

The copyright © of this thesis belongs to its rightful author and/or other copyright owner. Copies can be accessed and downloaded for non-commercial or learning purposes without any charge and permission. The thesis cannot be reproduced or quoted as a whole without the permission from its rightful owner. No alteration or changes in format is allowed without permission from its rightful owner.



**EXPLORING VOCABULARY LEARNING STRATEGY USING  
ONLINE LEARNING MANAGEMENT SYSTEM AMONG TESL  
TRAINEE TEACHERS**



**DOCTOR OF PHILOSOPHY  
UNIVERSITI UTARA MALAYSIA  
2023**



**PERAKUAN KERJA TESIS/DISERTASI  
(CERTIFICATION OF THESIS/DISSERTATION)**

Kami yang bertandatangan, memperakukan bahawa

*We, the undersigned, certify that*

UMAZAH BT. OMAR

calon untuk ijazah

*candidate of the degree of*

PhD

telah mengemukakan tesis/disertasi yang bertajuk:

*has presented his/her thesis/dissertation entitled:*

" EXPLORING VOCABULARY LEARNING STRATEGY USING ONLINE LEARNING  
MANAGEMENT SYSTEM AMONG TESL TRAINEE TEACHERS

Seperti yang tercatat di muka surat tajuk dan kulit tesis/disertasi.

*as it appears on the title page and front cover of the thesis/dissertation.*

Bahawa tesis/disertasi tersebut boleh diterima dari segi bentuk serta kandungan dan meliputi bidang ilmu dengan memuaskan, sebagaimana yang ditunjukkan oleh calon dalam ujian lisan yang diadakan pada:

*That the said thesis/dissertation is acceptable in form and content and displays a satisfactory knowledge of the field of study as demonstrated by the candidate through the oral examination held on:*

Pengerusi Viva:

*Viva Chairperson:*

Tandatangan:

*Signature*

Pemeriksa Luar:

*External Examiner:*

Tandatangan:

*Signature*

Pemeriksa Dalam:

*Internal Examiner*

Tandatangan:

*Signature*

Penyelia Pertama:

*First Supervisor:*

Assoc. Prof. Aizan binti  
Yaacob

Tandatangan:

*Signature*

Penyelia Kedua:

*Second Supervisor:*

Dr. Siti Nazuar Bt. Sailin

Tandatangan:

*Signature*

Tarikh:

*Date*

## **Permission to Use**

In presenting this thesis in fulfilment of the requirements for a postgraduate degree from Universiti Utara Malaysia, I agree that the Universiti Library may make it freely available for inspection. I further agree that permission for the copying of this thesis in any manner, in whole or in part, for scholarly purpose may be granted by my supervisor(s) or, in their absence, by the Dean of Awang Had Salleh Graduate School of Arts and Sciences. It is understood that any copying or publication or use of this thesis or parts thereof for financial gain shall not be allowed without my written permission. It is also understood that due recognition shall be given to me and to Universiti Utara Malaysia for any scholarly use which may be made of any material from my thesis.

Requests for permission to copy or to make other use of materials in this thesis, in whole or in part, should be addressed to :

Dean of Awang Had Salleh Graduate School of Arts and Sciences

UUM College of Arts and Sciences

Universiti Utara Malaysia

06010 UUM Sintok

## Abstrak

Strategi pembelajaran kosa kata (SPKK) merupakan proses yang sangat penting untuk pelajar dalam memperoleh kosa kata yang luas terutama bagi guru pelatih Program Pengajaran Inggeris sebagai Bahasa Kedua (PISBK) untuk digunakan pada masa hadapan. Walaubagaimanapun, SPKK tidak diberi penekanan dan dinyatakan dalam struktur PISBK di Institut Pendidikan Guru (IPG). Oleh itu, sistem pengurusan pembelajaran atas talian (SPPAT), *Schoology*, telah menjadi platform utama untuk menerokai SPKK dalam kajian ini. Kajian ini bertujuan untuk (i) mengkaji strategi pembelajaran perbendaharaan kosa kata dalam kalangan guru pelatih PISBK; (ii) meneroka bagaimana SPPAT membantu guru pelatih PISBK mengukuhkan SPKK mereka; dan (iii) menyelidik isu dan cabaran yang dihadapi oleh guru pelatih PISBK dalam menggunakan SPPAT. Kajian ini menggunakan pelbagai kaedah seperti temubual, pengeposan dalam talian dan perbincangan melalui *Schoology* SPPAT dan nota lapangan. Ia melibatkan 14 peserta kajian dalam tiga fasa selama 15 minggu interaksi. Peserta kajian telah menulis refleksi secara dalam talian mengikut tugas yang diberikan dalam tiga fasa tersebut dan dianalisis menggunakan *CEFR Text Analyzer*. Temubual dalam talian berstruktur, nota lapangan dan temubual bersemuka telah dianalisis secara tematik menggunakan perisian ATLAS.ti. Hasil kajian telah menunjukkan bahawa peserta kajian mempunyai SPKK yang sama seperti yang telah diketengahkan dalam domain pembelajaran kosa kata dan strategi metakognitif dan kognitif dalam Gu & Johnson (1996). Dalam kajian ini, strategi dalam talian dan modifikasi adalah dua strategi yang digunakan oleh peserta kajian yang telah diterokai melalui SPPAT. Kajian ini telah menunjukkan bagaimana SPPAT membantu guru pelatih PISBK dalam meningkatkan SPKK dan mengutarakan beberapa isu serta cabaran yang dihadapi oleh peserta kajian. Kajian ini sangat penting untuk guru pelatih, pensyarah, pengubal kurikulum, dan penyelidik bagi Bahasa Kedua. Ia akan menjadi satu keperluan untuk memaksimumkan penggunaan SPPAT bagi peningkatan penguasaan kosa kata guru pelatih PISBK melalui SPKK dalam proses pengajaran dan pembelajaran yang berjaya.

**Kata kunci:** Strategi pembelajaran kosa kata, sistem pengurusan dalam talian, guru pelatih

## Abstract

Vocabulary learning strategy (VLS) is a very significant process for the second language learner (L2) in acquiring wide vocabulary especially for TESL teacher trainees for their future usage. However, VLSs are not being emphasized and specified in the structure of the TESL programme at Institute of Teacher Education (ITE) of the study. So, online learning management system (LMS), Schoology becomes a major platform in exploring VLSs in this study. The study aims to (i) examine the types of VLSs used by the TESL trainee teachers; (ii) explore on how an LMS helps TESL trainee teachers in enhancing their VLSs; and (iii) investigate the issues or challenges faced by the TESL trainee teachers in using LMS. This qualitative study used multiple methods such as interviews, online postings and discussion via LMS Schoology and field notes. It involved 14 research participants in three phases within 15- week interactions. During the phases, they had to write online reflections based on the tasks given via the LMS which were analysed using CEFR Text Analyzer. The structured online interviews, field notes and face-to-face interviews were analysed thematically using ATLAS.ti Software. The findings indicated the research participants had used VLSs similarly that had been highlighted in Gu and Johnson's (1996) vocabulary learning domain, metacognitive and cognitive strategies. In this study, online and modification strategies are two strategies used by the research participants that had been explored through the LMS. This study depicts how LMS helps the TESL trainee teachers in enhancing their VLSs and presents some issues and challenges faced by the research participants. This study was significant for trainee teachers, teacher trainers, the curriculum developers, and L2 researchers. There is a need to maximize the use of LMS in increasing TESL trainee teachers' vocabulary learning through more VLSs for successful teaching and learning process.

**Keywords:** Vocabulary learning strategies, Online learning management system, trainee teachers

## **Acknowledgement**

In the name of Allah, the Most Compassionate, the Most Merciful. Peace and Blessings of Allah SWT be upon our Prophet Mohamnad (SAW).

First and foremost, I would like to express my deepest thanks and sincere gratitude to Allah SWT for His Blessings and for helping me to complete this project. praises and thanks to Allah the Almighty for His shower of blessings to complete the research successfully. Alhamdulillah.

I would like to express my deepest appreciation and sincere gratitude to my supervisors, Assoc. Prof. Dr Aizan binti Yaacob and Dr Siti Nazuar binti Sailin for giving me the opportunity to do research and providing valuable guidance throughout this research. I would also like to thank them for their friendship, empathy and warm-hearted.

The completion of my PhD journey would not have been possible without the financial support received from Ministry of Education. I am also grateful for the support receive from respective institutions as well as the research participants who gave me valuable contributions. Special thanks go to the validators and evaluators of my instruments a for their help and supports shown in completing this thesis.

I am extremely grateful to my mother, Che Dun and my late father , my mother and father in-law for their love, prayers, caring and sacrifices for educating and preparing me for my future. I am very much thankful to my husband, Mohd Zaid Bin Mat Zain, my children; Nur Zaidatul Syifaa, Nur Zaidatul Najeeha, Nur Zaidatul Syafiaa, and Muhammad Danial , my sons in law; Zulkifli and Hafiz, my three grandchildren Noah Zayyad, Nur Hasya Nadeera, Idrees Ziyad for their loves, prayers and continuing support to complete this research dissertation. I also express my thanks to my siblings, Omayah and Omashida, brothers and sister -in-law and friends especially Dr.Hjh.Mimi Rita for their support and valuable prayers.

## Table of Contents

Permission to Use .....	i
Abstrak.....	ii
Acknowledgement .....	iv
List of Tables .....	xi
List of Figures .....	xiii
List of Appendices .....	xiv
List of Abbreviations .....	xv
<b>CHAPTER ONE INTRODUCTION .....</b>	<b>1</b>
1.1 Introduction .....	1
1.2 Background of the Study.....	5
1.3 Problem Statement .....	10
1.4 Research objectives .....	20
1.5 Research Questions .....	20
1.6 The Significance of the Study .....	20
1.7 Scope of the Study .....	24
1.8 Definition of Terms.....	25
1.9 Summary .....	27
<b>CHAPTER TWO LITERATURE REVIEW .....</b>	<b>29</b>
2.1 Introduction .....	29
2.2 Language strategies.....	31
2.2.1 Classifications of Language Learning Strategies.....	31
2.3 Definition of Vocabulary Learning Strategies .....	32
2.4 Importance of Vocabulary Learning Strategies .....	33
2.5 Types of Vocabulary Learning Strategies(VLS).....	37
2.5.1 Previous Studies on Vocabulary Learning Strategies of Pre-Service Teachers .....	40
2.6 Online learning and e-learning.....	42
2.7 Advantages of using technology for learning vocabulary.....	43
2.8 Learning Management System (LMS).....	45
2.9 Schoology as a Learning Management System .....	47



2.10 Previous Study on vocabulary learning using online learning, e-learning, and b-learning.....	50
2.11 Related Theoretical Underpinnings.....	53
2.12 Vygotsky's Social Constructivism Theory .....	54
2.13 Theory of Connectivism.....	57
2.14 The Five Principles of Effective Second Language Instruction (Barcroft, 2004) .....	60
2.15 The Theoretical Framework of the Study .....	63
<b>CHAPTER THREE RESEARCH METHODOLOGY .....</b>	<b>69</b>
3.1 Introduction .....	69
3.2 Qualitative Research .....	69
3.3 Research Design.....	71
3.3.1 Interpretive Case Study Research Design.....	71
3.5 Data Collection Procedures.....	82
3.6 Context of the study .....	85
3.6.1 Location of the study .....	85
3.6.2 The research participants .....	85
3.6.2.1 The Research Participants' Profile .....	86
3.6.2.2 Research Participants General Requirement .....	90
3.7 Role of the researcher.....	92
3.8 Methods of Data Collection .....	93
3.8.1 Observation .....	94
3.8.1.1 Online observation.....	94
3.8.1.2 Online observations based on online postings and discussion .....	97
3.8.1.3 Online reflective journal writing .....	98
3.8.2 Interviews (Interactive data collection).....	99
3.8.2.1 Types of Interviews .....	99
3.8.2.2 Sample of Interview Questions .....	101
3.8.2.3 Limitation of Face to Face Interview .....	104
3.8.3 Researcher's Field Notes .....	105
3.9 Data Analysis .....	106

3.9.1 Analysing the Transcriptions of the interviews, online reflective writings .....	106
3.9.2 Coding.....	107
3.9.3 ATLAS.ti Software .....	110
3.9.4 Text Analyzer.....	111
3.9.5 Ethical Consideration.....	111
3.10 Trustworthiness .....	114
3.10.1 Triangulation.....	114
3.10.2 Validity, reliability, and transferability.....	116
3.10.2.1 Validity .....	116
3.10.2.2 Reliability .....	117
3.10.2.3 Transferability and Generalizability .....	118
3.11 Summary of the Chapter .....	118
<b>CHAPTER FOUR FINDINGS OF THE STUDY: TYPES OF VLS USED BY THE TESL TRAINEE TEACHERS.....</b>	<b>120</b>
4.1 Introduction.....	120
4.2 Vocabulary Learning Strategies .....	121
4.2.1 Cognitive Strategies .....	124
4.2.1.1 Guessing Strategies.....	124
4.2.1.2 Dictionary Strategies .....	125
4.2.1.2.1 Hardcopy Dictionary .....	126
4.2.1.2.2 Digital Dictionary Applications Strategies.....	128
4.2.1.3 Note-Taking Strategies .....	129
4.2.1.4 Listening Strategies .....	131
4.2.1.5 Activation Strategies.....	132
4.2.2 Memory Strategies .....	134
4.2.2.1 Encoding.....	134
4.2.2.2 Rehearsal .....	137
4.2.3 Online Strategies .....	139
4.2.3.1 Browsing the Internet Websites.....	139
4.2.4 Metacognitive Strategies.....	141

