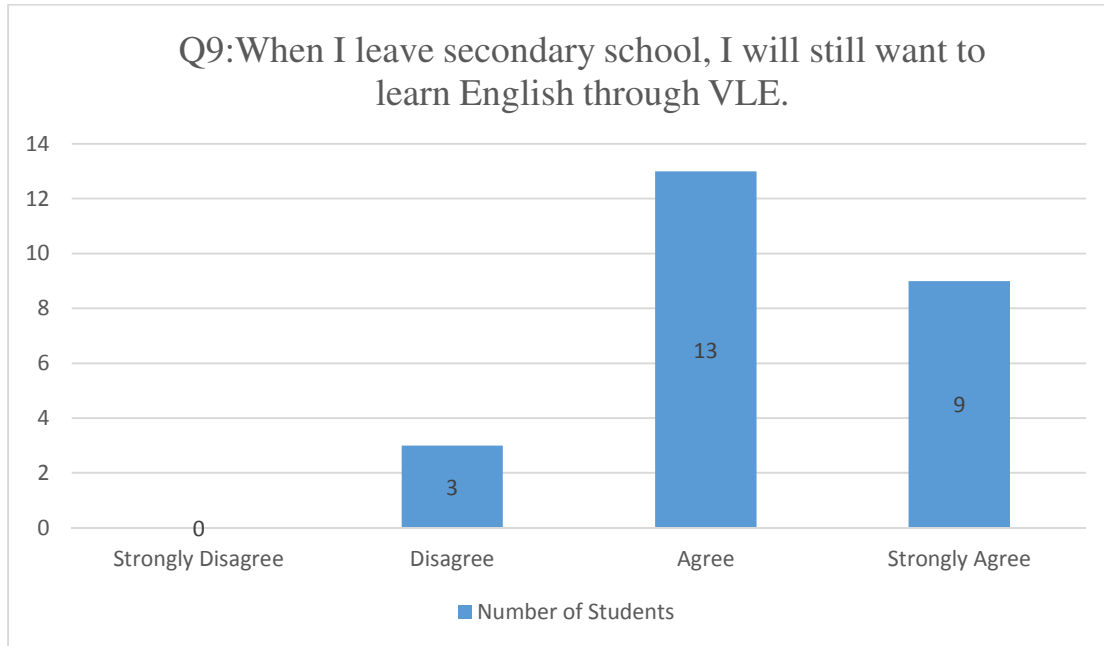
Based on Figure 4.3.7, majority of the students provided positive responses that if Frog VLE was not able to be used in school, they will like to use it somewhere else. 32% of the students strongly agreed and 48% of them agreed on this statement. However, there were five students, which were also 20% of the students disagreed it.



**Figure 4.3.8: Able to Learn English through VLE in the future**

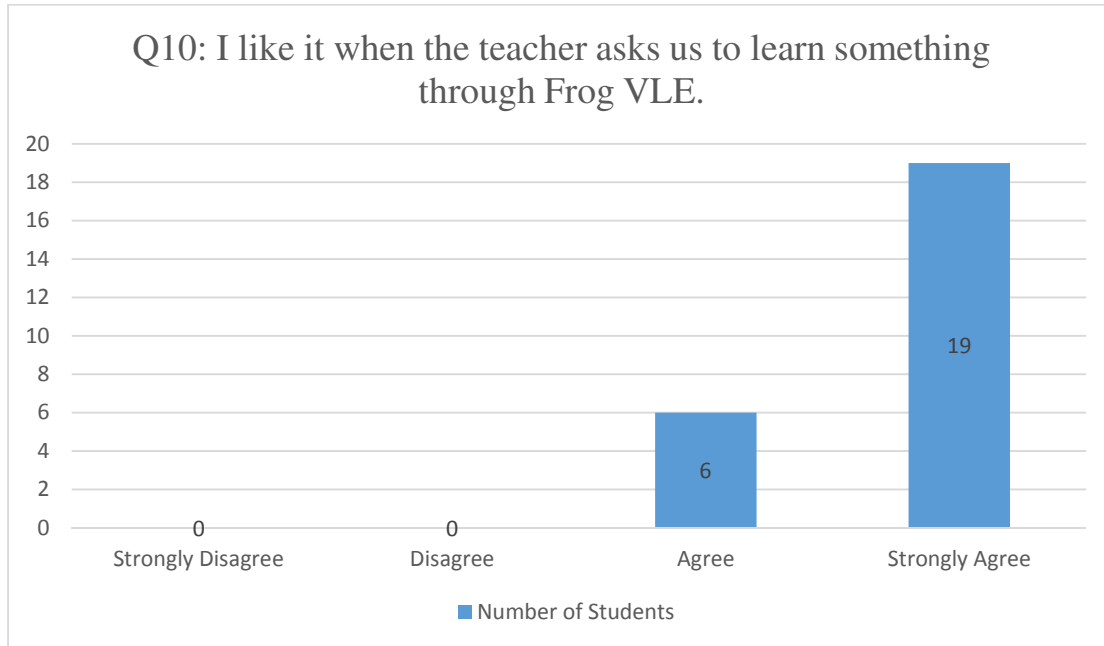
According to Figure 4.3.8, all the participants provided positive feedbacks towards the statement that in the future, they will want to be able to learn English through Frog VLE. The number of students who strongly agreed on this statement was 14 students, the percentage of 56% was slightly higher than the percentage of students agreed on it, which was 44%, a total of 11 students. Thus, it is obvious that the students were very motivated to learn English through Frog VLE since there was no disagreement from the students.





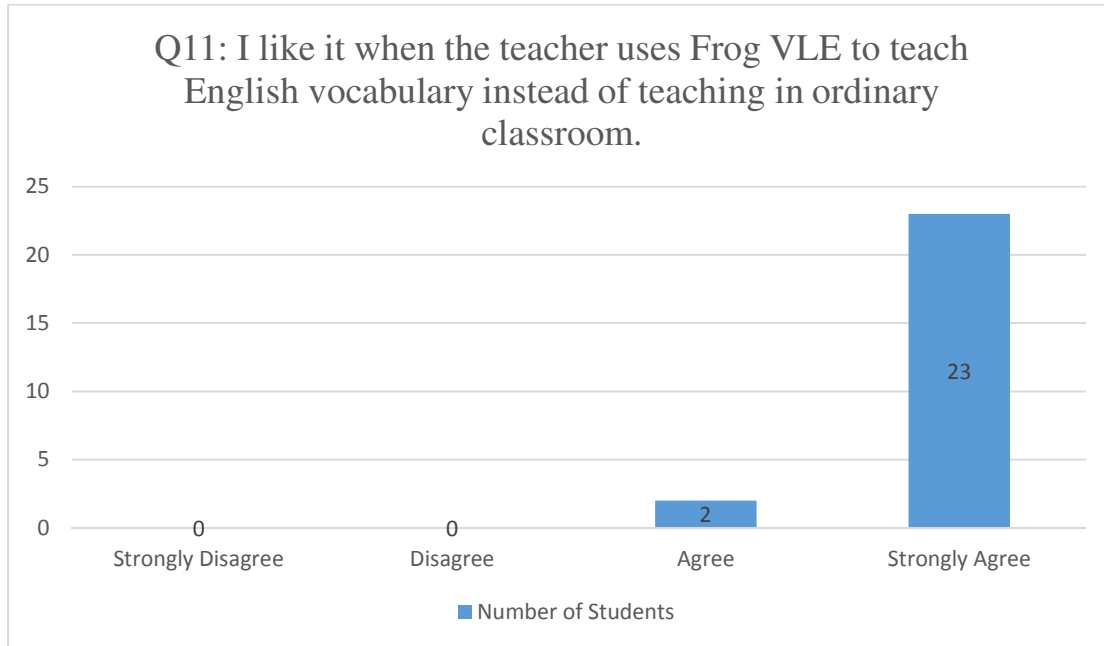
**Figure 4.3.9: Want to learn English through VLE even after Leaving School**

According to the graph depicted in Figure 4.3.9, the highest amount of responses collected was the “Agree”, 13 students, which was also 52% of them agree that when they leave secondary school, they will still want to learn English through VLE. Moreover, 9 students, about 36% of the total students strongly agreed on this statement. However, there were also 3 students, 12% of the total students disagree that they will still want to learn English through VLE when they leave secondary school.



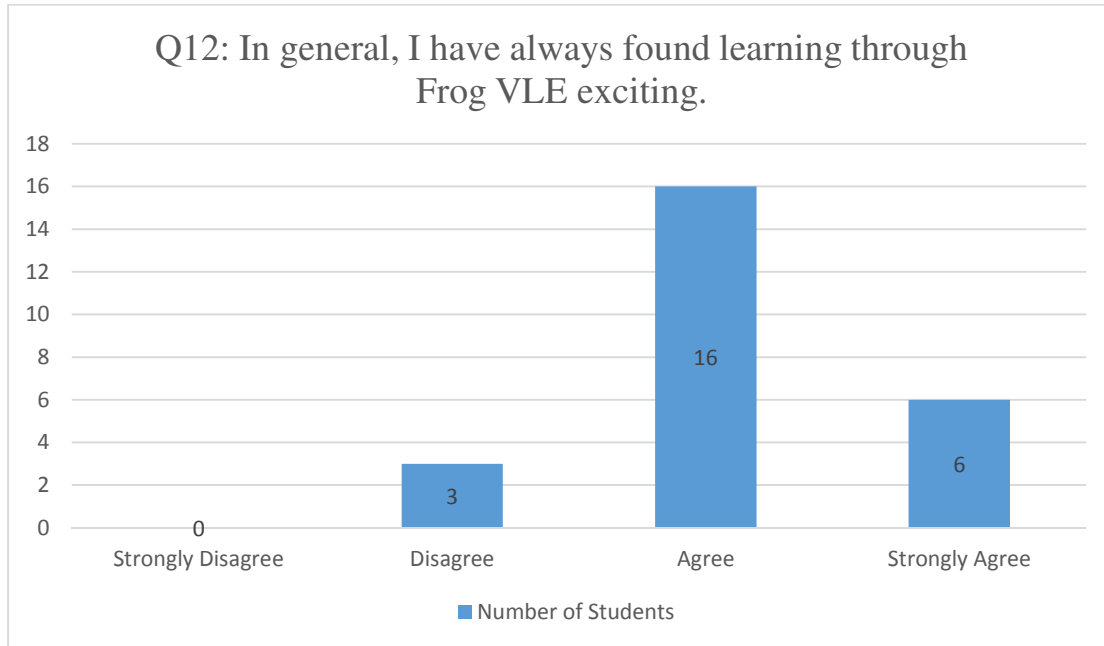
**Figure 4.3.10: Like the Teacher to ask for Learning through VLE**

Based on the data depicted in Figure 4.3.10, a very high percentage of 76% of the students, which were 19 over 25 students strongly agreed that they like it when the teacher asks them to learn something through Frog VLE. Meanwhile, the remaining 6 students, also 24% of the total students also agreed on the statement.