4.2.4.1 Beliefs about vocabulary learning .....	142
4.2.4.1.1 Words are learned by rote learning (repetition or memorization) .....	143
4.2.4.1.2 Words are learned through contextualization .....	145
4.2.4.1.3 Words are learned through the application .....	148
4.2.4.1.4 Words are learned subconsciously .....	156
4.2.4.1.5 Selective attention .....	158
4.2.4.1.6 Self-initiation .....	159
4.2.4.2 Online Learning Management System (LMS) .....	162
4.3 Summary of the Chapter .....	165
<b>CHAPTER FIVE THE USE OF ONLINE LMS IN ENHANCING VOCABULARY LEARNING STRATEGIES .....</b>	<b>167</b>
5.1 Introduction .....	167
5.2 Online Connections: The Use of LMS in Enhancing Students' VLSs .....	168
5.2.1 Diversity of opinions in learning and knowledge .....	170
5.2.2 Connecting process in gathering information .....	173
5.2.3 Learning involves non-human appliance .....	176
5.2.4 Capacity to know more .....	179
5.2.4 Nurturing and Maintaining Connection .....	181
5.2.4 Connection between fields, ideas, and concepts .....	182
5.2.5 Currency of Knowledge .....	183
5.2.6 Involvement in Decision Making .....	185
5.2.7 Emergent Theme: Simplification of online LMS .....	187
5.3 Improvement in Writing .....	187
5.3.1 The analysis based on Common European Framework (CEFR) and International English Language Testing System (IELTS) Levels .....	188
5.3.2 The analysis of six research participants' online reflective writings based on number of words .....	193
5.3.3 The analysis of six research participants' online reflective writings based on average sentence length .....	193

5.3.4 The analysis of six research participants' online reflective writings based on average word length.....	194
5.3.5 The analysis of six research participants' online reflective writings based on average word complexity.....	195
5.3.6 Summary of the Chapter .....	199
<b>CHAPTER SIX PARTICIPANTS' PERCEPTIONS OF ISSUES AND CHALLENGES OF USING LMS .....</b>	<b>200</b>
6.1 Introduction.....	200
6.2 Issues of Learning Management System Faced Among TESL Trainee teachers .....	201
6.2.1 Poor Internet Access .....	201
6.2.2 Lack of knowledge and skills in using LMS .....	203
6.2.3 Mismanagement of the tasks and activities in online LMS .....	204
6.2.4 Confusion to navigate online LMS, <i>Schoology's</i> Interfaces.....	206
6.3 Challenges Faced by TESL Trainee teachers in Using Online Learning Management System .....	208
6.3.1 LMS's ease of use .....	208
6.3.2 Difficulty Levels of Reading Materials Posted in LMS .....	209
6.3.3 Incompetency in applying ICT skills in LMS.....	211
6.3.4 Summary of the Chapter .....	213
<b>CHAPTER SEVEN</b>	
<b>DISCUSSION, CONCLUSION AND RECOMMENDATIONS.....</b>	<b>214</b>
7.1 Introduction.....	214
7.2 Types of Vocabulary Learning Strategies.....	214
7.3 Beliefs about vocabulary learning strategies.....	218
7.3.1 Beliefs that words are learned by rote learning (repetition).....	218
7.3.2 Beliefs that words are learned through contextualization.....	219
7.3.3 Beliefs that words are learned through application.....	221
7.3.4 Beliefs that words are learned subconsciously .....	221
7.4 Online Learning Management System Enhancing Vocabulary Learning Strategies(VLSs) .....	223

7.4.1 Social Connections.....	223
7.4.2 Vocabulary Acquisition and Language Learning .....	226
7.4.3 Online Connections.....	229
7.4.4 Issues and Challenges in Using Online Learning Management System (LMS).....	231
7.5 Conclusion and Recommendations .....	233
7.5.1 Methodological Contributions .....	238
7.5.2 Practical Contributions.....	238
7.5.3 Recommendations for Future Research .....	240
7.6 Limitations .....	241
7.7 Conclusion .....	241
<b>REFERENCE .....</b>	<b>242</b>
<b>APPENDICES .....</b>	<b>1</b>



## List of Tables

Table 1.1 .....	13
Number of Trainee teachers in Malaysia who took the APTIS Test in 2014 (Wak,2014) ....	13
Table 3.1 .....	93
Summary of the Research Methods Based on the Research Questions. ....	93
Table 4.1 .....	123
Summary Table Of Types Of VLSs Used (Cross Case Analysis) of Six Research Participants .....	123
Table 4.2 .....	153
Analysis of Miss Syuhada's Reflections Based on CEFR Level Using Text Analyzer .....	153
Table 4.3 .....	166
Summary of Themes or Categories of Vocabulary Learning Strategies.....	166
Table 5.1 .....	189
Research Participants' CEFR and IELTS Levels Based On Online Reflective Writings(ORW).....	189
Table 5.2 .....	191
Numbers of Six Research Participants' Online Reflective Writings Based on CEFR Levels (A1-C2).....	191
Table 5.3 .....	192
Research Participants' Online Reflective Writings based on IELTS Level.....	192
Table 5.4 .....	193
Analysis of six research participants' online reflective writings based on number of words .....	193
Table 5.5 .....	194
Analysis of six research participants' online reflective writings based on average sentence length .....	194
Table 5.6 .....	195
Analysis of six research participants' online reflective writings based on average word length .....	195
Table 5.7 .....	196
Analysis of six research participants' online reflective writings based on average word complexity.....	196
Table 5.8 .....	197

Miss Syuhada's Reflections Based on CEFR Level .....	197
Table 5.9 .....	198
Miss Insania's Reflections Based on CEFR Level .....	198
Table 6.1 .....	201
Participants' Perceptions of the issues and challenges of LMS Schoology .....	201



## List of Figures

Figure 1.1. Report of the APTIS Test Result in Institutes of Teachers Education in Malaysia (IPGM, March- April 2014).....	14
Figure 1.2. Overall Results of C1/C2 Bands According ITEs in Malaysia .....	15
Figure 2.1 A typical LMS and its functional elements (Trakakis,2011).....	46
Figure 2.2 Theoretical Framework of the Study (Adaptation from Taxonomies of VLSs by Gu and Johnson, 1996, Social Constructivism Theory by Vygotsky, 1978, Theory of Connectivism by Siemens (2009), and Barcroft's Principles of Effective Second Language Vocabulary Instruction by Barcroft,2004) .....	63
Figure 3.1 Case study research processes (Yin, 2009).....	74
Figure 3.2 The study framework derived from (Creswell et al.,2011).....	77
Figure 3.3 Data collection procedures of the main study.....	82
Figure 3.3 Triangulation Methods Based on Mertens & Hesse-Biber (2021) .....	115
Figure 4.1 Types of vocabulary learning strategies used among the research participants .	122
Figure 4.2 Beliefs about Vocabulary Learning .....	143
Figure 5.1 Themes regarding Online Connections Using LMS.....	169
Figure 5.2 The Features of the Browsing Page of Schoology.....	178
Figure 5.3 The Detailed Features of Research Participants' Postings .....	178
Figure 5.4 Online Posting in Schoology: Nur Ain Farahin Hassan .....	180
Figure 5.5 Analysis of Online Reflection Writings based on CEFR levels .....	188
Figure 6.1 Miss Asma's Posting About Problem in Uploading Videos Using LMS.....	212
Figure 6.2 Research Participant's Comment Regarding Wrong Post Section .....	213



## List of Appendices

Appendix A Vocabulary Learning Questionnaire Used in Constructing Interview's Questions .....	1
Appendix B Interviews questions for preliminary data .....	6
Appendix C Sample of <i>Schoology</i> Module.....	7
Appendix D Sample of Consent Form.....	14
Appendix E Interview Questions .....	15
Appendix F Alignment of the Research.....	18
Appendix G Sample of Field Notes .....	19
Appendix H Samples of Member Checking Form.....	21
Appendix I Samples of Research Participants' Online Postings in Schoology .....	24
Appendix J Samples of Online Reflection Writings and CEFR Text Analyzer Analysis .....	26
Appendix K Samples of Transcriptions of Research Participants' Interviews .....	35
Appendix L Samples of Online Learning Management Schoology .....	38
Appendix M CEFR Bands .....	39
Appendix N Samples of Research Participants' Online Reflective Writings and CEFR Analysis 1 .....	40
Appendix O Samples of research participants' online reflective writings and CEFR analysis 2 .....	45
Appendix P Samples of research participants' online reflective writings and CEFR.....	47
Appendix Q Samples of Tasks and Activities of Second Language Acquisition Course.....	50
Appendix R A Framework for Reflection.....	51
Appendix S Summary of the Course.....	53
Appendix T Samples of Instrument Validation Forms .....	54
Appendix U Samples of Validators Appointment Letters .....	59
Appendix V Sample of EPRD Letter .....	63

## List of Abbreviations

<b>CEFR</b>	Common European Framework
<b>IELTS</b>	International English Language Testing System
<b>L1</b>	First Language
<b>L2</b>	Second Language
<b>TESL</b>	Teaching English As Second Language
<b>IPG</b>	<i>Institut Pendidikan Guru</i>
<b>ITE</b>	Institute of Teachers Education
<b>ITEDC</b>	Institute of Teachers Education Darulaman Campus
<b>SLA</b>	Second Language Acquisition Course
<b>VLS</b>	Vocabulary Learning Strategy
<b>VLSs</b>	Vocabulary Learning Strategies
<b>LMS</b>	Learning Management System
<b>ORW</b>	Online Reflective Writing
<b>PPISMP</b>	<i>Program Persediaan Program Ijazah Sarjana</i> or Foundation Degree
<b>PISMP</b>	<i>Program Ijazah Sarjana Muda Pendidikan</i> or Degree Programme
<b>RP</b>	Research Participant
<b>RPSI</b>	Research Participant Structured Interview
<b>RPINT</b>	Research Participant Face to Face Interview
<b>RPLMS</b>	Research Participant Learning Management System

# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 Introduction**

Vocabulary learning is a central component of the English language teaching and learning process because insufficient vocabulary can disrupt communication especially in expressing different ideas and opinions (Abuarqoub, 2019). Vocabulary is important in a language whereby each language has its unique classification of features, each carrying a different meaning and grammatical function. Coxhead (2006) claims that students who know more words and meaning will be able to globally communicate in different circumstances. In acquiring either the first language (L1) or the second language(L2), language learners need to be exposed to various aspects of language such as meaning, collocation, pronunciation, grammar, word families and word formation (Coxhead, 2006).

Vocabulary can be defined as a collective concept referring to a total or partial stock of words that belongs to an individual or a language learner(Yaacob et al., 2019). From a pedagogical perspective, vocabulary is defined as the theoretical level of understanding of the language which Diamond and Gutlohn (2006) refer to as “the knowledge of words and words meaning” (pg. 4). Based on this definition, vocabulary is not something that one can fully master because it expands daily. Thus, vocabulary learning is not solely dependent on using dictionary or using words in sentences, but it can be acquired through different vocabulary learning strategies with either explicit or implicit instructions.

According to Colorado (2007), building vocabulary is the key to reading comprehension and he argued that using a variety of effective methods can increase second language learners' abilities and interest in learning new words. Thus, language teachers need to ensure that their pedagogical techniques and strategies of teaching language are enjoyable to improve students' vocabulary learning. With effective strategies, second language learners will be able to retain good vocabulary whenever they want to use the language for communicating.

Furthermore, Nation (2000) argues that learners will face the 'learning burden' of words when they attempt to invest a similar amount of effort in learning the words of a target language. This assertion implies that an individual learner needs to equip himself or herself with certain vocabulary learning strategies especially the fundamental ones (Schmitt, 2000). Memorisation, repetition, and note-taking are some of the vocabulary learning strategies highlighted by Schmitt (2000). By learning these VLS, second language learners could acquire a wide range of good vocabulary especially in learning new words either through translation or synonyms.

Language learning scholars (Allen, 1983; Bowen, 1985) believe that vocabulary remains the most vital element in making successful communication for second language learners. They assert that communication breakdown occurs when people do not possess sufficient vocabulary. This phenomenon illustrates the importance of vocabulary learning beyond oral communication, including reading and writing as well as understanding the meaning of written communication. It is supported by Tran (2020), who argues that positive attitudes regarding studying English vocabulary autonomously among ESL learners can be a great motivator for students to give serious

attention to vocabulary learning. Language also plays an important role in the growth and advancement of human society and culture, as it is the primary medium of communication and interaction between individuals, organisations, and countries and vocabulary is declared as the real key to second language learning (Yaacob et al., 2019). Furthermore, Chall (1983) highlights the types of vocabulary needed for reading namely, word recognition and meaning vocabulary. “Word recognition vocabulary consists of words that students articulate when reading while meaning vocabulary involves words that students define or appropriately assign meaning to” (p. 6).

In order to acquire a second language successfully, language learners need to learn different language learning strategies. Oxford (2001) defines learning strategies as “steps that are taken by the language learners to enhance their learning” (p. 2). This involves “specific actions taken by the learners to make learning easier, faster, more enjoyable, more self-directed, more effective and more transferable to new situations” (Oxford, 2003, p. 8). Amin (2013) supported this stance by highlighting that students who lack vocabulary have difficulties in expressing ideas, leading to poor academic performance. Vocabulary learning strategies aid language learners in expanding their vocabulary in which Nation (2001) views as part of general language learning strategies that involves three stages: noticing, retrieval, and creative or generative use.

There are many vocabulary learning strategies and one of them is through intentional methods where words are explicitly taught and/or intentionally focused upon by the learner through learning strategies. Not surprisingly, research has shown that when learners' attention is explicitly focused on learning vocabulary, the uptake is stronger

than in incidental learning (Chou, 2018; Young-Davy, 2014; Haniff & Tahir, 2017). However, the efficiency depends on the level of engagement with the vocabulary learning task. In other words, with high-engagement strategies like the Keyword Method (Hulstijn, 1997), relatively few meetings (perhaps even only one) may be enough to make the form-meaning link. Other methods, such as rote writing down a word, may require a greater number of encounters because they require less mental activity and interaction with the word (Schmitt, 2010). Other strategies which involve less mental effort and engagement with the word (such as rote written repetition of a word) may require many more meetings (Schmitt, 2010). Colorado (2007) outlines several vocabulary learning strategies by proposing interesting activities such as role-playing and scaffolding alongside using gestures, showing real objects, pointing pictures on the board, focusing on cognates, using computers, television, and audiobooks, encouraging oral language use and modelling correct usage. He claims that different teaching techniques should be emphasized as part of the input for trainee teachers. This emphasis is linked to the fact that vocabulary learning occurs by observing and listening to trainers in the classroom.

Despite the importance of learning various vocabulary learning strategies, vocabulary learning is often neglected and taught incidentally in second language learning especially in Asian countries (Fan, 2003). However, since then, some vocabulary teaching strategies have been put forth to make the process of vocabulary acquisition and recall easier, like using reading passages that are enhanced with textual information (Mashhadi & Jamalifar, 2015). Vocabulary is typically taught primarily through a word list that is attached to the end of a textbook; little vocabulary

knowledge is developed; and few VLS are introduced to the students in class. In other words, there isn't much effort put into teaching children how to learn new words. Regarding learners, the majority of them believe that learning vocabulary entails memorising new words by heart after learning their pronunciation, form, and meaning. Despite their best efforts, the outcome does not appear to be satisfactory (Zhu, 2020). It demonstrates that efficient VLSs are required to boost vocabulary, and efforts must be made by language teachers and students to emphasise the significance of explicitly teaching vocabulary in language classrooms.

## **1.2 Background of the Study**

In Malaysia, the Ministry of Education sets general aims for both primary and secondary education using the new English Language Syllabus. The English Language Curriculum for Primary Schools aims to equip pupils with basic language skills for effective communication in contexts that are appropriate to the pupils' developmental level. In contrast, at the secondary school level, the curriculum is designed to mold the students to communicate effectively, to read and respond to text independently, to produce well-structured written texts, and to enjoy and respond to literary works besides making a confident presentation (Sukatan Pelajaran Malaysia Sekolah Menengah Bahasa Inggeris, 2000). Even though vocabulary has been taught in schools beginning from pre-school to secondary schools, whereby students are exposed to vocabulary learning through the syllabus contents of the English language subject and they are required to apply the vocabulary taught to them in essay writing accurately (Teacher's Guide Year 3, year, pg. 9), many of them still have difficulties in acquiring appropriate vocabulary. Past studies indicate that the students' problems or challenges

with language learning persisted. Students encountered a variety of challenges when acquiring language (Siddiqua et al., 2010). As such, future TESL teachers and trainee teachers in school must have an awareness to extend their vocabulary range (Herbert, 2008) whereby in improving themselves as both learners and teachers, they need to know approximately 200,000 words.

One of the many challenges faced by trainee teachers in learning a second language is acquiring proper vocabulary especially in understanding the relevant academic text of the field. Although the trainee teachers are academically excellent learners, they still struggle to use proper vocabulary in their classroom discussions and presentations. This claim is supported by Bankowski (2010) and Barrett & Liu (2019) who stated that university lecturers frequently spend very little time teaching students oral presentation skills, leaving them to struggle with the task of gaining the skills they need to present effectively despite the other difficulties associated with lack of vocabulary. The purpose of learning vocabulary is to improve their oral performance by using them effectively. Therefore, students should be taught each word's definition as well as its associations in order to develop conversational variety and confidence in speaking English. Undoubtedly, this requires a strong knowledge of vocabulary (López, 2016). This situation could be attributed to the fact that many of them are not aware of the learning strategies that can be used to acquire vocabulary (Yulia, 2014; Adibah et al., 2014; Noorizah & Amir, 2012). As such, TESL trainee teachers need to be acquainted with language strategies related to vocabulary acquisition.

The Malaysia Education Blueprint 2015-2025 also focuses on the implementation of technology and innovation such as online learning to enable the customisation of



students' learning experience, implying that the government focuses on outcomes over input through active learning processes. The transformation of the Malaysian education system aims to offer higher-quality programs that incorporate experiential learning and technology-enabled learning models in offering personalized and engaging learning experiences that challenge their potentials (Malaysia Blueprint 2015-2025). Furthermore, this signals the importance of implementing online learning at higher education levels including in Malaysian *Institute of Teacher Education (ITE)* to equip trainee teachers with the latest medium of instruction. Besides improving the learning and teaching process, this move also aligns with the Malaysian Education Blueprint 2013-2025 in promoting and modelling digital citizenship and digital culture in professional practices.

Most trainee teachers in the Malaysian *Institute of Teacher Education (ITE)* are exposed to the use of ICT in their learning process as there are few courses by the ICT Department which is part of the course syllabus. Thus, trainee teachers would have learnt how to utilise digital resources throughout their program.

Upskilling English language teachers is one of the eleven shifts in the Malaysia Blue Print (2013-2025) that will overhaul the educational system to ensure that every child in the nation is fluent in both Malay and English. Since these future language teachers are encouraged to explore vocabulary learning strategies in the ESL classroom digitally, the learning management system, *Schoology* is employed to assist them in the classroom to enhance their language proficiency and their student's proficiency. *Schoology* was first introduced in the year 2007-2008 by Jeremy Friedman, Ryan Hwang, Tim Trinidad, and Bill Kindler. The system aims to reinvent the

implementation of classroom technology and improve students' learning outcomes by providing a configurable, scalable, and easy-to-implement solution, for educators via a free basic version of the award-winning platform. This platform is an innovative learning management system that enhances learning for second language learners in vocabulary acquisition by sharing academic content. It adopts one of the strategies in vocabulary learning which involves social networking among students. This learning management system (LMSs) is hoped to give a good impact on those involved in this study. They can work collaboratively and share vocabulary from the academic content. As a whole, *Schoology* is claimed to be a convenient platform for educators to engage students and increase communication and resource sharing by adapting students' learning strengths, differentiate instruction, and increase the impact of each lesson, collaborating and sharing with peers internationally browsing critical technologies such as Goggle Docs, Turnitin, enabling a complete course workflow from online assessments to grading and providing feedback on mobile devices , and personalising learning via flexible online grade book, objective-based performance tracking, and engagement analytics (Schoology).

Additionally, *Schoology* is also designed to ensure the simplification of content management using a centralized repository for users' personal, shared, and third-party resources. This simplification is done by:

- a) Building engaging content by creating, integrating, or embedding any media, including audio and video, to personalize learning;

- b) Ensuring consistency by aligning the content to the learning objectives and sharing items with the entire department;
- c) Sharing content instantly by housing all lesson content in one place;
- d) Making a data-based decision where educators can quickly modify their curricular and pedagogical approach to meet specific needs;
- e) Sharing with peers and effectively reducing the instructional gap from school to school;
- f) Modifying shared resources to suit students' needs without compromising the resources' original integrity. (Schoolology)

The need for trainee teachers to explore VLS instruction in language learning is crucial as it enables them to communicate instantly with their educators via a mass update, in-platform messages, and mobile notifications. Therefore, this platform enables instructors to do so with community support in an open environment by providing simple course development and content creation tools. In turn, these features help save time and effort as the students' workflows are simplified through an interface designed for multitasking and omnidirectional resource sharing. Furthermore, it can also reduce the overall costs since instructors can access professional development-valuable training, experience, and resources consistently.

By introducing *Schoolology*, the trainee teachers can have more creative space to create and share academic content with their peers and other trainers using an improved VLS

instruction methodology. This platform enables trainee teachers to treat online education as a collective effort that positively impacts the quality of teaching methodologies for the second language. Hence, the present study focuses on *Schoology* as a technology-assisted learning tool and a learning management system, in enhancing TESL trainee teachers' vocabulary learning strategies. In this research, vocabulary learning strategies are important elements of classroom learning where TESL trainee teachers demonstrate their awareness in learning new words, and apply different strategies.

### **1.3 Problem Statement**

If second language learners do not have the vocabulary and are influenced by their first language, they may find it challenging to learn English efficiently. Misbah et al. (2017) highlighted that most second language learners had trouble picking up the language if they lacked vocabulary, influenced by their mother tongue, or were from low-income backgrounds. So, the English language teachers in school played important roles in improving the second language learners' vocabulary size especially the students in the classroom through varieties of VLSs.

In the Malaysia Education Blueprint 2013-2025, the quality of teachers is a central issue where it is improved by equipping educators with tools and support to deliver and perform. The new Teacher Career Package is being introduced in selecting, developing, and rewarding teachers throughout their entire careers. One of aims is to improve the effectiveness of pre-service and continuous professional development.

“The quality of the English teachers in Malaysia had been discussed widely and the government had made some measurements in introducing the multi-pronged approaches to increase the English proficiency level of the teachers”

Tan Sri Dato’ Haji Muhyiddin Bin Haji  
Mohd Yassin, Minister of Education,

The Star, Sept 12, 2013

Tan Sri Dato’ Haji Muhyiddin Bin Haji Mohd Yassin, the former Education Minister mentioned that one third of English Language teachers in the country are “unfit” or “incapable” to teach the subject in the school. In line with that, the Ministry of Education encourages English teachers in Malaysia to improve themselves, implying the need to upgrade their proficiency through continuous in-service training. Furthermore, the government also adopts a multi-pronged approach to improve the English language proficiency in schools where the Ministry of Education’s (MOE) recent concern is to provide pre-service as well as in-service training for its teachers to meet the needs of schools (Jamil, et.al, 2011).

The launching of The Roadmap 2015-2025 as part of the Malaysian Education Blue Print (MEB) 2013-2025 functions as a dashboard of the implementation plan in systemically reforming the English language education in Malaysia. This reformation involves all Malaysian schools up to the tertiary level including teacher training. Cambridge English was assigned by the Malaysian Ministry of Education to conduct a baseline study describing the English standards of both students and teachers.

Therefore, the English Language Teaching Center (ELTC) is appointed as the lead agency in implementing and monitoring the progress of the roadmap.

Pressure to raise student English proficiency levels is driven by the need to perform academic tasks in the language, as well as from the rapid development of a global system of higher education. Mobility programs and the international exchange of resources and personnel bring the world to Malaysian campuses, requiring universities to ensure their students are capable of communicating effectively in English

YB Dato' Seri Idris Jusoh, Minister of Higher Education, Malaysia

(Ministry of Education, 2015)

Recently, the English testing proficiency among English teachers in the country was done through the organization of the Professional Up-skilling for English Language Teachers (Pro-ELT). Upon administering the Cambridge Proficiency Test (CPT) for 61,000 English teachers, the Ministry of Education announced that primary English Option teachers need to achieve B2 Band while secondary English teachers need to aim for the C1 Band. Teachers who do not meet the set requirement must then attend the Pro-ELT Course.

CPT is one of the assessment tools used by educational institutions to assess the proficiency level of English language learners. The result of the CPT test indicates that TESL trainee teachers do not perform well in their examinations. Another test used to evaluate TESL trainee teachers is the APTIS Test, a foundational assessment test designed specifically for those working in the education industry. It assesses the grammar, vocabulary and language skills (speaking, writing, reading and listening) where each candidate is required to complete a grammar and vocabulary test followed

by the English language skills of their choice. Beginning with the elementary tasks, each section of the test assesses English levels from A1-C. An APTIS candidate will be scored based on a numerical scale (0-50) for the grammar and vocabulary section, besides being assigned the Common European Framework of Reference (CEFR) level (A1-C) for each skill (Wak, 2014).