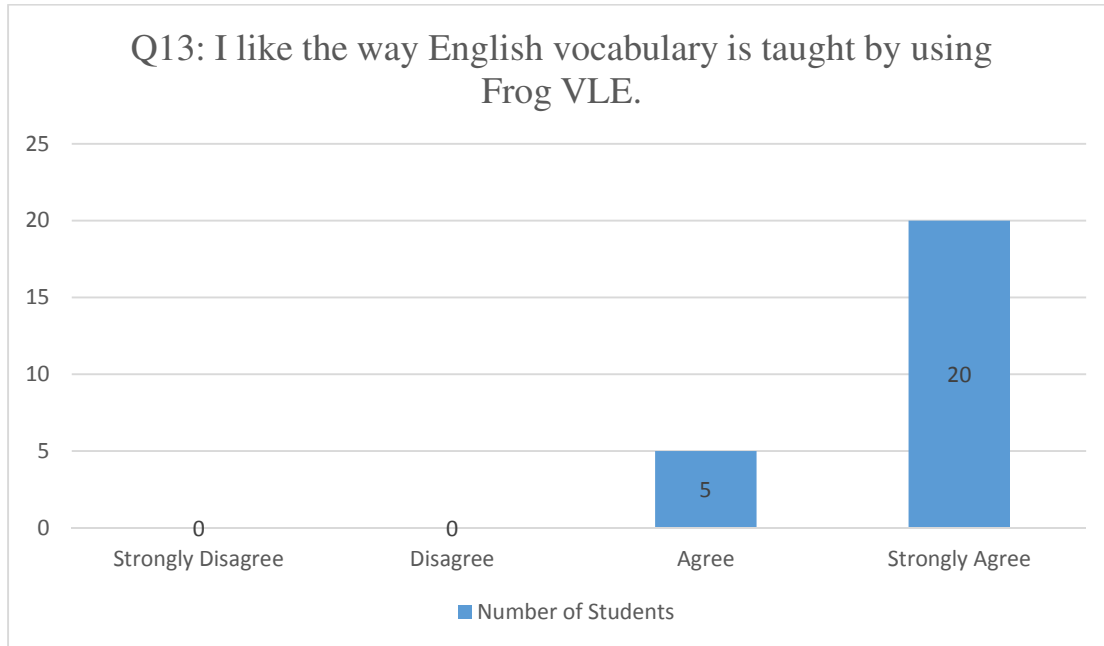
**Figure 4.3.11: Prefer VLE more than ordinary Classroom Teaching**

Based on Figure 4.3.11, the highest percentage of 92%, about 23 of the students strongly agreed that they like it when the teacher uses Frog VLE to teach English vocabulary instead of teaching in ordinary classroom. There was no disagreement on this statement as the remaining 8% of the students also agree on the statement. Thus, we can conclude that all the 25 students preferred the teacher to use Frog VLE in teaching English vocabulary instead of teaching in ordinary classroom.



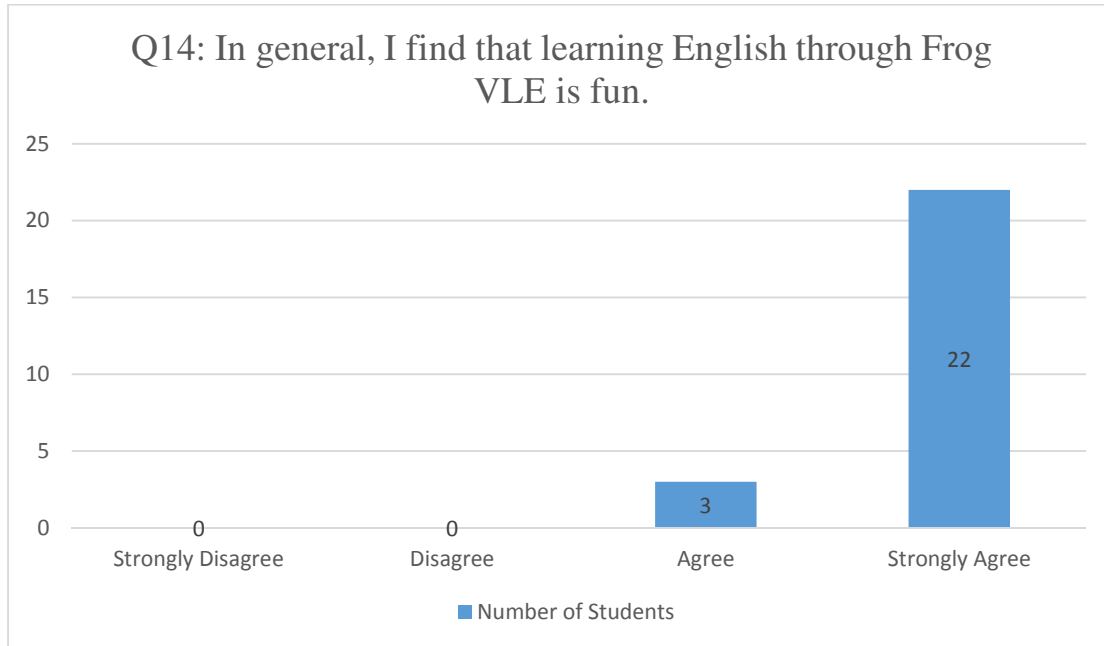
**Figure 4.3.12: Always found Learning through VLE exciting**

According to Figure 4.2.12, there were 3 students, contributed to 12% of the total students disagreed that they have always found learning through Frog VLE was exciting. However, 64%, which were also 16 out of the total of 25 students agree that they have always found learning through Frog VLE was exciting. Plus, 6 students, about 24% of the total students strongly agreed with the statement.



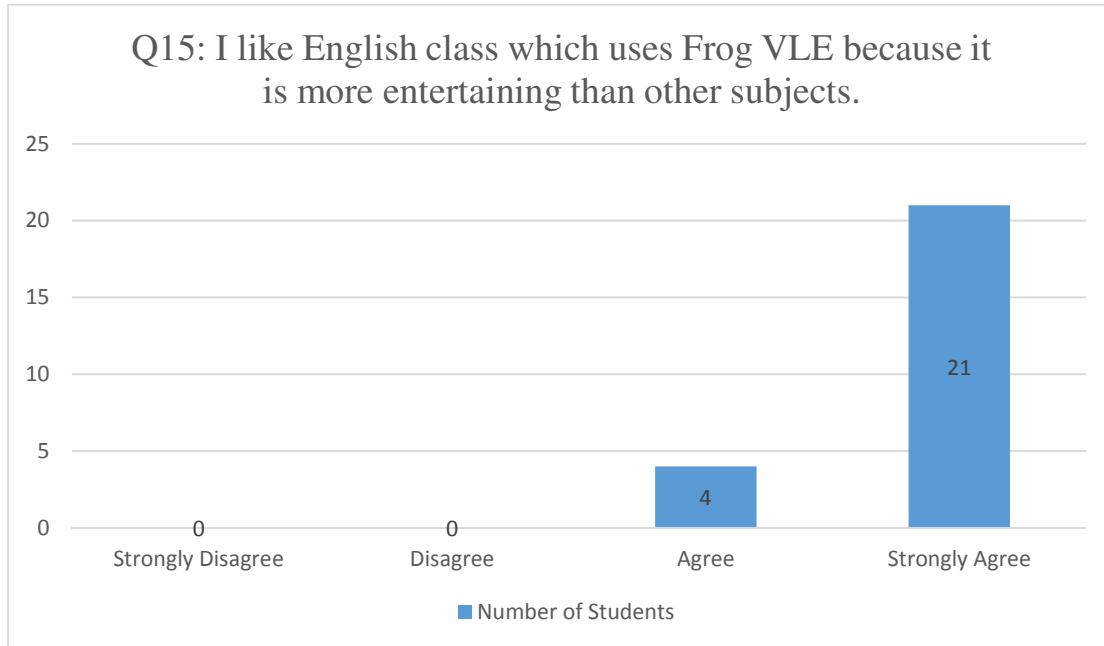
**Figure 4.3.13: Like the Way English Vocabulary is taught through VLE**

Based on Figure 4.3.13, 20 students, which were also 80% of the total students strongly agree that they like the way English vocabulary is taught by using Frog VLE. Meanwhile, the remained 20% of the students, which were also 5 students, also agree that they like the way English vocabulary is taught by using Frog VLE.



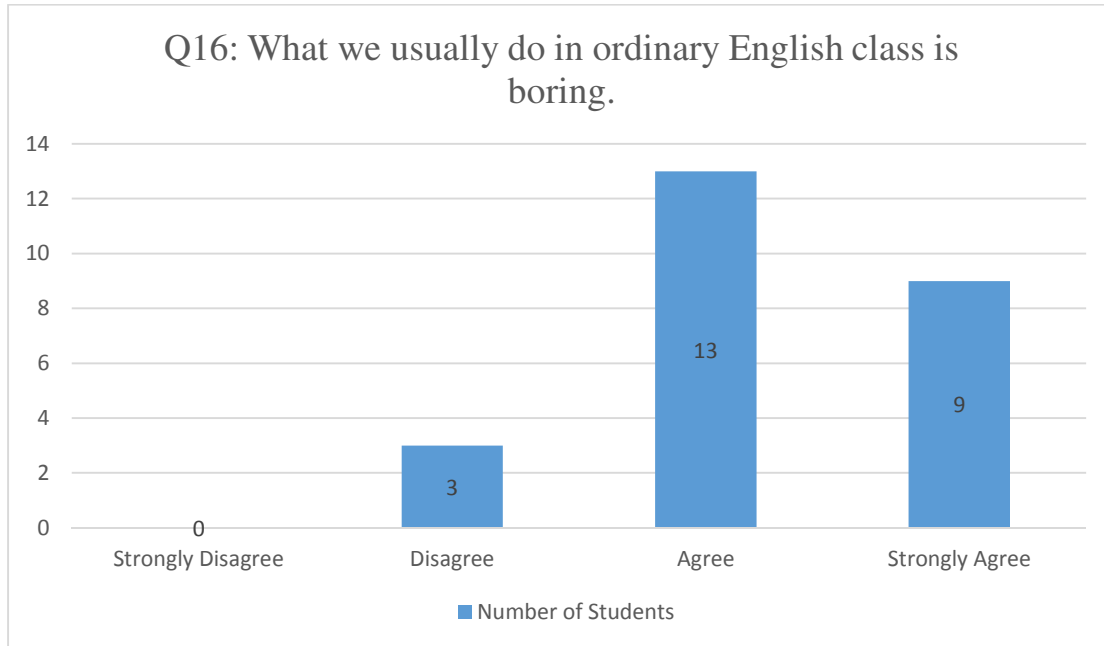
**Figure 4.3.14: Learning English through VLE is Fun**

According to Figure 4.3.14, a very high percentage of 88%, also an amount of 22 students found that learning English through Frog VLE was fun. This statement was further supported by the remaining 12% of students who also agree that they found that learning English through Frog VLE was fun. There was no negative response collected from the students, thus we can see that the students were really enjoy the process of learning English vocabulary through Frog VLE.