The APTIS Test was implemented from 12th Mac 2014 until 8 April 2014 at 23 examinations centres in Malaysia for 2,128 trainee teachers as shown in Table 1. Each test consists of five components: Grammar & Vocabulary, Listening, Reading, Speaking, and Writing. The results were released in Mid-June 2014 and were analyzed by the end of June 2014. Table 1.1 shows the number of trainees who were assessed.

Table 1.1

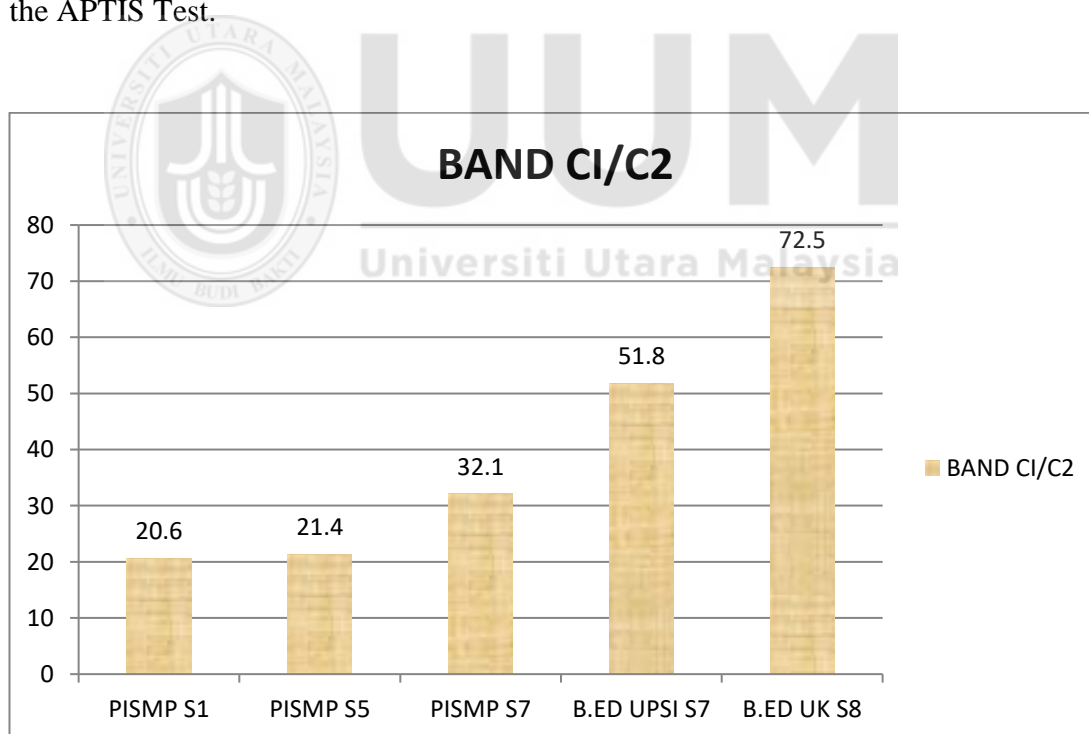
*Number of Trainee teachers in Malaysia who took the APTIS Test in 2014*  
(Wak, 2014)

Program	Semester	Number of students
Foundation	1	194
	5	963
	7	570
B. Ed. TESL (Local Twinning Programme)	7	197
B. Ed. TESL (Oversea Twinning Programme)	8	204
<b>Total number of the TESL Trainee teachers</b>		<b>2128</b>

Based on Table 1.1, there were 194 Semester 1 TESL trainee teachers, 963 Semester 5 TESL trainee teachers and 570 Semester 7 TESL trainee teachers from the Foundation Programme. On the other hand, there were about 197 TESL trainee teachers from the Bachelor of Education (Local Twinning Programmes), and 204

TESL trainee teachers from the Bachelor of Education (Oversea Training Programme). The total number of TESL trainee teachers who sat for APTIS was 2128 (Wak, 2014). Most of the candidates were given some training before they sat for the test where the trainings were conducted by their respective institutions with the guidance of the British Council and ITE trainers. Some ITE also organised the Intervention Workshops to assist TESL trainee teachers in acquiring the skills they need for the test since some TESL trainee teachers are not familiar with the software used for the test.

Table 1.2 presents the overall analysis of the APTIS Test Result for all the Institute of Teacher Education in Malaysia. C1 and C2 Bands are considered excellent bands for the APTIS Test.



*Figure 1.1. Report of the APTIS Test Result in Institutes of Teachers Education in Malaysia (IPGM, March- April 2014)*



The results indicated that the Ministry of Education Oversea Universities Twinning Programmes with ITE (B. Ed UK) scored the highest (72.5%) while the Local Universities Twinning Programmes with ITE scored 51.8%, followed by the Degree of ITE Programmes, *Program Ijazah Sarjana Muda Perguruan* (PISMP) for Semester 7 (32.1%), Semester 5 (21.4%), and Semester 1 (20.6%). Overall, most of the TESL trainee teachers did not manage to achieve the standard required by the Ministry of Education. Statistics also show that most TESL trainee teachers from the Ministry of Education Overseas Universities Twinning Programmes manage to achieve the set standard as their study environment overseas provide them with opportunities to acquire the second language effortlessly. As such, ITEs need to improve the English standard among their trainee teachers. Figure 1.1 indicates the overall result of C1 and C2 bands by ITEs in Malaysia

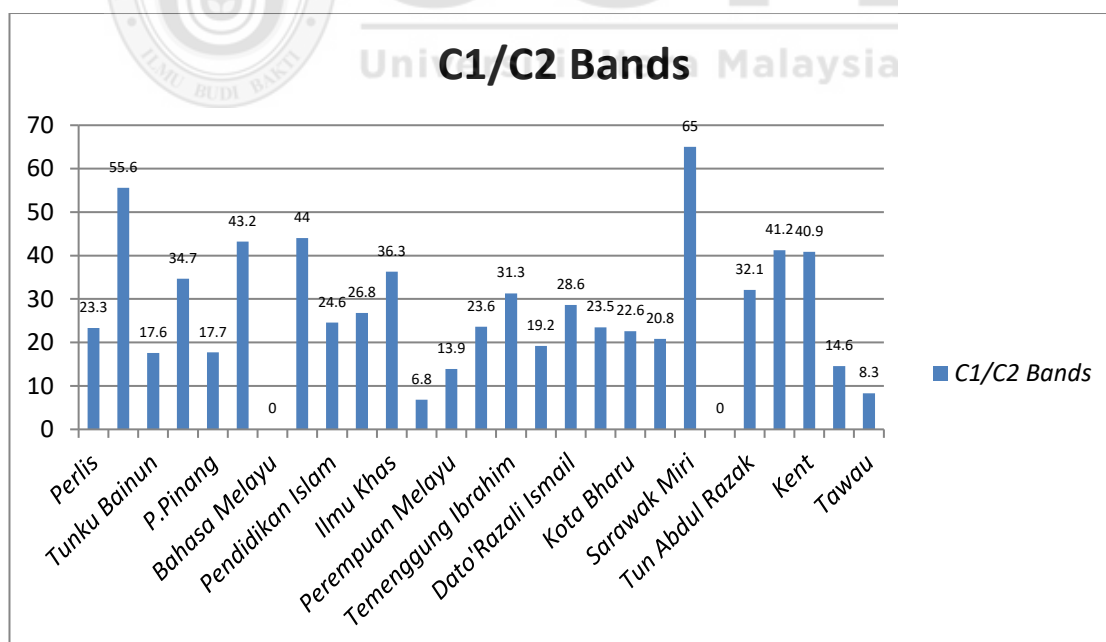


Figure 1.2. Overall Results of C1/C2 Bands According ITEs in Malaysia

On the whole, the test results for Malaysian ITEs in Malaysia are not satisfactory. The APTIS test indicated that only 31.9% of TESL trainee teachers achieved the C1 and C2 bands, indicating that the proficiency of TESL trainee teachers in Malaysia does not achieve high proficiency in grammar, vocabulary, and their language speaking skills. The performance of the TESL trainee teachers in both examinations demonstrates the need for them to improve their vocabulary acquisition. Numerous studies have attempted to explain the importance of vocabulary learning in improving their four skills including listening, speaking, reading, and writing. August (2002) highlights the importance of word (vocabulary) learning in enhancing hearing, speaking, reading, and writing. Previous studies (Alderson, 2000; Nation, 2001; Qian, 2002; Read, 2000) stressed that reading ability and attaining new input from texts can be demonstrated through the vocabulary knowledge of the language learners. Similarly, Bear and Helman (2004) stated that vocabulary knowledge is common between spoken and written forms of language.

Recently, in 2020, the Ministry of Education introduced the document regarding the outline of CEFR achievements among the English Language teachers including the in-service teachers in all educational institutions. The basic requirement of CEFR level is C1 or proficient users (Rahim, 2020). Therefore, it becomes a challenge for most English teachers particularly the English trainee teachers at ITEs to achieve the C1 level as the main requirement before they are employed as teachers.

In addition, the Malaysia Education Blueprint 2013-2025 clearly states the need for all English teachers to have a high proficiency level in the English language or they will

face deployment to overcome the issues related to “unfit” English teachers in the country.

The redeployment of teachers who do not meet the proficiency standard by 2025 could result in a small shortfall of English language teachers. These gaps will be proactively filled with teachers that already meet the minimum competency bar in English proficiency. To fill these gaps as rapidly as possible, the Ministry will hire teachers using alternative pathways. The primary sources that are not currently teaching the subject and new graduate teachers from ITEs and IPTAs.

#### Malaysia Education Blueprint 2013-2015

As such, the ITEs are challenged to strengthen the delivery of English lessons among trainee teachers in meeting the needs of the schools. This improvement will enable them to teach effectively in their second language classrooms. Past studies (Al Maqtri & Thabet, 2013; Rahman Al-Mahrooqi et. al.,2015) have discussed various aspects such as socio-affective skills, pedagogical knowledge, subject matter knowledge, and personal qualities which could be attributed to effective language teaching.

In relation to vocabulary learning via online, a line of researchers investigated various aspects of online learning which include online vocabulary learning (Ferit et al.,2010; Linda & Shah,2020; Rahman et. al.,2020), implications of mobile learning(m-learning) on vocabulary (Zoraini et al.,2009; Haisen & Jack, 2011), online social networking among the universities students (Muhamad Kamarul Kabilan et al.,2010), a blended learning pedagogical model (Emerita, 2006), and practices of online learning (Barbara et. al.,2013). Meanwhile, studies that dealt with vocabulary learning strategies which focused on pre-service teachers were also conducted (Seray Tnyer &

Yusuf, 2014; Mohamad Ta'amneh, 2014; Xue & Ying, 2011; Yu-Ling, 2005). Some of these studies looked at the impact of automated essay scoring tools on the development of writing proficiencies of the pre-service and in-service teachers (Xue & Ying, 2011), as well as on the awareness, beliefs, and instructional practices related to vocabulary learning strategies (Yu-Ling, 2005). However, to date, there has been limited evidence in demonstrating the use of a learning management system (LMS) as their main instructional tool in vocabulary learning among second language trainee teachers. Therefore, this study explores vocabulary learning strategies using online learning (LMS) among TESL trainee teachers in one of the ITEs in the northern region of Malaysia.

Past studies also examined how vocabulary learning strategies (VLS) influence the proficiency levels of second language learners (Gu & Johnson, 1996; Maeda, Tagashira, & Miura, 2003). These studies focused on the improvement in proficiency levels of second language learners in vocabulary learning, demonstrating that the achievement of TESL trainee teachers in these tests shares a close relationship with their vocabulary level. Although some studies show how LMS promotes a 'student-active-learning' environment (Bradley, 2020; Koszalka & Ganesan, 2004), increases students' interaction (West, Waddoups, & Graham, 2007), and innovates the learning and teaching process (Dutton, Cheong, & Park, 2003), they do not specifically address how LMS impacted vocabulary learning of second language learners in the L2 contexts. qualitatively. Furthermore, some of these studies adopted quantitative design and the process on how the L2 learners learn vocabulary qualitatively is not widely explored.

Past literature has indicated that investigation of LMS contribution in exploring vocabulary learning strategies for second language learners remains limited. Most Asian studies in the field of vocabulary learning focused on preferred strategies used by EFL students in Japanese, Hispanic, Korean, and Arabic-speaking countries such as predicting from contexts, working with peers (Ried, 1995), using rote learning and bilingual dictionaries (Kudo, 1999), and understanding the different aspects of vocabulary learning strategies among L2 learners in their lexical expansion (Giridharan & Conlan, 2003). Other Asian studies include examining different types of vocabulary learning strategies among postgraduate students (Noor & Amir, 2009) and undergraduate students (Ahmad, 2009) as well as their beliefs towards vocabulary learning strategies (Dhewi, 2014).