**Figure 4.3.15: Like English class with VLE because it is more entertaining**

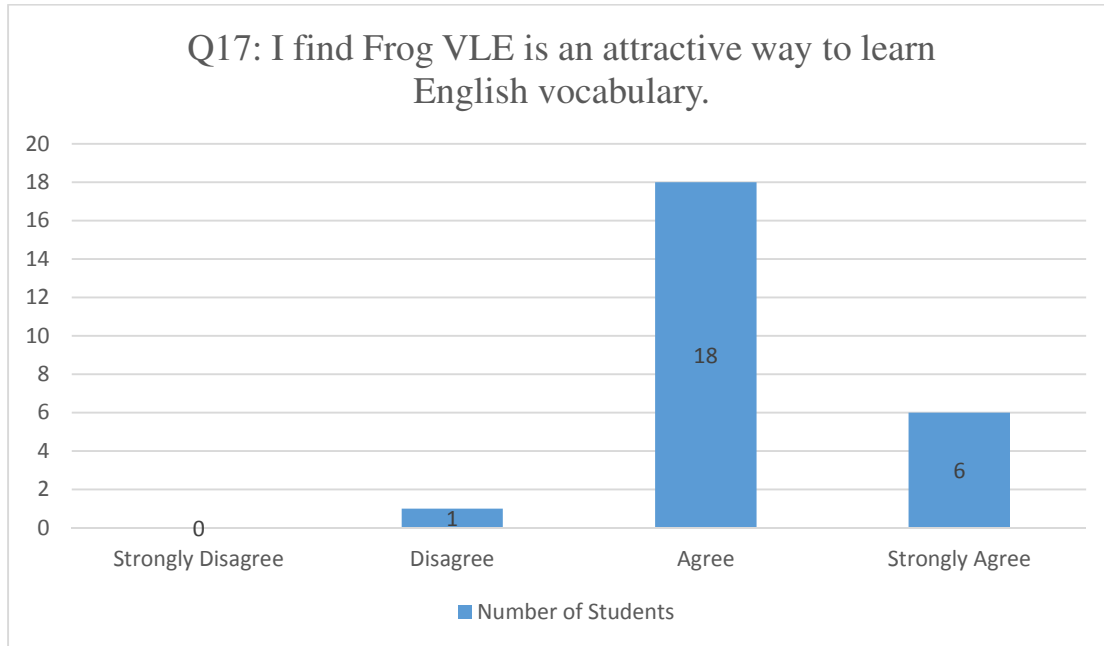
Based on the graph depicted in Figure 4.3.15, all of the 25 participants provided positive responses towards the statement that they like English class which uses Frog VLE because it was more entertaining than other subjects. There were 21 students, which contributed to 84% of the total students strongly agreed and 4 students, which were also 16% of the students agree that they like English class which uses Frog VLE because it is more entertaining than other subjects.



**Figure 4.3.16: Ordinary English class is boring**

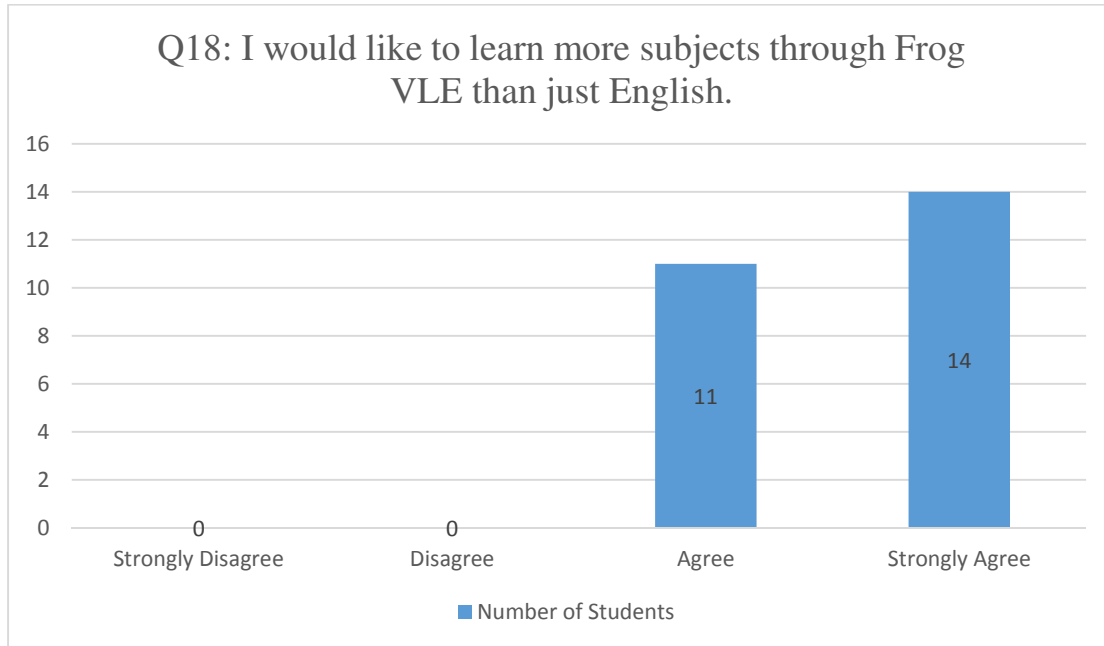
According to the data depicted in Figure 4.3.16, there were 13 students, which were also 52% of the total students agree and 9 students, 36% of them strongly agree that the activities that they usually do in ordinary English class were boring. On the other hand, there were 3 students, which contributed to 12% of the total students did not feel that what they usually do in ordinary English class is boring.





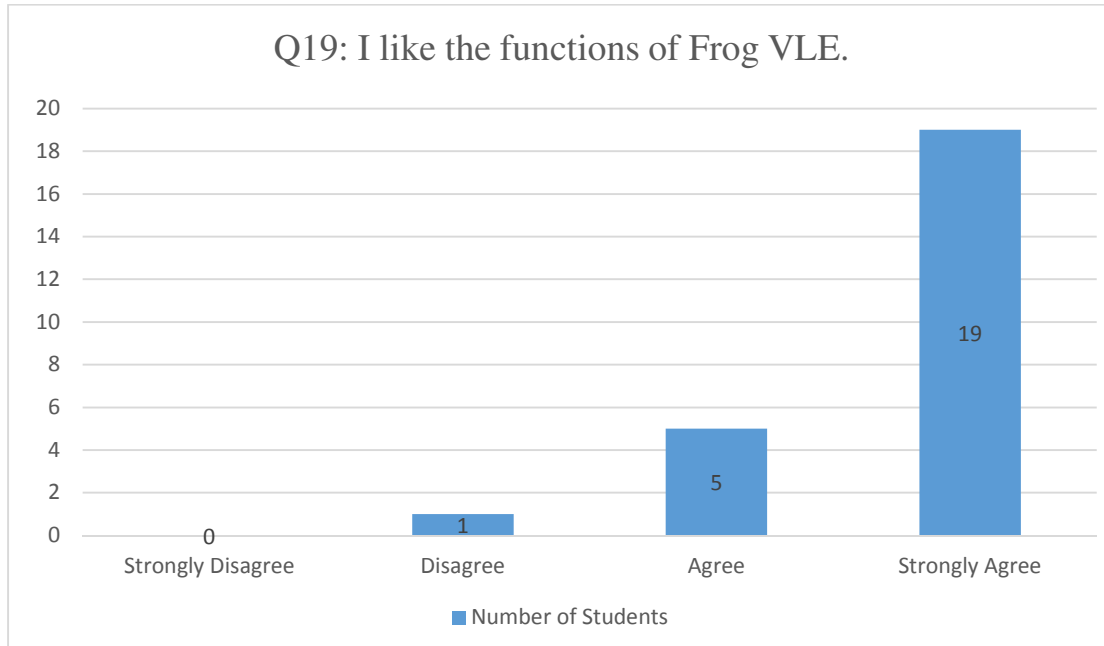
**Figure 4.3.17: VLE is an Attractive Way to learn English Vocabulary**

Based on the bar graph shown in Figure 4.3.17, there were 18 students, which were also 72% of them strongly agree that they found that Frog VLE was an attractive way to learn English vocabulary. This statement is further supported by another 6 students who agree with it. On the other hand, there was one student, only 4% of the total number of students disagreed that he or she found Frog VLE was an attractive way to learn English vocabulary.



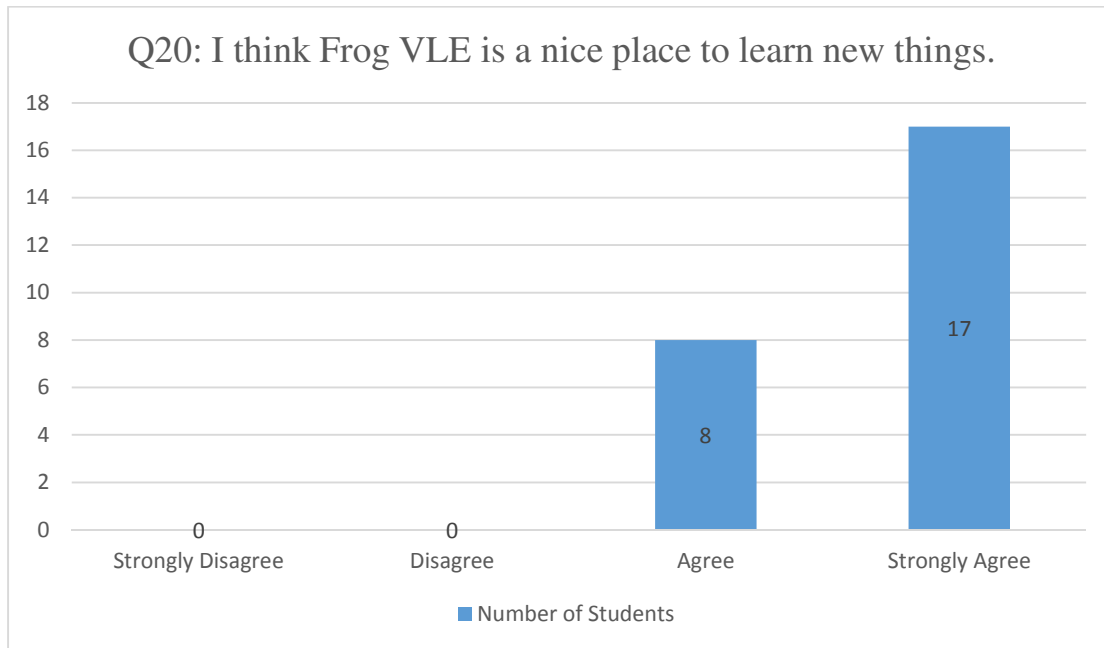
**Figure 4.3.18: Like to learn more Subjects through VLE**

According to what shown in Figure 4.3.18, all of the students provided positive perceptions towards the statement that they would like to learn more subjects through Frog VLE than just English. In this context, there was no negative response that has been found regarding this statement, as 14 students with a percentage of 56% strongly agreed and 11 students with a percentage of 44% agreed that they would like to learn more subjects through Frog VLE than just English.



**Figure 4.3.19: Like the Functions of VLE**

Based on the data shown in Figure 4.3.19, there were 19 students, with a percentage of 76% strongly agreed and 5 students with a percentage of 20% agree that they like the functions of Frog VLE. In contrast, there was one student, with a percentage of 4% disagreed that he or she likes the functions of Frog VLE.



**Figure 4.3.20: VLE is a nice place to learn new thing**

According to Figure 4.3.20, all the students provided positive perceptions towards the statement that they think that Frog VLE is a nice place to learn new things. 17 out of 25 students, which was also 68% of them strongly agreed and 8 students, with a percentage of 32% agreed that they think Frog VLE is a nice place to learn new things. No negative perceptions were collected from the students regarding this statement.

#### ***4.3.2 Summary of Questionnaires Findings***

In brief, the findings of the questionnaires showed that most of the participants have shown positive perspectives towards the utilisation of Frog VLE in the teaching and learning of English vocabulary, as majority of them opted for the “Agree” and “Strongly Agree” for questions regarding the positive aspects of Frog VLE. Another significant data to highlight was that the

positive responses from the participants in these questionnaires have been analysed into two main categories, which were their positive motivation to learn English through Frog VLE and their positive attitudes towards the learning instruction of Frog VLE, shown in the table below.

Category	Questions
Motivation to learn English through Frog VLE	Q1-Q11
Attitudes towards the learning instruction of Frog VLE	Q12-Q20

**Table 4.8: Category of the survey questions.**

#### ***4.3.3 Interviews***

In order to shed more lights on answering the second research question, this study also conducted interview sessions with three participants to get some detailed and personalised perceptions regarding the utilisation of Frog VLE in the teaching and learning of English vocabulary. The interview sessions were recorded, and the consent forms had also been collected from the students to prevent ethical issues in the future. As for the questions of the interview, there were three questions that have been included, which are as shown below:

1. Do you think Frog VLE really helped you in improving your vocabulary skills? If yes, how?
2. Learning vocabulary through traditional way and through Frog VLE, which one will you choose? Why?

3. What function or part do you like the most when you are using Frog VLE in learning vocabulary?

For the first question, “Do you think Frog VLE really helped you in improving your vocabulary skills? If yes, how?”, the three respondents gave the answers which had been shown in the table below.

Respondent A	<i>“Yes. I can learn more things when play games also, it is more fun.”</i>
Respondent B	<i>“Yes. I can answer the quizzes with my friends together, we can see our marks and fight for better marks.”</i>
Respondent C	<i>“Yes, I can remember the words easily when I see pictures and videos when I play games.”</i>

**Table 4.9: “Do you think Frog VLE really helped you in improving your vocabulary skills? If yes, how?”**

From the answers of the three respondents, it was undeniable that the participants all agree that Frog VLE did help them in improving their vocabulary skills. Moreover, they think that Frog VLE is fun and the interaction between their friends through the utilisation of VLE play a significant role. Besides, the usage of non-print materials like pictures and videos also helped them memorise the vocabulary better.

For the second question, which was “Learning vocabulary through traditional way and through Frog VLE, which one will you choose? Why?”, the answers from the three respondents have been shown in the table followed.

Respondent A	<i>“I like Frog, because the traditional way is boring.”</i>
Respondent B	<i>“I will choose Frog VLE, because I can play games and I love games.”</i>
Respondent C	<i>“I will choose Frog, because Frog is more fun and exciting.”</i>

**Table 4.10: “Learning vocabulary through traditional way and through Frog VLE, which one will you choose? Why?”**

From the answers of all the three respondents, the similarity is obvious that all of them think that Frog VLE was better and more exciting. The main reason was due to the fact that Frog VLE is an online learning platform which incorporates fun elements like games and quiz competition online to promote the motivation of the students to learn more and also enjoy the learning process.

For the last question, “What function or part do you like the most when you are using Frog VLE in learning vocabulary?”, the respondents showed different answers as compared to the previous two questions, their answers have been shown in the table followed.

Respondent A	<i>“I like the quiz games, it is so fun.”</i>
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Respondent B	<i>“I prefer the Boost games, I like the shooting games in between answering the ABC questions, it is fun.”</i>
Respondent C	<i>“I like the online quiz games, I like to do the questions with my friends and fight better marks with my friends.”</i>

**Table 4.11: “What function or part do you like the most when you are using Frog VLE in learning vocabulary?”**

From the answer gathered from the three respondents, both Respondent A and Respondent C preferred the online quiz competition the most. During the intervention period, the online quiz platform that the researcher used the most is “Kahoot!”. The online quiz session was indeed the most exciting part of the whole lesson for majority of the participants, almost all of them will be engaged in the session and the students were very motivated to finish the questions together. As for Respondent B, he preferred the Boost games, which the games are more towards answering the vocabulary questions individually, if the participant gave correct answer, he or she will enter the game interface and the game will last for several minutes before the next question appears. Boost games are designed for the students who want to learn new things individually, thus they can control their own learning pace and also the contents of the things they want to learn.

#### ***4.3.4 Summary of Interview Findings***

In brief, it can be seen that the responses of interview from the participants are mostly positive. They prefer Frog VLE due to the “games”, “fun”, “exciting” elements. Although there



are some divergence in the preference of functions that they like the most in Frog VLE, but it also indicates that the variety of functions and interfaces of Frog VLE also promote effective and fun learning among different kinds of learners.

#### ***4.4 Conclusion***

In conclusion, the researcher had adopted three methods in the process of collecting the data, which included the pre-test and post-test of vocabulary skills, questionnaires and interview sessions. The findings of the research managed to answer Research Question 1 and Research Question 2 accordingly. The utilisation of VLE did provide positive effects in vocabulary learning among secondary school ESL learners, as it has been proven by the overall improvement of results among the students. Moreover, the participants also give positive perceptions on the utilisation of VLE in the teaching and learning of English vocabulary.

## **CHAPTER 5**

### **DISCUSSIONS AND RECOMMENDATIONS**

## ***5.0 Introduction***

As the last chapter of this research study, the summary of discussion for all the research methods, which were the pre and post-tests, questionnaire survey and interview had been highlighted. Besides, the actual limitations throughout the process of carrying out the study, future implications of the study and some useful and significant recommendations for future researchers had also been included before the conclusion of this very end chapter of research study.

## ***5.1 Discussion***

For the following subsections of discussion, the findings which have been portrayed in Chapter 4 had also been discussed in depth and proven to support the formulated hypothesis at the very beginning of this research study. The formulated hypothesis was accepted and supported, in the sense that the utilisation of Frog VLE in an ESL secondary school context will bring positive effects to the students. In this context, further discussion has been included to identify the effectiveness of the three research methods, which were the questionnaire survey, interview session and pre, post-test in achieving the research objectives of this research.

### ***5.1.1 Discussion on the Analysis of Pre-test and Post-test of Vocabulary Skills***

The purpose of the pre-test and post-test were to compare the initial level of vocabulary skills of the students before the intervention and their later level of vocabulary skills after the intervention, while suggesting an overall improvement from the students who have undergone the intervention of using Frog VLE during the teaching and learning of English vocabulary. The 25 students were all undergone the pre-test and post-test which were comprised of 13 multiple-choice

questions and 12 fill-in-the-blanks questions with words given. After the collection of data, the data were then interpreted statistically and be further elaborated.

After comparing the results of pre-test and post-test between the experimental group and the controlled group, a T-test was had also been carried out to analyse the results of the experimental group. From the data collected, it was obvious that Frog VLE really enhanced the teaching and learning of vocabulary among ESL secondary learners significantly, despite of the fact that they only experienced the intervention for eight weeks.

### ***5.1.2 Discussion on the Analysis of Intervention***

After carrying out the pre-test, an intervention of using Frog VLE to enhance the teaching and learning of English vocabulary had been given to the 25 participants among the experimental group. In this research, the intervention given to the participants lasted for eight weeks, which the participants had attended English classes that utilised Frog VLE as the learning platform, once per week.

The online learning platform, VLE Frog promotes interactivity among the students themselves and also with the teacher as it has a lot of functions. As Shen et.al. (2017) mentioned in their study, VLE permits students to access different learning tools without the constraint of space and time. The students will have the chances to access different learning tools, discussion board and document sharing system with an enormous amount of learning resources.

Throughout the process of giving the intervention, the application that the students preferred the most was the Frog Play. The Frog Play application offers the students with boosted quiz selection and a lot of games. It also incorporated an advanced analytics function. This function

is able to measure the performance of the students and also made the comparison of students' performances over time possible.

After carrying out the intervention, one thing that must be highlighted is the differences between the process of teaching vocabulary through Frog VLE and the process of teaching vocabulary through conventional strategies. Conventional vocabulary teaching strategies emphasise on rote memorisation, and these strategies will always lead to comprehension and retention problems among ESL learners (Zabidin, 2015). Meanwhile, Frog VLE is a learning platform that enables the students to learn vocabulary while enjoying the process of learning. It promotes healthy competition among the students who learn in the same online platform.

### ***5.1.3 Discussions on the Questionnaire Survey***

In order to collect the data on evaluating the perceptions of the ESL secondary learners on the utilisation of Frog VLE in the teaching and learning of vocabulary, the researcher had analysed the responses of all the 25 students through a total of 20 questionnaire survey questions. The questions included in the survey were categorised to test two different aspects, which were their motivation to learn English through Frog VLE and their attitudes towards the learning instruction of Frog VLE.

The questionnaires were distributed to all the 25 participants who undergone the intervention period of eight weeks. After analysed the data collected, it can be concluded that majority of the responses from the students were more towards giving positive perceptions on the utilisation of Frog VLE in the teaching and learning of English vocabulary.

In general, almost all the students preferred learning vocabulary through Frog VLE rather than the conventional way of teaching vocabulary in ordinary classroom. Meanwhile, the researcher also found out that some of the students may only wanted to use Frog VLE during their school time, not in the future when they leave secondary school. In this context, it was suggested that these students may only wanted to participate in Frog VLE online learning only if their friends are together with them.

Based on the results of the questionnaires, it can be clearly seen that most of the participants enjoyed their learning experience through Frog VLE, this further proved that the students did have a very good and overall positive perception on learning through Frog VLE.

#### ***5.1.4 Discussions of the Interview Sessions***

As for the interview sessions, brief interviews were carried out with three students who had experienced the intervention of using Frog VLE to enhance the teaching and learning of English vocabulary. The students who participated in the interview sessions had been asked with three questions. The first question of the interview session was “Do you think Frog VLE really helped you in improving your vocabulary skills? If yes, how?”. All the three respondents agreed that Frog VLE did help them to improve their vocabulary skills, each of them thought Frog VLE helped them in different ways.

As for the second question, “Learning vocabulary through traditional way and through Frog VLE, which one will you choose? Why?”, all the respondents preferred Frog VLE more than the traditional way of learning. The similarity is obvious that all of them think that Frog VLE was better and more exciting due to the reason that Frog VLE is an online learning platform which

incorporates fun elements like games and quiz competition online to promote the motivation of the students to learn more and also enjoy the learning process.

For the last question, “What function or part do you like the most when you are using Frog VLE in learning vocabulary?”, two of the respondents preferred the online quizzes, and one of them preferred the quiz games. This was due to the reason that Frog VLE is an online learning platform that incorporates different functions to suit different kinds of learners. Some of the students will prefer online quizzes that always promote healthy competition among themselves, meanwhile there were other students who preferred individual quizzes which they can control what they want to learn and in what pace they want to learn.