Given the scarcity of research related to LMS usage in vocabulary learning among L2 TESL trainee teachers, this study investigates the use of *Schoology* as a learning tool to enhance TESL trainee teachers' vocabulary learning strategies. It also examines issues and challenges in using Schoology LMS. The present study also employs qualitative design to explore the processes of vocabulary learning to understand the complexity of the phenomena. LMS is considered as an important platform especially in learning English vocabulary (Bradley, 2020; Duong et al., 2021; Zhu, 2020; Clark, 2013; Alizadeh, 2019; Banacha & Tongtep, 2021). Therefore, educational administrators should take into account the educational, technical, and logistical needs of using the LMS in university programmes, use an LMS tailored to a particular field or modify the current one keeping in mind the needs of the students, and enhance the infrastructure needed for using web-based educational technologies.

#### **1.4 Research objectives**

The objectives of the study are as follows:

1. To examine the types of vocabulary learning strategies used by the TESL trainee teachers.
2. To explore on how an online learning management system(LMS) helps TESL trainee teachers in enhancing their vocabulary learning strategies.
3. To investigate the issues or challenges faced by the TESL trainee teachers in using online learning management system.

#### **1.5 Research Questions**

This study attempts to answer the following research questions:

1. What are the types of vocabulary learning strategies used by the TESL trainee teachers?
2. How does the online learning management system help the TESL trainee teachers in enhancing their vocabulary learning strategies?
3. What are the issues and challenges faced by the TESL trainee teachers in using the online learning management system?

#### **1.6 The Significance of the Study**

One of the successful efforts done by the Ministry of Education of Malaysia was to launch the new comprehensive review of the education system in the country in developing a new National Education Blueprint (2015-2025) in October 2011. The

purpose of this new blueprint is to raise the standard of the education system to fulfill the government's inspiration that was to prepare the children for the 21st. Century educational system. Students' potential will be identified and they will be provided with better access and quality education which bring meaningful differences in their lives.

The study will be beneficial not only for the trainee teachers, but also for the lecturers at ITE, the curriculum developers and also to researcher who are interested in the study of VLS in the L2 contexts.

#### **For the trainee teachers**

Firstly, this study is useful for the trainee teachers at ITEs because the *Schoology*, as the online learning management system (LMS) is needed to be used by them as one of the platforms in facilitating and inspiring them in their vocabulary learning and to polish their creativity especially in acquiring good vocabulary learning strategies. Moreover, by using technology, it is hoped that this will advance the TESL trainee teachers' learning, creativity in innovation in both face-to-face and in virtual environments. Besides, the TESL trainee teachers will be exposed to designing and developing their own learning experiences by incorporating all the tools and resources. They will also be able to maximize their content learning and develop their knowledge, skill, and attitudes using ICT. As English teachers, the TESL trainee teachers need to fully use the online learning management system in building the learning environment either in formal or informal ways. It is hoped that through the online learning management system, the TESL trainee teachers will be able to design and evaluate authentic learning experiences and assessments, incorporating contemporary tools and

resources to maximize their vocabulary learning strategies. This will be achieved when they are able to maximize content learning in context by utilizing ICT in exploring more vocabulary learning strategies.

In developing a good strategy in vocabulary learning especially for the TESL trainee teachers, in upgrading their knowledge in the second language, they have to exhibit knowledge, skills, and work processes representative of an innovative professional in a global and digital society. This includes the fluency in ICT systems and digital tools to support their success and innovation in their studies. Even though they have been using ICT during their presentation, but some of the trainee teachers are not fully engaged in self-learning and fully depending on the trainers' teaching input. This study is hoped to expose the TESL trainee teachers to manage their learning materials which will help them in their studies.

In addition, as TESL trainee teachers, they are able to create second language learning not only in the classroom itself but also outside the classroom. They are able to vary their teaching resources in enhancing vocabulary learning for their students. Furthermore, the students will be given chances to share their resources that related language learning. So, this will create a positive learning environment without ignoring the students' creativity and initiative in improving their second language learning especially in widening their vocabulary.



### **For teacher trainers in ITE**

Secondly, the proposed study will be useful for the teacher trainers as the module can be used by the trainers in implementing the *Schoology* to enhance vocabulary learning. Most of the ITEs in Malaysia have their online learning systems for uploading their teaching materials or resources for the students to assess as preparations before starting classes, setting online quizzes, forums, and discussions of topics. The *Schoology* module developed in this study will provide more suggestions for the trainers to use it as a medium of instruction for formal and informal learning environments. When the students are exposed to VLSs, they will become more aware of the teaching and learning strategies of vocabulary. Thus, it will provide greater impact to the teaching and learning of vocabulary among trainee teachers.

### **For the curriculum developers at ITE**

ITEs have vital roles in producing qualified teachers for schools in Malaysia. It becomes the responsibilities of the curriculum developers in Malaysia Institute of Teacher Education (MITE), learning facilitators, instructional specialist, master trainers for ITEs to achieve the training goals by aligning the content and assessments, and adhere to standards as they relate to selected curricula and instructional programs through the learning management system such as *Schoology*. The ITE curriculum developers are able to review the instructional resources used by the ITEs trainee teachers such as modules, podcasts, web-based apps, videos for training purposes, e-books and relate with the learning outcomes of the programs conducted by ITEs. Through *Schoology*, all the lessons related to trainee teachers' learning process will be systematically shared, documented, and recorded in achieving students' learning

outcomes. Phillopo and Krongard (2012) claimed that learning management system becomes a great enabler of many current and future education institutions such as personalized learning, learner-centered decision making, staff productivity, and curriculum development. This indicates that the curriculum developers have to give some attention to the curriculum designed for the ITEs trainee teachers in enhancing the use of technology in their learning and teaching processes effectively and meets the trainee teachers' needs.

### **For L2 researchers**

It is hoped that they will be able to learn more about how Schoology, an online learning management system, can be used as an effective platform in blended learning, not only for teaching the second language but also for collaborating with other Schoology users from other countries who have a variety of up-to-date teaching and learning materials.

### **1.7 Scope of the Study**

This study utilizes *Schoology* an online learning management system with a convenient collaborative interface to improve the overall impact of student's learning and teaching processes. Christopher (2014) highlights the importance of selecting current learning and development strategies in fulfilling learning needs effectively. Simultaneously, TESL trainee teachers can choose and use the LMS which serves their functional and creative needs.

The scope of this study involves fourteen (14) TESL trainee teachers who were taking the Bachelor's Degree in TESL programme in one ITE in the northern region of

Malaysia. The participants were fully involved in exploring the use of *Schoology* in enhancing vocabulary learning strategies.

### **1.8 Definition of Terms**

*Trainee teachers.* A trainee teacher is defined as a person undergoing training in the Institute of Teacher Education (ITE) for two semesters for the foundation program and eight semesters for the degree program.

*Institute of Teacher Education (ITE).* It is an organization that has a close relationship with education, training, teaching, and learning. Its purpose is to produce the future and calibre teachers academically and becoming professionals in teaching and learning processes.

*Schoology.* It is an online learning management system (LMS) that educators can do things as simple as posting assignments, quizzes, and links to additional resources or as sophisticated as conducting online courses, providing one-on-one remediation, or hosting discussions. *Schoology* is an excellent educational form of technology that can be instrumental in developing a digitally literate ESL classroom by involving an interactive and engaging learning experience for both teachers and students. *Schoology* helps foster the specific skills students need to be successful in the 21st Century ESL. Students can collaborate online, communicate ideas and views about certain topics, create blogs, as well as analyze others' opinions through online discussion with the availability of constant feedback and updates.

*Vocabulary.* Vocabulary is generally defined as the knowledge of words and word meanings (Kamil & Hiebert, 2005).

*Vocabulary learning.* Vocabulary learning is a continual process of encountering new words in meaningful and comprehensible contexts (Harmon et al.,2009).

*Vocabulary learning strategies.* Word lists have long been associated with the term vocabulary, and vocabulary learning strategies have been equated to techniques for committing these lists to memory (Gu and Johnson, 1996)

*English as a Foreign Language(EFL).* EFL is usually learned in environments where the language of the community and the school is not English. EFL teachers have the difficult task of finding access to and providing English models for their students (Gunderson, 2009).

*English as a Second Language (ESL).* ESL is based on the premise that English is the language of the community and the school and that students have access to English models (Gunderson, 2009).

*Learning Management System (LMS).* LMS is the software application or Web-based technology used to plan, implement, and assess a specific learning process. Typically, a learning management system provides an instructor with a way to create and deliver content, monitor student participation, assess student performance.

*Teaching English as a Second Language(TESL).* It is a term that refers to teacher training programs in English as a Second Language(ESL).

To sum up, this chapter explains about the background of the study which focuses the importance of vocabulary learning strategies for the TESL teacher trainers.

## 1.9 Summary

**The introduction chapter** provides the background of the research, highlighting the importance of vocabulary learning strategies (VLSs) in second language learning and the awareness of VLSs among TESL trainee teachers in ITEs in improving their vocabulary learning using online learning management system. The research objectives and research questions are also in this chapter, followed by the significance of the study, scope of the study, and also the definition of terms used in the study.

**Chapter Two** discusses the Literature Review of the study including language strategies, definition of VLSs, importance of VLSs, types of VLSs which covers the previous studies on VLSs, online learning and e-learning, learning management system in general and *Schoology*, one of the LMS in specific.

In addition, this chapter also reviews the three related theories which are connected to the study, which are Vygotsky's Social Constructivism Theory, Theory of Connectivism (Siemens and Downes, 2009)) and The Barcroft's Five Principles of Effective Second Language Vocabulary Instruction. Lastly, in this chapter, the theoretical framework which is the main reference for the whole study is also presented.

**Chapter Three** highlights the research methodology of the study. The introduction of the qualitative study is mentioned in this beginning of the chapter, followed by the research design of the study, participant observation, population and sample of the study. It also discusses the data collection methods which involve observation, interviews, online reflective writings, and researcher field notes (Appendix G). The

last section of this chapter explains the data analysis that includes analysing the transcriptions, coding, ATLAS.ti Software, Text Analyzer, and ethical consideration in the study.

**Chapter 4** brings out the findings of the first research question on types of vocabulary learning strategies among TESL trainee teachers. The findings were based on the taxonomies of VLS proposed by Gu and Johnson (1996). The VLS were categorised into three categories, cognitive strategies, metacognitive strategies and beliefs of VLS.

**Chapter 5** discusses the findings of the second research question on how the online LMS helps in enhancing VLS of TESL trainee teachers. In this chapter, the findings were discussed based on Theory of Connectivism by Siemens and Downes (2009) and the impacts on TESL trainee teachers' writing which had been analysed using Text Analyzer.

**Chapter 6** highlights the issues and challenges faced by TESL trainee teachers in using online learning management system. There were four main issues and three challenges widely discussed in this chapter.

**Chapter 7** focuses on discussions, conclusion and recommendation of the study. In this chapter, the discussions give great focus on types of VLSs with the related with previous studies in enhancing vocabulary learning of the second language learners. For conclusion and recommendations, it deliberates the major conclusions and theoretical contributions, methodological contributions, practical contributions, recommendation for future research, limitation, and conclusion.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter discusses previous studies defining vocabulary learning strategies in both L1 and L2 contexts, including studies on vocabulary learning strategies of trainee teachers. This chapter also highlights previous studies on vocabulary learning using online learning, e-learning, and b-learning. The learning management system, the theoretical framework, and Vygotsky's Social Constructivism Theory was also expounded in this chapter. Finally, the chapter outlines the Five Principles of Effective Second Language Acquisition, the theoretical framework of the study, and the summary of the chapter.

Most second-language learners need the vocabulary to listen, speak and read (National Institute for Literacy, 2001) where it is a major component of language learning. The contribution and importance of vocabulary to the field has been highlighted in numerous studies (Akbari, 2008; Cassidy & Cassidy, 2003 & 2004; Manzo, 2004). Vocabulary learning is also considered the heart of language learning and language use or the essence of the language (Laufer, 1998)

Dewey (1910) highlights the importance of vocabulary in language learning whereby a word is a tool to think about the meaning it expresses, depicting the importance of vocabulary as a tool in communication, especially in speaking and listening.

Additionally, Nation (2005) also mentioned that vocabulary is the “learning burden of a word”, encompassing the various aspects required by second language learners in understanding, learning and acquiring words effectively. Nation (2005) summarizes the language aspects needed by language learners to include meaning, form, and use. In this sense, language meaning refers to the form, meaning, concept, references, and associations while language form includes the spoken and written components. Finally, language use refers to the grammatical functions, collocation, and constraints on language usage.

Studies on vocabulary centre on student’s vocabulary knowledge as a significant predictor of their overall comprehension through collaborative conversations where words are regularly used. Fisher and Frey (2014) found that the teacher’s role involves utilising interactive read-aloud of narrative and informational texts that consist of vocabulary terms. Teachers are also responsible for modelling how to solve works with the various word parts. In the same manner, Elgort and Warren (2014) revealed a complex landscape of contextual L2 word learning which can influence student’s vocabulary acquisition. The L2 learner gains greater linguistic memory when they engage in various processing activities required during L2 reading.

Furthermore, how children learn to read words by sight, to spell words from memory, and acquire vocabulary words from print were also a central focus of some studies (Ehri,2014). These studies also include collaborative practices in promoting reading by explicitly teaching vocabulary (Martinez et al.,2014 ; Hassan, 2014 ; Ariffin, 2021) where the need for collaborative practices in vocabulary learning is highlighted.



## **2.2 Language strategies**

Various language strategies are being used by successful language learners in acquiring a second language whether in the classroom or outside the classroom. These strategies change as they progressively move on to more advanced levels where most language learners seem to possess mixed attitudes toward language strategies.

### **2.2.1 Classifications of Language Learning Strategies**

Prominent scholars hold different views of language learning strategies through several categories that promote proficiency of the language learned. O'Malley et al. (1985) categorised 24 language strategies into three main areas namely "Metacognitive", "Cognitive", and "Socio-affective". On the other hand, Oxford (1990) classified these strategies as direct and indirect strategies which can be further understood through the categories of memory, cognitive and compensation strategies as direct strategies and metacognitive, affective and social strategies as indirect strategies. Additionally, Oxford (1990) also systematically identified learning strategies to include communicative competence, self-directed learners, teachers' roles, problem-oriented approach, learners' attitude speciality, cognitive approach, learners' support learning, observation of the strategies, teachability, flexibility, and several other factors.

Language learning strategies can be defined as "learning techniques, actions, learning to learn, problem-solving, or learning skills" (Oxford and Crookall, 1989, p.37). Second language learners with specific learning strategies can learn better, leading to better language proficiency.

In this sense, language learners manage their learning through indirect, metacognitive, affective and social strategies. Oxford (1990) believes that language learners can directly utilise target language, allowing them to use their cognition and regulate their emotions and motivations through interactions. Schmitt (1997) proposes a multi-purpose strategy according to the communication and production strategies of Oxford's taxonomy where learners possess several potential strategies for vocabulary learning.

### **2.3 Definition of Vocabulary Learning Strategies**

Depending on their point of view, different researchers suggest various definitions of VLSs. Cameron (2001) defines VLSs as "activities that learners perform to help themselves grasp and recall vocabulary items." Nation (2000) emphasises learner independence and strategy effectiveness when discussing student strategy preferences, stating that "a strategy needs to involve choice (there are several strategies to choose from), be complex (there are several steps to learn), require knowledge and benefit from training; and increase the efficiency of vocabulary learning and vocabulary use."

The first thing to highlight about VLSs is that some of them are used consciously, while others are used automatically. As previously stated, most learning styles are manifested through visible learning strategy behaviours. Takac (2012) provides another wide definition, stating that VLSs are any actions, behaviours, or approaches employed by learners to increase vocabulary learning. These strategies assist students in learning the meanings and forms of lexical components. Learners also utilise these strategies to internalise, store, retrieve, and actively apply newly learnt vocabulary in

language production, which is an important element of the language acquisition process. Another point to mention is the selection of VLSs.

According to Schmitt (2000) , when determining the efficiency of learning procedures, the entire language learning situation should be considered. According to him, the success of learning strategies when taught or utilised is determined by a variety of elements, including students' proficiency level, L1 and culture, motivation and goals for learning the L2, the task and text being used, and the nature of the L2 itself. According to Gu (2003), "there is an increasing recognition that the choice and effectiveness of VLSs in general depend very much on a mix of task, learner, and context.

Furthermore, Nation (2001) cites one of the key contributions of VLSs, stating that owing to VLSs, a large number of vocabulary items can be taught and students of varied skill levels can profit from the usage of VLSs when used effectively. Finally, Takac (2012) asserts that VLSs are critical in helping language learners to become autonomous learners (independent learners), who are equipped with all of the language learning resources necessary to develop their vocabulary knowledge and meet their personal vocabulary demands.

## **2.4 Importance of Vocabulary Learning Strategies**

The role of vocabulary learning strategies in language learning has been studied for more than 30 years (Cohen and Macaro, 2007) where the improvement of language learners' learning outcomes in L2 remains central. Many scholars have highlighted the significance of vocabulary learning strategies especially in language learning (Bogaards and Laufer, 2004; Coady and Huckin, 1997; Huckin, Haynes, and Coady, 1993, 2001; Read, 2000; Schmitt, 2000; Schmitt and McCarthy, 1997). These scholars believe that a second language teacher must expose language learners to a variety of

strategies to make the vocabulary learning process fun and meaningful. While the teaching of vocabulary does not guarantee success, the lack of vocabulary and reading can trigger a failure (Biemiller, 2005). Thus, second language learners need to read to expand their vocabulary, making vocabulary the key to acquiring a second language successfully.

Vocabulary learning strategies involve engaging the learners' mental processes to learn their target language. Wenden (1987) supports this in his study which described the involvement of mental processes in vocabulary learning strategy (VLS) in the field of cognitive science where he emphasises the importance for language learners to be ready to engage themselves in the language that they desire to learn.

Second language learners also need to have strong mental processes in acquiring excellent vocabulary knowledge (Wenden, 1987). Chamot and El-Dinary (1999) expands this claim by stating that VLS does not only involve mental procedures but activities such as visual imaging in memorizing vocabulary and purposeful socializing in L2 interaction. Thus, the features of these activities are vital in helping second language learners acquire the vocabulary they need.

Various approaches and methodologies have been introduced in catering to the second language learners' vocabulary acquisition and vocabulary learning. Coady (2000) proposes strategic teaching as one of the four basic approaches to vocabulary teaching. He suggests that vocabulary learning can be taught through context without explicit instruction as well as development through explicit instruction, where explicit teaching

is used at the beginning which develops into contextualized learning and teaching through practical active classroom activities at a later stage.

Some studies explored the individual differences in second language learning such as motivation, learning aptitude, language learning strategies, learning style, personality type, gender, self-efficacy, anxiety, culture or national origin, language learning environment, career orientation, and age. According to these studies (Dornyei, 2001; Oxford, 2003), learners need strategies to be motivated and determine their progress in acquiring a second language. Appropriate learning strategies also enable learners to be responsible for their learning, moulding their independence (Oxford and Nyikos, 1989). Learning language strategies appears as a dynamic language learning process that focuses on the effects of certain factors where most scholars and EFL practitioners prefer to focus on a particular domain of language learning (Tseng, Dornyei and Schmitt, 2006). Limited studies have attempted to examine the importance of collaboration among peers in acquiring the language in general especially on vocabulary learning using online learning.

Previous studies include exploring the relationships between different strategies and the proficiency levels of the second language learners (Gu and Johnson, 1996; Maeda, Tagashira, and Miura, 2003), their influences on learning environments (Nakamura, 2002), motivation (Harino and Ichikawa, 1997), and gender differences (Catalan, 2003; Gu, 2002). Generally, findings indicate that vocabulary learning strategies involve several variables such as language being learned, level of language learning, degree of metacognitive awareness, sex, affective variables (attitude, motivation and language learning goals), specific personality traits, overall personality traits, learning

styles, career orientation, nation origin, aptitude, language teaching methods, task requirement, and type of strategy training chosen (Oxford and Nyikos, 1989). However, few published studies address the progress of second language learners in acquiring the vocabulary through specific instructional tools as a strategy to improve their proficiency level. In the context of this study, Gu and Johnson's (1996) definition of VLS is adopted. It includes eight major categories of strategies: guessing, using a dictionary, taking notes, rehearsing, encoding, activation, and metacognitive regulation.

Furthermore, the role of vocabulary learning strategies in improving reading skills through adult-read and technology-enhanced repeated reading for the English Language Learner (ELLs) for preschool and kindergarten was also investigated (Leacox, et al., 2014). Leacox, et al (2014) proposes an intervention package for bilingual learners by combining several strategies but was unable to conclude which of the intervention's core ingredient were critical for effective instruction.

In another study, the effects of morphological instruction on English vocabulary learning among freshmen were studied where participants who received morphological instruction were found to no longer have fixation times on the vocabulary and morpheme areas as inferring references (Liu, 2014). In contrast, Holmes and Thompson (2014) conducted studies on reading informational books as a vehicle for rare-word vocabulary exposure for pre-service teachers reported vocabulary improvement. Vocabulary learning strategies closely related to mnemonic and gameplay for elementary students in South Texas was also an area explored in this field (Miyazoe, 2008; Ekiaka Nzai and Reyna, 2014).

In the context of foreign language learning, the nature of vocabulary acquisition and how informal language learning environment influence the application of vocabulary learning strategies was investigated (Sayed,2012; Azadeh,2011). Nation (2001) stressed the ongoing contribution of vocabulary and reading in a foreign language among university students. His quantitative study demonstrates that learners should continue to learn new words from high-frequency words to low-frequency words. Additionally, Gasten and Baker (2003) state that vocabulary learning plays a major role in successful programs for English Language learners with learning disabilities when it comes to writing intervention. Graves and Watts-Taffe (2002) supports this notion by highlighting students' failures in writing are caused by a lack of vocabulary knowledge, especially among lower proficiency students.

“Students who are word conscious are aware of the words around them-those they read and hear and those they write and speak. This awareness involves an appreciation of the power of words, an understanding of why certain words is unused instead of others, a sense of the words that could be used in place of those selected by a writer or speaker, and cognizance of first encounters with new words. It involves an interest in learning and using new words and becoming more skillful and precise in word usage” (Graves and Watts-Taffe, 2002, p. 144).

## **2.5 Types of Vocabulary Learning Strategies(VLS)**

The taxonomies of vocabulary learning strategy are a popular area of study (Nation, 2001; Schmitt, 1997; Gu and Johnson, 1996). Nation (2001) proposes the VLS cluster by dissecting features of vocabulary knowledge from the sources of vocabulary

knowledge and learning processes where he suggests three main classes: planning, resources, and processes. In another study involving Japanese EFL learners and teachers, Schmitt (1997) organised the taxonomy based on Oxford's (1990) classification of the Discovery/ Consolidation distinctions where 58 strategies were discovered. Gu and Johnson's (1996) taxonomy presents a more comprehensive picture of vocabulary acquisition processes, with two primary dimensions: metacognitive regulation and cognitive strategies. Subsequently, there were six subcategories: guessing strategies, dictionary strategies, note-taking strategies, rehearsal strategies, encoding strategies, and activating strategies which were being further subcategorized into 74 strategies. In the meantime, Schmitt (1997) classified vocabulary learning strategies into social, cognitive, metacognitive and memory strategies which were considered as major vocabulary learning strategies. He discovered some issues in deciding whether a procedure qualifies as an individual and independent strategy due to the large variations in classification.

Vocabulary learning strategies pose a big impact on second language learning and trigger changes in their vocabulary development (Gu,2010) where EFL students use vocabulary learning strategies more frequently after the course especially when using passive vocabulary.

The intrinsic relationship between vocabulary learning and reading in second language acquisition is also central (Noor and Amir, 2009) where the lack of vocabulary knowledge restricts the fluency of second language learners' reading process. Similarly, Doczi, (2011) investigated the role of vocabulary learning strategies in



tertiary educational institutions and found that most students useless social and metacognitive strategies and spend more time studying the language.

In the same vein, Doczi (2011) in her study to investigate the role of vocabulary learning strategies in H tertiary educational institutions discovered that most of the students were using less social and metacognitive strategies and spent more time studying the language.

On the other hand, Subon (2013) identified the pattern of vocabulary learning strategies of Form Six(Pre-university) students using the taxonomy of Gu and Johnson (1996) and Fan (2003). The result of the study reported that students' preferences in vocabulary learning strategies include guessing strategy alongside perception and encoding strategies

Similarly, Sadaf and Zoya (2014) discovered that metacognitive strategies were least employed by undergraduates of Aligarh Muslim University in India compared to memory strategies. They stressed that L2 learners need special training to be accustomed to vocabulary learning strategies.

Together, vocabulary learning strategies are important in the L2 learning process where L2 learners can improve their vocabulary learning if they possess proper strategies and are comfortable in using them to acquire a second language. These studies highlight the association between vocabulary learning and vocabulary knowledge.

In the context of this study, Gu and Johnson's (1996) taxonomies became the main reference in exploring TESL trainee teachers' VLS. They consist of two domains of strategies which are cognitive and metacognitive strategies. Cognitive strategies involve guessing strategies, dictionary strategies, note taking strategies, memory strategies: rehearsal and encoding, and finally, activating strategies. Meanwhile, metacognitive domain concerns with planning, monitoring and evaluating. Gu and Johnson (1996) revealed that second language learners used multiple VLSs.

### **2.5.1 Previous Studies on Vocabulary Learning Strategies of Pre-Service Teachers**

Few studies were conducted on pre-service teachers in the L2 context where VLS research explored strategies used in vocabulary learning and the vocabulary size of the university pre-service teachers (Seray Tnayer and Yusuf, 2014; Linda and Shah, 2020; Ünal & Yelken, 2020). In Turkey for example, the results of the cross-sectional, mixed-method study showed that the most popular strategy was determination, which had no impact on the participants' vocabulary sizes. Similarly, Sener (2015) also highlighted that pre-service English teachers at a state institution in Turkey were asked about their preferred vocabulary acquisition strategies and vocabulary size. It was discovered that more advanced techniques like "guessing from textual context" and "interacting with native speakers" were most frequently used, as opposed to some mechanical repetition techniques like "word lists" and "flash cards." Additionally, it looked into the connection between their vocabulary size and strategy use.