In general, the answers gathered from the interview session did provide a clearer understanding on the students’ perceptions on the utilisation of Frog VLE in the teaching and learning of English vocabulary.

## ***5.2 Limitations of the Study***

Throughout the process of completing this research study, it is undeniable that there were some limitations in different aspects that were inevitable due to different reasons and constraints. In this research, the limitations of the study were the time constraint, the inability to generalise the findings of the study due to limited sample size and also the lack of perspectives from the language teachers to contribute the results of the study.

The first and primary limitation of this study was the time constraint. The duration of the intervention given to the students was merely eight weeks due to the school holidays. The time constraint for the intervention led to the problem of lack of exposure among the students towards

acquiring higher level of vocabulary skills. The time allocated for the intervention were not enough to collect actual and significant results of the students' improvement of vocabulary skills. Besides, the researcher also faced time constraint as the "Chrome Room" can only be used once per week for every class. The mere one-hour lesson per week was indeed challenging and it also limited the conduction of intervention to improve the vocabulary skills of the students.

Moreover, there were also limitation in the aspect of exploration of perceptions from the point of view of the English subject teachers, regarding the utilisation of Frog VLE in the teaching and learning of English vocabulary in ESL secondary school context. This study only gathered the perceptions from a total of 25 ESL secondary school students, which most of the responses were positive towards the utilisation of Frog VLE. As most of the students provided positive responses and agreed on the effectiveness of Frog VLE in enhancing their vocabulary skills, the perceptions of the teachers regarding the usefulness of Frog VLE in enhancing the teaching process of English vocabulary in comparison with the conventional teaching method is still a topic to be explored and discussed.

In addition, this research study also cannot be generalised, and the findings were not suitable to be applied to all ESL secondary school learners in Malaysia. As the respondents of this research were comprised of unequal distribution of students in the aspects of races, genders and their first language, the findings and results of this research may also be affected by different factors. Plus, the participants of this research were all Form 4 students with mixed proficiency levels in English, thus the findings of the results may not be generalised as the findings with respect to every secondary ESL learner.



### ***5.3 Implications of the Study***

One of the most significant implications of this research study is definitely its ability to prove that Frog VLE is a wonderful online learning platform that the stakeholders should fully utilised in order to achieve the aspiration of 21<sup>st</sup> century educational goals. Frog VLE was described as a symbol of the revolution in education field in Malaysia as it is the first cloud-based learning platform which take in the students, teachers and parents altogether.

Besides, this study is also significant in proving that a solid foundation of vocabulary skills is the key to improve other language skills like reading, listening, speaking and writing. Despite of the inadequate attention been given to vocabulary skills associated to other language skills, it has already been upheld in the study of Boers (2013) that enhanced vocabulary skills will lead to higher listening, speaking, reading, and writing skills.

In general, the importance of acquiring vocabulary skills in English had been highlighted in this research study. Moreover, the advantages and usefulness of Frog VLE in enhancing the learning process of the students proven in this research study will also raise the awareness of the stakeholders to fully utilise the online learning platform in order to achieve higher educational goals of Malaysia.

### ***5.4 Recommendations***

As this research study was carried out with only 25 students, the results of this study thus cannot be generalised for every ESL secondary school learner in national context. Therefore, the researcher recommends more further studies can be conducted with the topic of utilising Frog VLE in enhancing the learning process of our future generation. Not only researches on vocabulary

skills, future researches on other language skills like reading, listening, speaking and writing are also recommended to be carried out, with a larger sample size, taken from all the nations in Malaysia, in order to generate results and findings with higher validity and reliability.

On the other hand, it is also recommended that future researches can be done with a longer time span. As this research study was limited to a time constraint to finish every stage of the research in only 12 weeks, including the school holidays, thus the intervention had also been restricted to only 8 weeks. It was believed that with a longer duration of research, data with higher validity and clearer perceptions from the respondents will also be collected.

### ***5.5 Conclusion***

In conclusion, the findings and results of this study supports the notion that Frog VLE should be utilised and implemented in the context of enhancing the teaching and learning of vocabulary among ESL secondary learners. It has been proven that the students have a very positive perception towards Frog VLE in enhancing their process of learning. It is wished that this study may contribute in producing a generation of students who can think and create without being prodded and enjoy learning.



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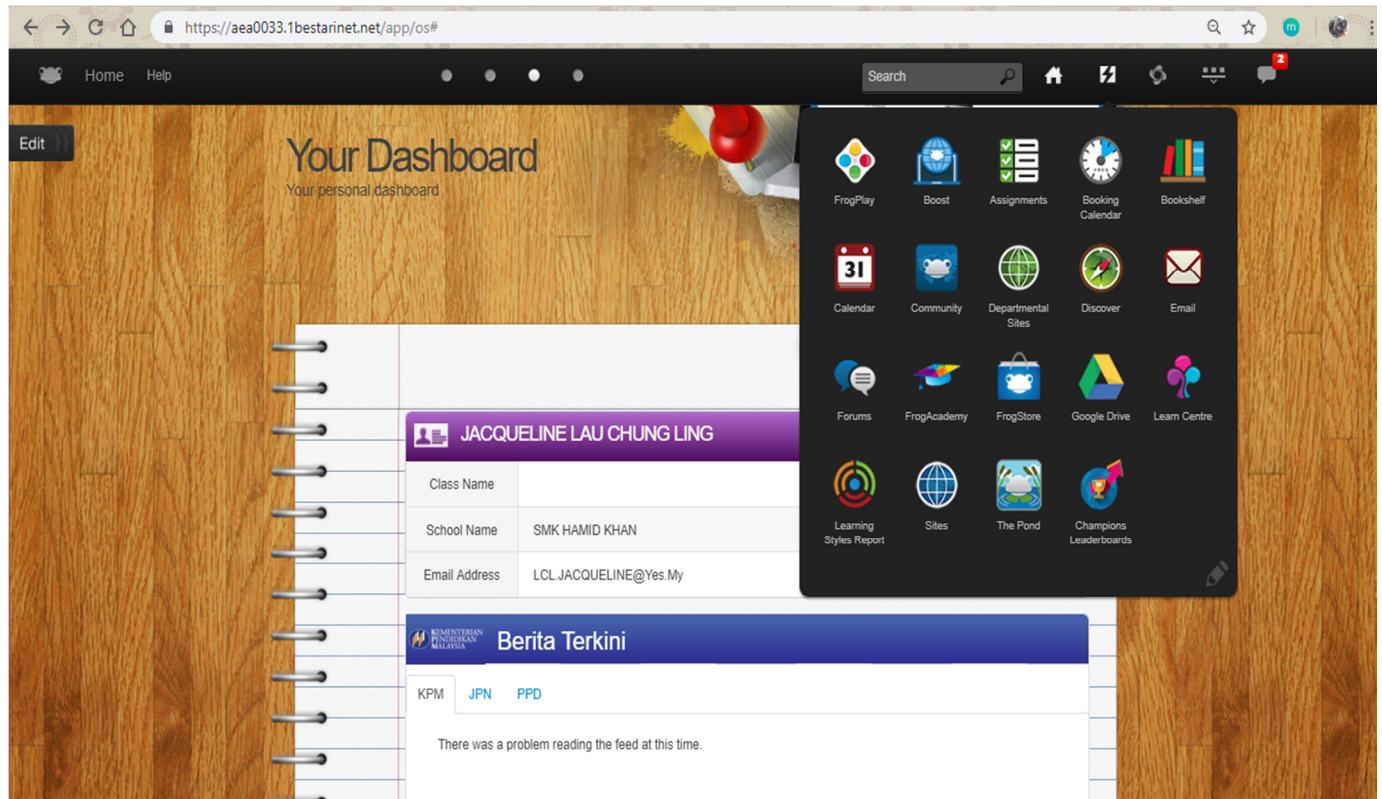


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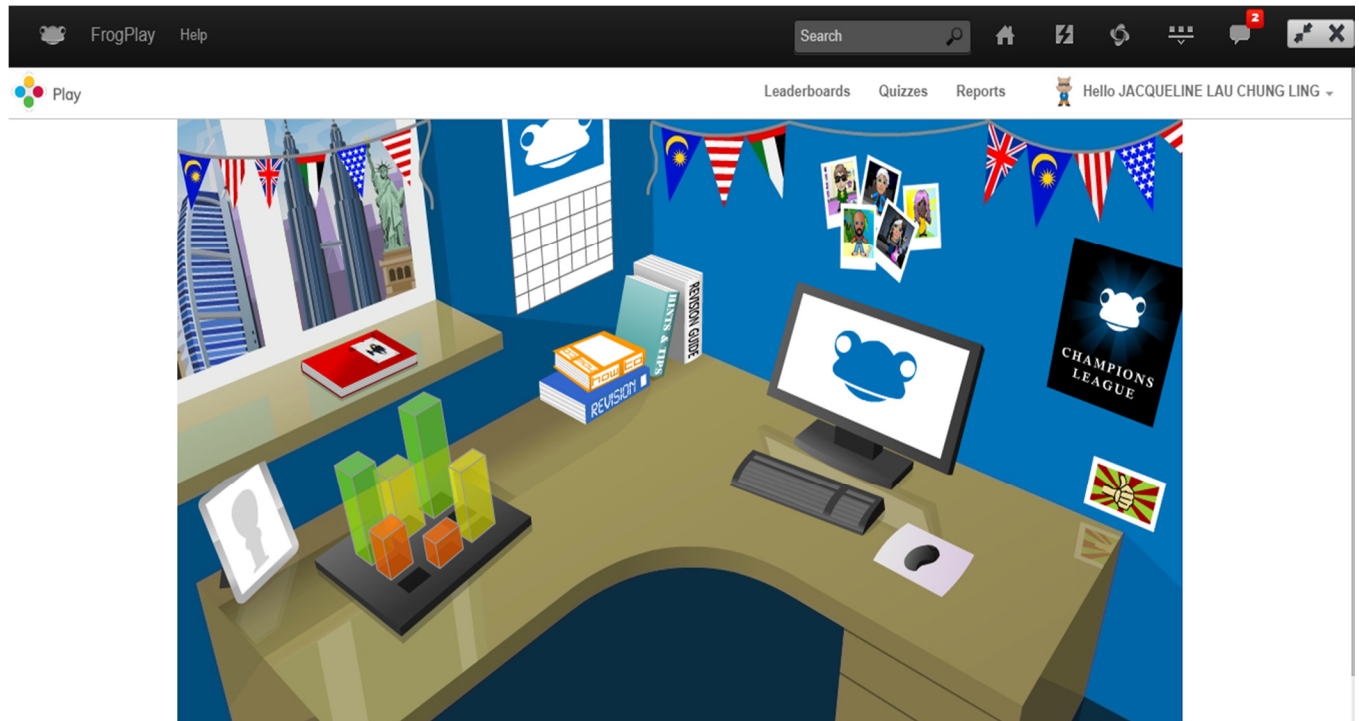
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## Appendix A



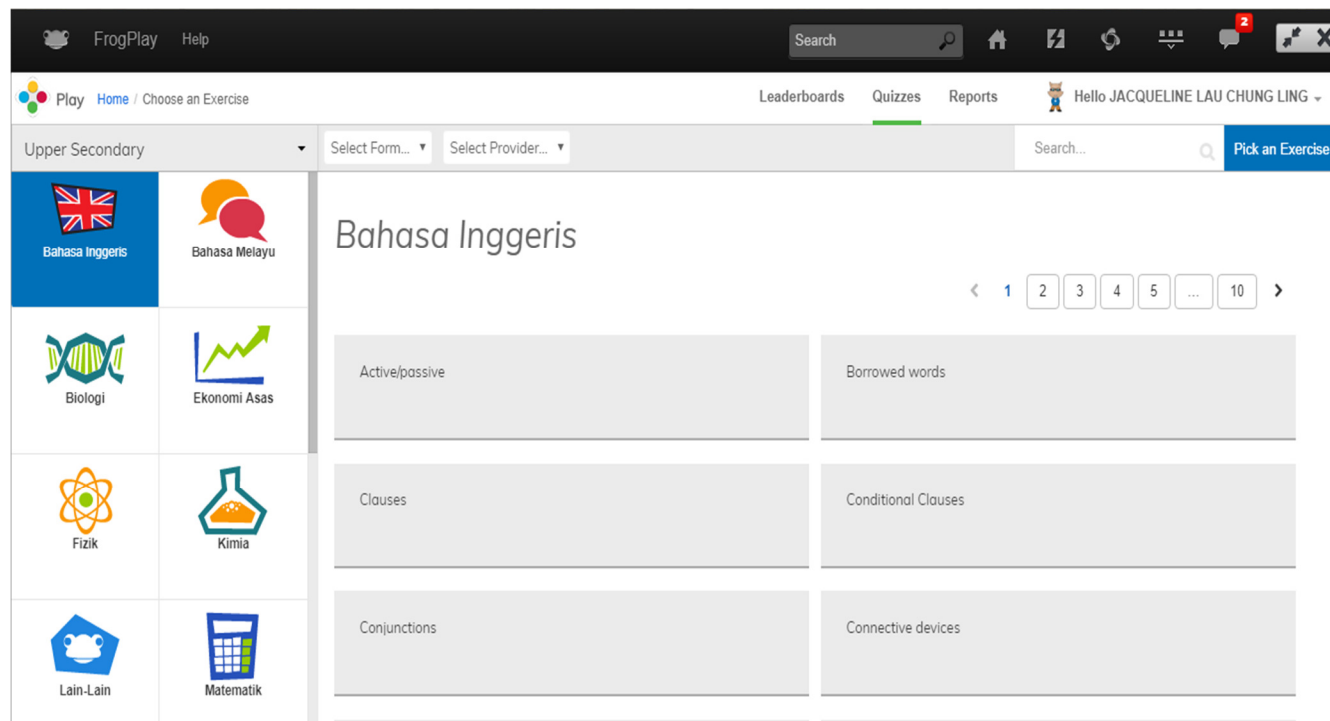
## Frog VLE Interface

## Appendix B



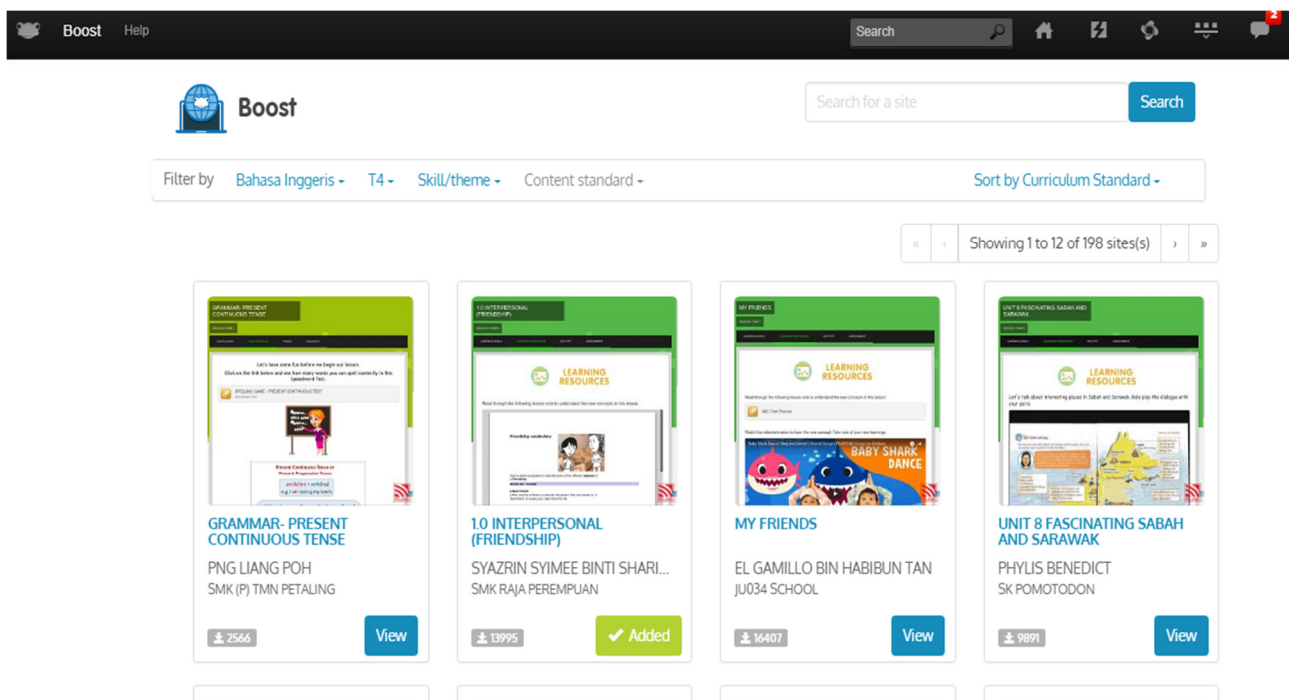
**View of Student Room in the Frog Play Application**