In a study conducted by Mohamad Ta'amneh (2014), the preferences of pre-service teachers 'are geared towards rote learning as compared to other strategies in improving

their learning practices especially in vocabulary learning. These findings demonstrate the individual differences among pre-service teachers in choosing vocabulary learning strategies based on their preferences. The questionnaire and interviews were the main instruments used in the research and the findings exposed rote learning as one of the preferred strategies among the pre-service teachers.

Additionally, vocabulary learning strategies, awareness, beliefs, and instructional practices have been identified as important elements in relevant literature based on the second language learners' personal learning experience, including both direct and indirect vocabulary learning approaches (Yu-Ling, 2005). By using questionnaires, the researcher discovered the need to add in awareness –raising activities in pre-service education programs to alarm the language practitioners of the state of the art in vocabulary instruction. As second language learners, these elements are important to ensure effective vocabulary learning.

Mehrabian et al. (2019), explored the relationship between adopting various vocabulary learning methodologies and word mastery. The results of their study confirmed that there is a strong and favourable relationship between vocabulary knowledge and word learning techniques. The findings also indicated that training vocabulary acquisition techniques benefits language learners as well as language learning. Additionally, the teaching of strategy helps teachers and students satisfy their needs.

In summary, limited studies have examined the instructional tools used by pre-service teachers in exploring vocabulary learning strategies especially using a learning

management system (LMS) such as *Schoology*. Most studies are also conducted using quantitative approaches namely experimental design. Hence, a qualitative approach will provide a different perspective in exploring vocabulary learning strategies among TESL trainee teachers.

## **2.6 Online learning and e-learning**

Studies on online learning are mostly conducted to examine differences in the learning outcomes between face-to-face interaction and distance learning (The US Department of Education, 2010; Neuhauser, 2002). Kabilan et al. (2010) investigate the use of Facebook (FB) among university students in supporting second language learning where Facebook is reported to be a meaningful and useful platform in accomplishing meaningful learning.

In another study, Shih (2011) examined the effect of incorporating blended learning with Facebook and peer assessment for college students in an English for Business Communication course. Shih (2011) reported that the incorporation enhances students' professional knowledge via in-class instruction and increases students' motivation and interest.

Neo et al. (2009) designed a course using multimedia as an instructional tool for the Malaysian classroom where students provided positive feedback and improved interpersonal and collaborative learning skills.

These studies support online learning as an interactive and effective instructional tool in enhancing learners learning skills, especially in language learning. Regardless of

the type of students involved, technology can improve students' learning. The U.S Department of Education (2010) found that students who took their courses online performed better in their studies. Furthermore, collaborative studies where students work as a group, sharing and exchanging knowledge can also be encouraged. The findings from several experimental studies related to online learning showed some issues highlighted such as lack of influence from the video or online quizzes. Online learning also provides students with the freedom to interact with media and also prompts learners' reflection (U.S Department of Education, 2010).

In contrast to the studies reporting the benefits of online learning, some studies did not show significant differences in the learning outcomes due to different preferences, demographics, learning styles, technical competencies, perceptions of the course and also the task effectiveness (Neuhauser, 2002; Johnson, et al, 2000; Maki, et al 2000; Freeman, and Capper, 1999; Arbaugh, 2000). These studies demonstrate the failure in online learning is due to the lack of sufficient training, limited institutional and instructional aims, and the lack of a comprehensive approach to accommodate student mobility and non-traditional learners (Bates, 2011). The number of users of online learning is predicted to increase to 27.34 million with students who are taking at least some of their courses in higher education programs (Ambient Insight Research, 2009).

## **2.7 Advantages of using technology for learning vocabulary**

Using technology or computers to teach vocabulary provides many advantages to English language learners. For better understanding, students need to learn word in context and with visual cues. Computers are able to offer this contextually rich

environment. In a one-on-one setting, computers also enable students to become active learners. Computers may support a variety of learning styles and involve a number of learning methodologies.

Dalton and Grisham (2011) emphasised that the techniques' reliance on digital tools and resources offer the possibility of invoking learning potential when technology and media are incorporated into the instructional mix. Besides, it is extremely obvious and widely acknowledged that ICTs are a part of every element of 21st-century life, but it is less clear how teachers may successfully incorporate technology into literacy instruction, and more specifically vocabulary instruction. If teachers want students to attain the high reading levels necessary for success in school and beyond, it is urgently a need to work on improving their vocabulary (Biancarosa & Snow, 2006; Graves & Watts-Taffe, 2008).

Moreover, teachers are also seeking advice on instructional methods, strategies, and resources in the domain of vocabulary (Berne & Blachowicz, 2008). Nowadays, most schools have access to digital tools and media that teachers could use to enhance vocabulary learning. These resources can engage students and offer scaffolds and settings for learning.

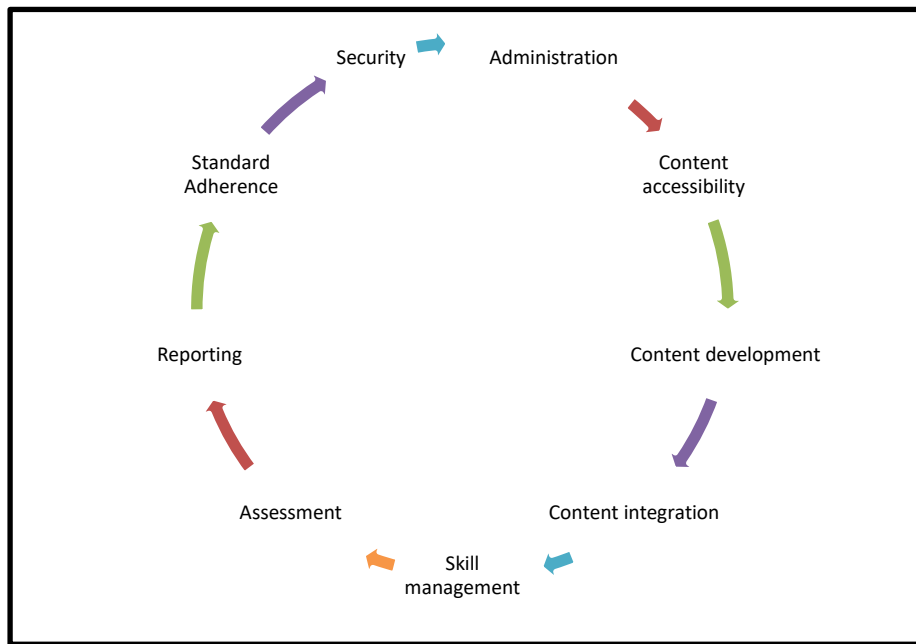
The research mentioned above can be used to conclude that technology is no longer a foreign tool, especially in schools nowadays. Most schools have access to the internet, and all of the technologies have been demonstrated to teachers so they may use them successfully when teaching and learning, particularly when teaching vocabulary.

## **2.8 Learning Management System (LMS)**

A Learning Management System (LMS) is a virtual learning environment that delivers e-learning through applications such as Moodle, Blackboard, and Campus. LMS is described as a software application for administration, documentation, tracking, reporting, and delivery of electronic educational technology in creating and managing courses online. The system eases digital learning by allowing objects to be supported, reused and shared by the learners. It can be defined as management software that facilitates learning content, resources and planned activities (Hobbs, 2005).

The LMS functions as a Course Management System(CMS), a Collaborative Learning Environment, and a Virtual Learning Environment. Its functions overlap to include the management of users, roles, course information, online communication, and web-based content, promoting a 'student-active-learning' environment (Koszalka and Ganesan, 2004) where student interaction is established (West, Waddoups, and Graham, 2007) besides offering opportunities for innovation in the learning and teaching process (Dutton, Cheong, and Park, 2003). LMS is closely related to the constructivist worldview where students build their understanding in learning to achieve their goals and objectives.

Ellis (2009) highlights the main characteristics of a learning management system as administration tools, content accessibility, content development, content integration, skills management, assessment capabilities, reporting, standards adherence, and security (Figure 2.1).



*Figure 2.1 A typical LMS and its functional elements (Trakakis,2011)*

As indicated in Figure 2.1, the basic features of an effective learning management system involve easy management for users' registration and profiles, setting curricula, defining roles, managing content, authoring courses, and administering user payments. Content accessibility refers to the content to be delivered which can be managed online or in the classroom itself. Trakakis (2011) mentioned that content development includes authoring, maintaining, and storing learning content. On the other hand, content integration refers to native support including content management systems (CMS), portals, and registration modules. The competency skills assessment of e-learners using peer reviews and feedback tools is classified under skill management.

Therefore, LMS is considered a strong and flexible system especially in customizing reports based on the course offered or course completion and assessing the e-learners that support the standards such as the Shareable Content Object Reference Model



(SCORM). LMS is also significant in importing and managing courseware that complies with standards irrespective of the authoring system that produces content. Finally, the security of the data system containing personal user details, proprietary content such as user authorization, authentication, and data protection are prioritised in LMS. The usage of passwords encryption techniques is a common security feature for any LMS.

LMS has grown in importance for students and instructors in recent years, particularly during the COVID-19 pandemic. All educational institutions, including ITEs, must employ a range of learning management systems (LMSs) that can be used as virtual classrooms where educators must engage with students and conduct learning activities online. It is supported by Yaghoubi, Mohammadi Iravani, Attaran, and Gheidi (2008) who argued that students' attitudes towards and perceptions of using technologies and electronic learning play a pivotal role in the success of implementing electronic learning. Li (2010) contrasted vocabulary learning methods that used and did not use technology. The findings according to Li (2010), Duong et al. (2021) and Zhu (2020) show that technology-enhanced scaffolding can help students advance their learning processes and may even improve their ability to learn vocabulary through reading.

## **2.9 Schoology as a Learning Management System**

Computers in particular can play a significant role in giving second language learners beneficial language experiences while they learn a new language. Computers can be utilised to help give the TESL trainee teachers with additional language learning

opportunities outside of the typical classroom setting. The TESL trainee teachers can have a rich language learning experience by combining these possibilities with things they can do at home with their families and also at the college with their peers. As ITE students, every research participant in the study had a laptop or personal computer especially in completing their course works throughout their studies. Schoology was used in this study because it was the most user-friendly platform with few interfaces. There is a need to use technology at ITE as there are many studies which indicate the positive impact on using technology to learn vocabulary (Seray Tnayer and Yusuf, 2014; Linda and Shah, 2020; Ünal & Yelken, 2020).

*Schoology* is the main platform for vocabulary learning in this study. It is the LMS for TESL trainee teachers to employ especially in exploring their vocabulary learning strategies. In *Schoology*, educators are being exposed to various e-learning features such as assigning assignments, classroom tasks, conducting quizzes, linking students to additional resources from the Internet, one-to-one online consultation, discussions and several other technology-related tasks. Franklin (1999) defined technology as a sophisticated sense of practice and as a way of doing things. *Schoology* is a user-friendly platform where its simple features encourage a much easier and faster learning process.

*Schoology* can link students and parents to educators in a safe learning environment, engaging students at their own pace and time without restrictions in developing a digitally literate ESL classroom. This application involves classroom management, online learning, and social networking where students actively participate in the

learning process using new technologies. Furthermore, the platform fosters students' creativity and innovation contributing to their technologies in their learning contexts.

Additionally, *Schoology* assists students to collaborate online by communicating ideas and views about selected topics besides getting feedback and updates. Its interface that matches other social networking sites makes it a good platform for students to have a direct connection in sharing their learning experience in a meaningful and formal way.

*Schoology* also encourages learner's autonomy and self-motivation in a safe environment where it functions as a central element of knowledge production and reproduction. Teachers can create their learning groups and give special attention to the content of the knowledge learned. This application allows teachers and students to post various teaching and learning materials related to the topic discussion while the interactive learning process will encourage students to pay more attention to the lesson taught. Assigning students with other internet-based media can serve the diverse needs and interests of the students (Information and Lincs, n.d.). The expansion of multiple literacies through various multimedia is a vital and new approach in learning and literacy (Kellner, 2002), implying the need for both teachers and students to familiarise themselves with digital technologies.

Hence, *Schoology* is a potential learning platform for students to be innovative, creative, and competent in managing their learning process in a 21st Century learning environment.

## **2.10 Previous Study on vocabulary learning using online learning, e-learning, and b-learning.**

Online learning is probably just as popular as recent education when many students choose this as a more convenient and affordable choice. The phrases e-learning, online learning, and blended learning have all developed as distance learning and has become a more well-known route to a degree. These terms describe the various methods that the students can use in 21<sup>st</sup> Century teaching and learning processes

Learning new vocabulary is commonly thought to be uninspiring by learners, especially those who were born and brought up in the digital world. Vocabulary, according to Hedge (2000), has a significant influence and emerges as one of the most crucial elements of learning a second language. The learners can improve their receptive and productive skills from the vocabulary mastery. Rich vocabulary can also encourage children to learn new words and improve their comprehension. Although vocabulary instruction has an impact on students, instructional methods and media are intended to increase students' motivation to study and provide opportunities for language exposure. The use of online games is another well-liked strategy for getting students interested in learning a language (Schultz & Fisher, 1988). It depicts on how vocabulary can be learned easily and indirectly through online games by the second language learners.