## Appendix C

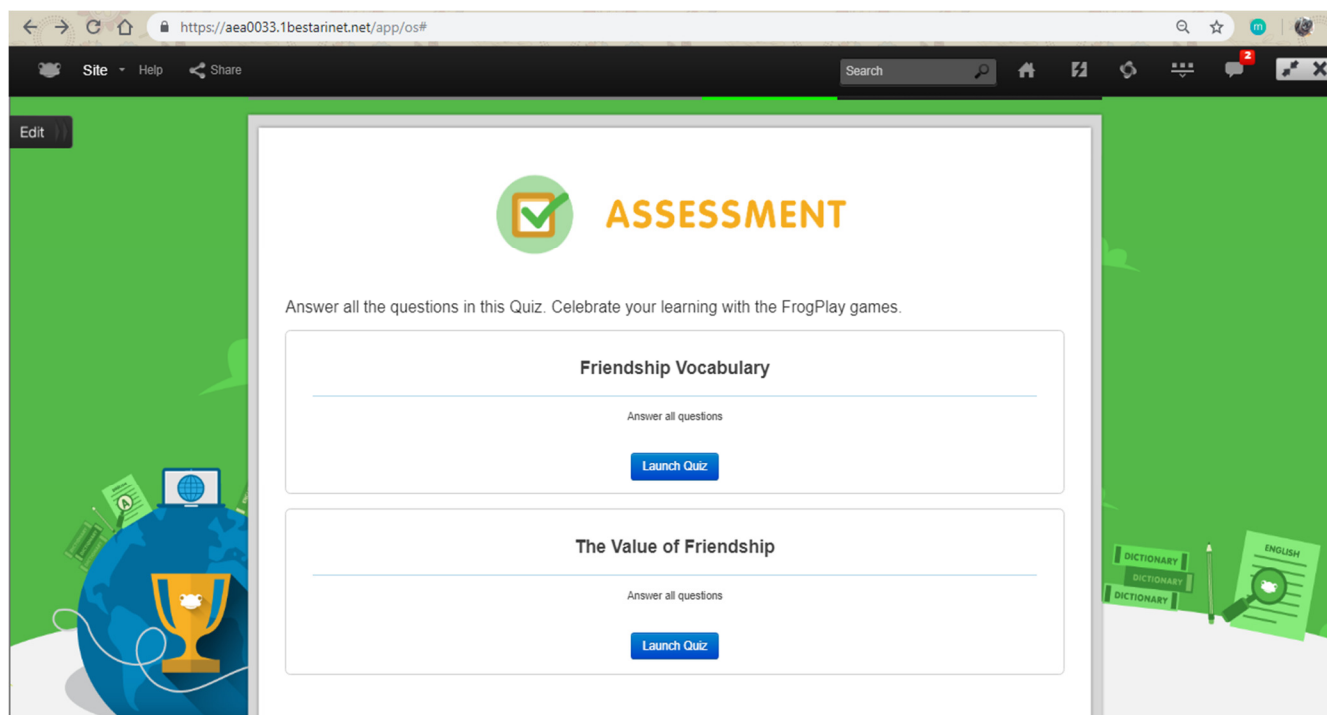


**View of the Students when Selecting Quiz under English Subject**

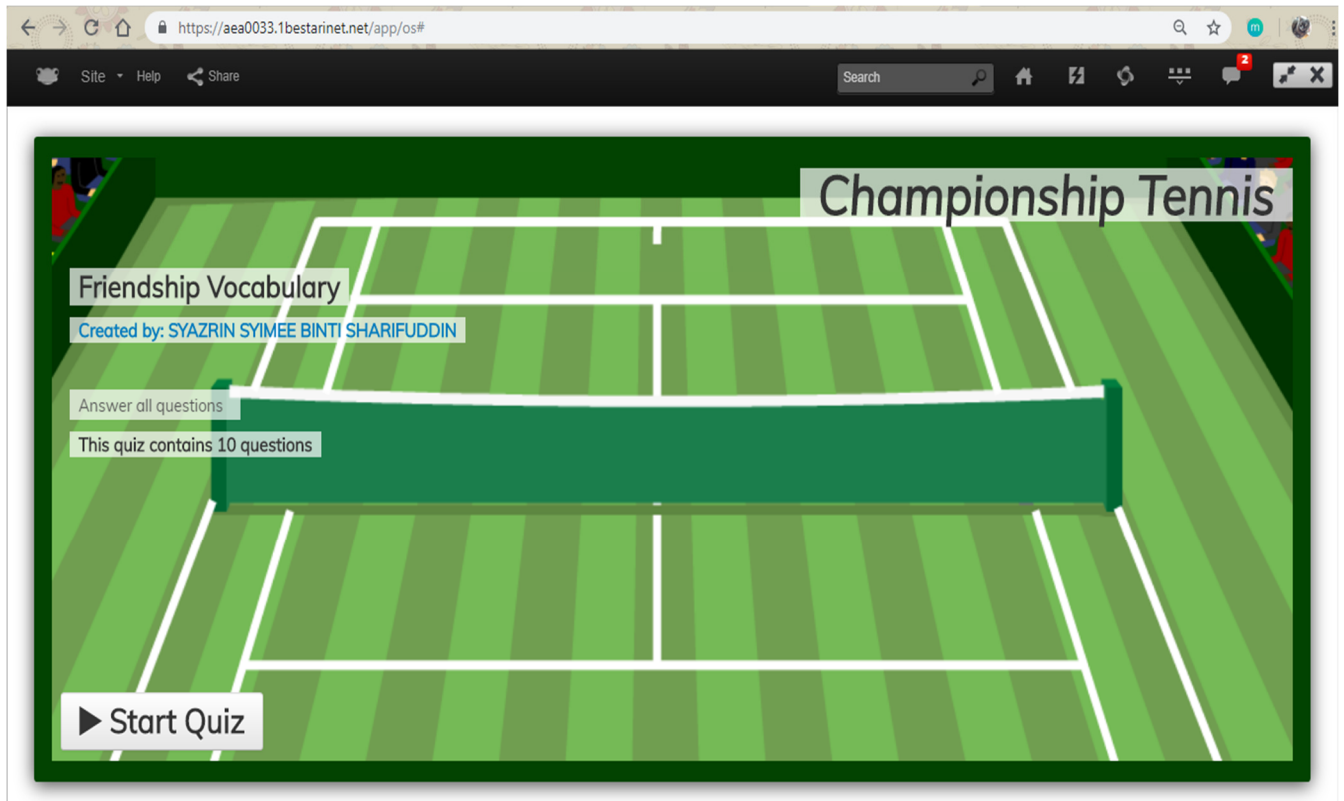
## Appendix D



### List of Boost Sites on Form Four English Level



## The Assessment of a Boost Site with Quiz on Friendship Vocabulary



Quiz Game Interface of the Boost Site on VLE



**Appendix E**

The screenshot shows a web application titled "Learning Styles Report" within a virtual learning environment. The interface includes a search bar at the top right with the text "Search for a class...". Below the search bar, there are two buttons: a funnel icon and a gear icon. The main content area displays a table with the following columns: Name, User ID, Class, Visual, Auditory, and Kinesthetic. The table contains one row of data for the student PHAN WEN JUN. The Visual and Auditory scores are 10, and the Kinesthetic score is 9. The background of the interface features a scenic landscape with trees and a body of water.

Name	User ID	Class	Visual	Auditory	Kinesthetic
PHAN WEN JUN	JW.PHAN@Yes.My	T4-HARMONI	10	10	9

**Learning Styles Report of the student on VLE**

## Appendix F

### LESSON PLAN FORM (KSSM Syllabus)

Trainee Name: Jacqueline Lau Chung Ling

Student Reg. I.D. No. 1603976

**Date :**

**Class :**

**Time :**

**Number of Students :**

**Content Standard(s):**

**Learning Standard(s):**

**Topic :**

**Language Skill:**

**Grammar Component:**

**Previous / Background Knowledge:**

#### **Lesson Objectives**

This lesson aims to:

- 1.
- 2.

#### **Learning Outcomes**

By the end of this lesson, students should be able to:

- 1.
- 2.

<b>Stage</b>	<b>Teacher Activity</b>	<b>Student Activity</b>	<b>Teaching Materials</b>
<b>Set Induction</b>			
<b>Presentation</b>			
<b>Practice</b>			
<b>Production</b>			
<b>Closure</b>			

## **Appendix G**

### **School Management Consent Form**

**UNIVERSITI TUNKU ABDUL RAHMAN**

**FACULTY OF ARTS AND SOCIAL SCIENCE**

**BACHELOR OF ARTS (HONS) ENGLISH EDUCATION**

Title of Study: **Virtual Learning Environment: Effectiveness in Enhancing Teaching of Vocabulary to Secondary ESL Learners**

Research Investigator: **Jacqueline Lau Chung Ling**

#### **Introduction**

- In regards to the title of study as stated above, this study aims to conduct a research on using Virtual Learning Environment to enhance the vocabulary of one class of students in English. This research is hoped to be conducted throughout the researcher's teaching practice in the school. As such, this consent form is prepared for the school's management to obtain the acknowledgement and agreement to conduct the research so as to avoid any ethical issues.
- Your school is selected to conduct the research as the researcher is assigned by the Faculty of Arts and Social Science's (FAS) faculty general office (FGO) to carry out his teaching practice throughout this semester.
- As such, it is important that you should read this form and ask any questions that you may have before agreeing to be in the study.

#### **Purpose of Study**

- The purpose of the study is to determine the effectiveness and students' perception on the use of Virtual Learning Environment (Frog VLE). The researcher will conduct survey, pre-test, post-test and interviews on the participating students.
- Ultimately, this research will be published as a thesis which also serves as a requirement for every undergraduate to complete his course of study in the university.

#### **Description of the Study Procedures**

- The research is expected to be carried out for 8 weeks within the researcher's teaching practice. The vocabulary items that will be used are taken from the scheme of work. As such, the research will be carried out in a normal English lesson without the need to conduct extra classes. This research will not affect their syllabus as it is based on their respective schemes of work.

### Risks / Discomforts of Being in this Study

- There are no foreseeable risks for this research. However, ethical consent forms will still be distributed to the students and their English teacher who will be involved in this research. Should they feel any discomfort in this study, they have the rights to withdraw from the study and no actions will be taken.

### Benefits of Being in this Study

- Upon the completion of this study, it is hoped that the use of Frog VLE can serve as a trigger to create awareness among ESL teachers. Using Frog VLE in English lessons will provide more opportunity for communicative tasks, where students apply their ICT knowledge at the same time. Another benefit is that this study will allow the students to have better memory retention on the vocabulary through guided discovery. At the end of the study, it is hoped that the students will improve their English scores and consequently, they will enhance the school's reputation.
- As stated, the vocabulary items will be taken from the scheme of work. It not only allows the students to develop their English vocabulary but also enables the students to use the ICT knowledge in communicative tasks. Thus, fulfilling the criteria for the English lessons and aims as set by the Malaysian Ministry of Education (MMOE).

### Right to Ask Questions and Report Concerns

- The school management reserves the right to ask questions about this research study and to have those questions answered by the researcher before, during or after the research. If the school's management has any further questions about the study, at any time feel free to contact the researcher, **Jacqueline Lau Chung Ling** at **jacling96@1utar.my** or by telephone number at **016-8993130**. If the school management wants to know the results of this study, a summary of the results of the study will be sent to the school management.

### Consent

- Your signature below indicates that you have decided to have your school volunteer as a research participant for this study, and that you have read and understood the information provided above. You will be given a signed and dated copy of this form to keep, along with any other printed materials deemed necessary by the researcher.

Principal :

Signature :

Date :

Researcher : **Jacqueline Lau Chung Ling**

Signature :

Date :

**UNIVERSITI TUNKU ABDUL RAHMAN**  
**FACULTY OF ARTS AND SOCIAL SCIENCE**  
**BACHELOR OF ARTS (HONS) ENGLISH EDUCATION**

**Tajuk Kajian: Keberkesanan dan Pandangan Pelajar terhadap Penggunaan ‘Frog VLE’ dalam Meningkatkan Pencapaian Perbendaharaan Kata Antara Pelajar**

**Nama Pengkaji: Jacqueline Lau Chung Ling**

**Pengenalan**

- Seperti yang dinyatakan di atas, kajian ini bertujuan untuk menggunakan ‘Frog VLE’ untuk meningkatkan pencapaian perbendaharaan kata pelajar dalam subjek Bahasa Inggeris. Kajian ini akan dijalankan sepanjang latihan mengajar pengkaji di sekolah dan kajian ini tidak memerlukan kelas tambahan untuk menjalankan proses pengumpulan data.
- Adalah diharapkan bahawa kajian ini boleh dijalankan sepanjang pengkaji berada di pihak sekolah di semester tersebut. Oleh itu, adalah penting untuk pengkaji memberi borang ini untuk mendapat persetujuan pihak sekolah dan juga mengelakkan isu-isu etikal semasa perjalanan kajian ini.
- Sekolah tuan/puan dipilih untuk menjalankan kajian ini adalah kerana pengkaji ditempatkan oleh FGO Faculty Arts and Social Science, UTAR untuk menjalankan latihan pengajaran di sekolah tuan/puan.
- Oleh itu, adalah penting untuk pihak sekolah membaca borang ini dan bertanya jika perlu sebelum bersetuju untuk menjalankan kajian ini.

**Tujuan Kajian**

- Tujuan kajian ini adalah untuk menentukan keberkesanan dan pandangan pelajar terhadap penggunaan ‘Frog VLE’.
- Semasa mengumpul data, kedua-dua pra dan pasca ujian akan dijalankan ke atas pelajar-pelajar mata pelajaran Bahasa Inggeris dari kelas pengkaji.
- Selepas semua prosedur dijalankan, semua maklumat dan data yang diperolehi akan dijanakan sebagai tesis yang diperlukan oleh pengkaji sebagai syarat untuk menamatkan pelajaran di universiti.

**Keterangan Prosedur Perjalanan Kajian**

- Kajian ini dijangka akan dijalankan sepanjang 8 minggu di sekolah tuan/puan. Komponen perbendaharaan kata yang akan digunakan adalah diambil dari sukatan pelajaran seperti

yang dinyatakan dalam Pulse 2. Oleh itu, kelas Bahasa Inggeris akan dijalankan seperti biasa tanpa tanpa memerlukan pelajar-pelajar Tingkatan 4 untuk menghadiri kelas tambahan. Penyelidikan ini juga tidak akan mempengaruhi sukatan pelajaran mereka kerana ia berdasarkan rancangan pengajaran tahunan, seperti yang ditetapkan oleh Kementerian Pelajaran Malaysia (KPM).

### Risiko-risiko Kajian

- Adalah difahamkan bahawa tiada risiko-risiko yang akan berlaku sepanjang kajian ini. Walaubagaimanapun, borang persetujuan tetap akan diberi kepada pelajar-pelajar dari dua kelas dan guru Bahasa Inggeris mereka yang terlibat dalam kajian ini. Jika mereka berasa tidak selesa ketika kajian dijalankan, mereka berhak untuk menarik diri daripada kajian ini dan tiada tindakan akan dikenakan.

### Manfaat Kajian

- Kajian ini diharapkan boleh meyedarkan guru-guru ESL bahawa penggunaan ‘Frog VLE’ boleh menjadi satu cara yang berkesan untuk mengajar pelajar-pelajar untuk mempelajari perbendaharaan kata Bahasa Inggeris. Selain itu, penggunaan ‘Frog VLE’ dalam kelas Bahasa Inggeris dapat meningkatkan kualiti untuk aktiviti kelas, supaya pelajar-pelajar dapat menggunakan pengetahuan ICT dalam kuminikasi. Bukan itu sahaja, pelajar-pelajar lebih mudah untuk mengingati komponen perbendaharaan kata melalui ‘Frog VLE’. Jika pelajar-pelajar ini menunjuk penambahbaikan dalam skor Bahasa Inggeris mereka, mereka juja akan mengharumkan nama sekolah tuan/puan.
- Seperti yang dinyatakan, komponen perbendaharaan kata akan diambil dari rancangan pengajaran tahunan. Ia bukan sahaja membolehkan pelajar untuk mengasah kemahiran membaca tetapi juga membolehkan pelajar untuk mengenal pasti strategi yang sesuai untuk menguasai perbendaharaan kata. Oleh itu, ia memenuhi kriteria pelajaran Bahasa Inggeris dan matlamat seperti ditetapkan oleh Kementerian Pendidikan Malaysia (MMOE).

### Hak Pertanyaan

- Pihak sekolah atau tuan/puan berhak untuk bertanya sebarang soalan yang berkaitan kajian ini tidak kira sebelum kajian dijalankan, semasa, atau selepas kajian. Sekiranya pihak sekolah atau tuan/puan mempunyai soalan-soalan yang lain, sila hubungi pengkaji pada bila-bila masa: **Jacqueline Lau Chung Ling, [jacling96@1utar.my](mailto:jacling96@1utar.my), 016-8993130**. Jika pihak sekolah atau tuan/puan ingin mengetahui hasil-hasil yang didapati melalui kajian ini, satu salinan kajian akan dihantar kepada pihak sekolah atau tuan/puan.

### Persetujuan

- Tandatangan tuan/puan di bawah menunjukkan persetujuan pihak sekolah untuk memberi peluang kepada pengkaji untuk menjalankan kajian, dan telah membaca dan faham akan semua pernyataan seperti yang dinyatakan di atas. Tuan/Puan akan diberi satu salinan



borang ini yang berserta tandatangan dan tarikh, dan juga semua borang yang berkaitan kajian ini.

Pengetua :

Tandatangan :

Tarikh :

Penyelidik : **Jacqueline Lau Chung Ling**

Tandatangan :

Tarikh :

## **Appendix H**

### **Student Consent Form**

**UNIVERSITI TUNKU ABDUL RAHMAN**

### **STUDENT INTERVIEW CONSENT FORM**

RESEARCH PROJECT TITLE VIRTUAL LEARNING ENVIRONMENT: EFFECTIVENESS  
IN ENHANCING TEACHING OF VOCABULARY TO  
SECONDARY ESL LEARNERS

RESEARCH INVESTIGATOR: JACQUELINE LAU CHUNG LING

RESEARCH PARTICIPANT'S NAME:

FACULTY OF ARTS AND SOCIAL SCIENCE

BACHELOR OF ARTS (HONS) ENGLISH EDUCATION

The interview will take about 15 to 30 minutes. There are no risks anticipated that are associated with your participation, but you have the right to stop the interview or withdraw from the research at any time.

Thank you for agreeing to be interviewed as part of the above research project. Ethical procedures for academic research require interviewees to explicitly agree to being interviewed and how the information contained in their interview will be used. This consent form is necessary for the researcher to ensure that you understand the purpose of your involvement and that you agree to the conditions of your participation. Would you therefore read the accompanying information sheet and then sign this form to certify that you approve the following:

- A transcript will be produced upon the completion of the interview.
- A transcript will be sent to you and you will be given the opportunity to correct any factual errors.
- The transcript of the interview will be analyzed by Jacqueline Lau Chung Ling as researcher investigator.
- Access to the interview transcript will be limited to Jacqueline Lau Chung Ling and academic colleagues with whom he might collaborate as part of the research process.
- Any summary interview content, or direct quotations from the interview, that are made available through academic publication or other academic outlets will be anonymized so that you cannot be identified, and care will be taken to ensure that other information in the interview that could identify yourself is not revealed.

#### Quotation Agreement

I also understand that my words may be quoted directly. With regards to being quoted, please initial next to any of the statements that you agree with:

I wish to review the notes, transcripts, or other data collected during the research pertaining to my perception.

I agree to be quoted directly.

I agree to be quoted directly if my name is not published and a made-up name (pseudonym) is used.

I agree that the researcher may publish documents that contain quotations by me.

All or part of the content of your interview may be used;

- To achieve the research project as noted above.

By signing this form, I agree that;

1. I am voluntarily taking part in this research project. I understand that I don't have to take part, and I can stop the interview at any time;
2. The transcribed interview or extracts from it may be used as described above;
3. I have read the information sheet;
4. I don't expect to receive any benefit or payment for my participation;
5. I can request a copy of the transcript of my interview and may make edits I feel necessary to ensure the effectiveness of any agreement made about confidentiality;

Participant's name: \_\_\_\_\_

Participant's signature: \_\_\_\_\_

Date: \_\_\_\_\_

Researcher's signature: \_\_\_\_\_

Date: \_\_\_\_\_

### **Contact information**

This research has been reviewed and approved by the Faculty of Arts and Social Science, UTAR.  
If you have any further questions or concerns about this study, please contact:

Name of researcher: JACQUELINE LAU CHUNG LING

Telephone number: 016-8993130

E-mail: jacling96@gmail.com

**UNIVERSITI TUNKU ABDUL RAHMAN**

**BORANG PERSETUJUAN MENEMUDUGA**

**TAJUK KAJIAN: KEBERKESANAN DAN PANDANGAN PELAJAR TERHADAP  
PENGUNAAN 'FROG VLE' DALAM MENINGKATAN PENCAPAIAN  
PERBENDAHARAAN KATA ANTARA PELAJAR**

**NAMA PENKAJI: JACQUELINE LAU CHUNG LING**

**NAMA PESERTA:**

**FACULTY OF ARTS AND SOCIAL SCIENCE**

**BACHELOR OF ARTS (HONS) ENGLISH EDUCATION**

Sesi temuduga ini akan mengambil masa kira-kira 15 hingga 30 minit. Tiada risiko yang dijangka akan berlaku sepanjang penglibatan anda dalam sesi ini. Walaubagaimanapun, anda berhak untuk menghentikan sesi ini atau menarik diri daripada kajian ini pada bila-bila masa.

Terima kasih kerana anda sanggup menyertai sesi menemuduga ini. Sebagai syarat untuk memenuhi prosedur etika, semua peserta harus bersetuju untuk ditemuduga, bagaimana informasi yang didapati direkod dan cara informasi diguna untuk tujuan kajian ini. Borang ini adalah penting untuk anda bahawa anda memahami tujuan penglibatan anda dalam kajian ini serta bersetuju terhadap syarat-syarat yang akan dinyatakan di bawah:

- Satu transkrip akan dijana selepas sesi temuduga selesai.
- Satu transkrip akan dihantar kepada anda dan anda diberi peluang untuk membuat penyesuaian jika terdapat mana-mana fakta yang mempunyai kesalahan.
- Transkrip yang didapati akan dikaji oleh Jacqueline Lau Chung Ling, pengkaji untuk projek ini.
- Akses terhadap transkrip ini hanya dihadkan kepada Jacqueline Lau Chung Ling dan ahli-ahli akademik yang terlibat dalam proses kajian ini.
- Sebarang ringkasan informasi dan petikan langsung yang didapati melalui sesi temuduga ini akan diterbitkan dari aspek akademik. Nama serta informasi peribadi anda tidak akan dipaparkan dalam sebarang penerbitan.

### Perjanjian Penggunaan Petikan

Saya faham bahawa semua pertuturan dan jawapan yang saya memberi boleh diguna atau dipetik secara langsung dalam projek ini. Sila tanda (/) pernyataan yang anda bersetuju di bawah:

Saya berharap dapat membaca sebarang nota, transkrip, atau data yang didapati dalam kajian.

Saya bersetuju untuk dipetik secara langsung.

Saya bersetuju bahawa nama saya tidak akan diterbit dan nama samaran akan diberi kepada saya.

Saya bersetuju bahawa pengkaji boleh menerbit sebarang petikan yang saya menjawab dalam sesi temuduga.

Semua atau sesetengah kandungan yang didapati menerusi sesi temuduga ini bertujuan untuk:

- Mencapai matlamat projek ini seperti yang dinyatakan di atas.

Dengan menandatangani boring ini, saya bersetuju bahawa;

1. Saya menyertai projek ini secara bersuka-rela. Saya juga memahami bahawa saya berhak untuk tidak menyertai dan menghentikan temuduga dalam bila-bila masa;
2. Transkrip yang dijana boleh digunakan untuk tujuan projek seperti yang dinyatakan di atas;
3. Saya sudah membaca semua pernyataan di atas;
4. Saya tidak berharap untuk menerima sebarang penghargaan atau pembayaran dalam penyertaan untuk projek ini;
5. Saya berhak untuk mendapat satu salinan transkrip dan membuat pengubahsuaian yang bersesuaian serta sebarang pernyataan yang melibatkan isu-isu peribadi sulit;

Nama peserta: \_\_\_\_\_

Tandatangan peserta: \_\_\_\_\_

Tarikh: \_\_\_\_\_

Tandatangan pengkaji:

Tarikh:

Kajian ini telah disemak dan diluluskan oleh Faculty Arts and Social Science, UTAR. Jika anda mempunyai sebarang pertanyaan, sila menghubungi:

Nama pengkaji: Jacqueline Lau Chung Ling

Nombor telefon: 016-8993130

E-mel: [jacling96@gmail.com](mailto:jacling96@gmail.com)

## Appendix I

### Student Survey Form

#### UNIVERSITI TUNKU ABDUL RAHMAN

**Instructions: Read the questions and tick in the box to represent your degree of agreement or disagreement towards the statements.**

No.	Question	Total Number of Responses			
		1 <i>Strongly Disagree</i>	2 <i>Disagree</i>	3 <i>Agree</i>	4 <i>Strongly Agree</i>
1.	I like learning English through Frog VLE.				
2.	I think I would be able to use English as well as I use my first language by learning through Frog VLE.				
3.	I am interested in learning English through Frog VLE.				
4.	I would like to learn more through Frog VLE, not just English.				

5.	I really want to learn English through Frog VLE.				
6.	If I could choose the ways I like the best to learn English, I would probably choose Frog VLE.				
7.	If Frog VLE was not able to be used in school, I will like to use it somewhere else.				
8.	In the future, I will want to be able to learn English through Frog VLE.				
9.	When I leave secondary school, I will still want to learn English through VLE.				
10.	I like it when the teacher asks us to learn something through Frog VLE.				
11.	I like it when the teacher uses Frog VLE to teach English				



	vocabulary instead of teaching in ordinary classroom.				
12.	In general, I have always found learning through Frog VLE exciting.				
13.	I like the way English vocabulary is taught by using Frog VLE.				
14.	In general, I find that learning English through Frog VLE is fun.				
15.	I like English class which uses Frog VLE because it is more entertaining than other subjects.				
16.	What we usually do in ordinary English class is boring.				
17.	I find Frog VLE is an attractive way to learn English vocabulary.				
18.	I would like to learn more subjects through				

	Frog VLE than just English.				
19.	I like the functions of Frog VLE.				
20.	I think Frog VLE is a nice place to learn new things.				

(Adapted from Chiu ,2014)

## **Appendix J**

### **Questions for Interview**

1. Do you think Frog VLE really helped you in improving your vocabulary skills? If yes, how?
2. Learning vocabulary through traditional way and through Frog VLE, which one will you choose?  
Why?
3. What function or part do you like the most when you are using Frog VLE in learning vocabulary?