Concerning vocabulary learning, most researchers agree that second language learners learn more effectively using digital tools such as mobile phones (Emrah, 2010; Ferit et al., 2010; Haisen and Jack, 2011; George, 2006; Zoraini et al., 2009). Using mobile phones as a vocabulary learning tool is more effective than traditional vocabulary

learning tools as reported by Ferit et.al (2010) who found that second language learners improved by remembering the word studied online. Since most language learners owned technologies such as smart mobile phones, it is practical for second language learners to make use of these technologies in acquiring the language. Haisen and Jack (2011) discovered that vocabulary learning via mobile phones is effective as the blended approach of vocabulary learning can be successfully implemented in language learning. Mobile phones are used in terms of voice calls or email in vocabulary practice, quizzes, words, phrases translations, and access to live talking tutors, facilitating second language learners to learn the language better (George, 2006).

A study on learners' readiness for mobile learning (m-learning) reported that learners are more exposed and welcomed m-learning in their learning process (Zoraini et al., 2009). In contrast, blended learning (b-learning) studies conducted by few researchers support the success of the b-learning model in creating an online interactive multimedia language learning environment with positive usability of learning management system alongside students' differences in their learning styles and achievements' level (Emerita, 2006; Miyazoe, 2008; Buket et.al.,2008; Barbara et. al., 2013).

Besides, the phrase "social media" refers to websites and web-based frameworks that are available via any device and enable people to use the network for widespread online communication, interaction, and sharing. Educators are becoming more and more interested in integrating social media into their curriculum, for instance, while teaching vocabulary (Hill et. al., 2013). According to Ariza and Hancock (2003), the process by which a child learns his first language and the way they both use social

media to develop vocabulary is quite similar. Both studies endorsed the use of web-platforms in expanding second language learners' vocabulary through diverse online learning activities.

One of the most successful strategies for promoting language learning over the past two decades is blended learning. Many academics have described and defined blended learning (Allen et al., 2007; Tosun, 2015; Bernath, 2012). According to Allen et al. (2007), blended learning necessitates a rich fusion of technologically based teaching and learning methodologies and occasionally a combination of in-person and online learning. Contrarily, blended learning was described by Garrison and Kanuka (2004) as the cautious integration of classroom experiences with online learning activities.

Foreign language teachers all over the world are becoming increasingly interested in the blended learning approach. Blended learning is the addition of various forms of technology-based instruction to traditional face-to-face teaching and learning environments. This is in contrast to pure e-learning, which refers to using just electronic media to study. Today, blended learning is widely used in higher education institutions as an additional tool for increasing students' vocabulary (Tosun, 2015).

Bernath (2012) also highlighted that blended learning is a type of educational programme that combines traditional classroom instruction with electronic learning (E-Learning). To sum up, blended learning is a practice that combines several learning modalities, such as in-class learning, learning outside the classroom, or using various learning technologies while online learning refers to learning that occurs online or via the internet.

The incorporation of multimedia in teaching and learning in educational institutions improve students' interpersonal and collaborative learning skills (Ken, 2003). Considering the positive outcomes of e-learning on students' language development, this study explores vocabulary learning via Schoology. Technology is already incorporated as a learning tool especially in schools and higher institutions due to its practicality and mobility.

In this study, LMS indirectly contributes to the formal processes of teaching and learning by identifying the types of VLSs used by trainee teachers in ITE. In the context of this study, these three forms of learning are presented interconnected, present in the study, and they are used frequently and directly throughout it. These three different forms of learning have some similar characteristics, such as the use of online resources for learning and the online interaction of teachers and students in each case. Additionally, the learning process can be carried out in a classroom or remotely. It has a close relationship to the study that used the LMS as one of the platforms to investigate VLSs among TESL trainee teachers.

### **2.11 Related Theoretical Underpinnings**

In this study, the effectiveness of Schoology in enhancing trainee teachers' vocabulary learning strategies will be explored, investigating the pedagogical knowledge and skills needed in meeting the needs of learning a language effectively. Generally, the language teaching methods, alongside the learning theories provide some recommendations for effective ESL instruction. Second language teaching methods

are commonly linked to concepts and theories of how second language learners learn in general (Magaly, 2010).

This study is founded on three theories namely, 1) Vygotsky's Social Constructivism Theory (1978), 2) the Theory of Connectivism by Siemens and Downes (2009), and 3) Barcroft's Second Language Vocabulary Acquisition: A Lexical Input Processing Approach (2004) to understand vocabulary learning processes among trainee teachers. Constructivism is characterised as a broad educational philosophy that embraces a variety of learning theories. The constructivist framework is then used to classify these theories, highlighting their commonalities and differences. Zone of Proximal Development (ZPD) theory by Vygotsky is stretched to include learning that occurs in social networks and technology instruments that is external to the learner. In the context of this study, ZPD could be seen when the students work collaboratively to perform online tasks. Here more knowledgeable learners helped weaker learners in learning vocabulary. Furthermore, connectivism is promoted as a new educational philosophy for the digital age. In addition, Barcroft's second language vocabulary acquisition posits that when learners present new words repeatedly through online LMS, they will acquire the L2 vocabulary better and faster. Therefore, these theories are merged and used as frameworks as they complement each other. The three theories are closely related to each other in exploring the VLSs in the study.

## **2.12 Vygotsky's Social Constructivism Theory**

The constructivist theory consists of two important aspects: the active participation of the learners in constructing their language and the importance of social interactions in



the knowledge construction process (Bruning, Schraw, and Norby, 2011). It involves dynamic and vibrant social interaction between language learners in making language learning processes more enjoyable and meaningful.

Generally, Vygotsky's focus on the development of greater mental function involving the thinking skills of the learners in a motivating environment (Vygotsky, 1978). His ideas are relevant to educators who teach directly, intentionally use modelling to teach, or crafting a collaborative learning atmosphere (Woolfolk, 2013). Woolfolk (2013) explains the application of Vygotsky's ideas in teaching by stressing that educators need to tailor scaffolding to students needs before they perform any new tasks or topics. By providing models, prompts, sentence starters, coaching, and feedback, the students will gain confidence in doing the tasks with less support, providing them with the opportunity to perform independently (Vygotsky, 1978).

Secondly, the accessibility of powerful tools, such as computer searchers and word-processing programs that support thinking will give students greater chances to use them in their learning processes. Thirdly, by building on the students' cultural fund of knowledge (Gonzales, Moll, and Amanti, 2005; Moll et al., 1992). The term "funds of knowledge" refers to a body of information based on cultural traditions that are ingrained in families, workplaces, or everyday routines. Due to their positions in their families, communities, and cultures, students and their family members have this knowledge and skill (Vélez-Ibáñez & Greenberg, 2005). Students will be able to relate whatever knowledge that they gain through the learning processes of their assignments. Lastly, the students can be taught how to ask good questions and give helpful explanations through peer tutoring and cooperative learning strategies. It can

be concluded that Schoology covers almost all the four aspects underpinning the Social Constructivism Theory.

Through the constructivist lens, Mason (2007) described learning as belonging to a group and participating in the social construction of knowledge. In other words, learning takes place when learners participate in the construction of knowledge where they share ideas and opinions with their friends in the learning process (social constructivist theory). Furthermore, it has been argued that there is no universal model that can fully capture the dynamic interaction between the external and internal parts of development because learning and development take place in socially and culturally structured surroundings, which are also continually changing (Palincsar, 1998; Prawat, 1996). Some scholars argue that social constructivism is acknowledged when knowledge is taught as both individuals constructed and socially mediated (Windschitl, 2002), such as when people are both products and producers of their societies and cultures (Bandura, 2001). Woolfolk (2013) opines that social constructivists as those who believe that knowledge is socially constructed, and, some people have more power in defining what constitutes such knowledge. These are considered as the main principles in Vygotsky's Social Constructivism.

Based on the principles of social constructivism, knowledge construction refers to the types of social interactions with other people that allow individuals to build their understanding of the world (Vygotsky, 1978). This study adopts the Social Constructivism Theory framework as collaboration and interaction in Schoology, especially in vocabulary learning, will indirectly assist TESL trainee teachers in managing their learning structures systematically using technology.

Limberg and Alexanderson (2012) states that if the students are more independent in information seeking due to technological assistance, their learning process and the education system will be positively altered. Since TESL trainee teachers need to be more independent and work collaboratively with their peers in developing their vocabulary learning, this study is closely related to Social Constructivism

Constructing new ideas or concepts based on the latest or previous knowledge or experience is a major theme in Bruner's theoretical framework (Smith, 2002). Language learners are encouraged to explore particular information by selecting, transforming information, constructing hypotheses, and making a decision depending on a cognitive structure (for example schema, mental models) that provides meaning and organization to experiences. In this theory, learners are encouraged to discover principles by themselves. Thus, by conducting this research and developing Schoology in vocabulary learning, TESL trainee teachers will the chance to explore a learning management system that will enhance vocabulary learning by peer and trainer collaboration inside and outside the classroom.

Schoology also supports the learning process of language learners socially through dynamic and authentic activities that involve students' active participation. This theory supports this study as it priorities the active participation of language learners.

### **2.13 Theory of Connectivism**

This study also employs the Theory of Connectivism by George Siemen and Stephen Downes (2009) highlighting the importance of learners staying connected in creating a new climate of thinking (Duke et al., 2013).

The eight principles in Theory of Connectivism which are proposed by Siemen and Downes (2009) are:

- 1) the diversity of opinion in learning and knowledge;
- 2) learning as part of a connecting process in gathering information;
- 3) learning involves non-human appliance;
- 4) capacity to know more is more critical than what is currently known;
- 5) nurturing and maintaining connections is needed to facilitate continual learning;
- 6) ability to see the connection between fields, ideas, and concepts is a core skill;
- 7) currency (accurate, up-to-date knowledge) is the intent of all connectivist learning activities;
- 8) involvement in decision making as part of the learning process.

Firstly, the diversity of opinion in learning and knowledge involves both cognitive and affective fields. It depicts how knowledge is being distributed through the network and stored in various digital formats (Siemens, 2008).

The second principle refers to finding new information, processing and connecting to a network to share with others and gather new information through a cyclical learning process (Kop and Hill, 2008).

The third principle refers to the notion that information may be held within a group of things, not just a single person. For example, a class of students may know a lot as a group, but each student may not know everything, therefore the "class" is a non-human appliance that contains the knowledge. Allowing students to use technology, exposes them to a vast amount of information.

The fourth principle highlights student's learning capacity to critically understand their background knowledge. This involves various strategies in incorporating and updating the latest data, knowledge, and concept.

The fifth principle nurtures and maintains connections needed to facilitate student's continuous learning where it does not only maintain connections but also produce new ones.

The sixth principle allows learners to establish connections between fields, ideas, and concepts that covers multiple knowledge domains.

As for the seventh principle, it is a currency of knowledge (accurate and up-to-date knowledge) and the application of authentic experiences provided and supported by teachers are skills needed by the students especially in technology.

Finally, the last principle focuses on how intelligent decisions are being made based on brand new data and some changes in the education system which they will need beyond the classroom.

Connectivism blends knowledge from the past with the present to produce fresh interpretations (Siemens, 2004). As a theory that integrates technology into the world of knowledge, links prior knowledge to present knowledge, and encourages students to reach beyond their own understanding to connect information, connectivism is effective and closely related to the study conducted. In order to build a strong vocabulary by connecting all of their resources and knowledge, TESL teacher candidates had to be completely aware of their VLSs when utilising an online learning

management system (LMS). In this study, the research participant should effectively combine ideas, theories, and general knowledge. It acknowledges that technology plays a significant role in the vocabulary learning process and that staying connected all the time allows us to make decisions about the vocabulary learning. Additionally, it encourages group participation and conversation, allowing for various points of view and views when it comes to making decisions, solving problems, and understanding information. Connectivism encourages learning that takes place in environments other than a person, such as social media, online communities, blogs, or knowledge databases.

#### **2.14 The Five Principles of Effective Second Language Instruction (Barcroft, 2004)**

In learning a second language, most second-language learners prioritise grammar, syntax and subsequently lexis. However, Joe Barcroft's Second Language Vocabulary Acquisition: A Lexical Input Processing Approach (Barcroft, 2004) propose that learning vocabulary will lead second language learner to be more successful. He had listed the five effective principles of vocabulary learning through The Byki (Before you know it) Program utilising the concept of building a solid vocabulary foundation before considering other language aspects.

Barcroft's Five Principles of Effective Second Language Vocabulary Instruction (Barcroft, 2004) are first, present new words frequently and repeatedly in input. Second language learners need to be exposed frequently to the same words or phrases in making them remember the words or phrases as they had been repeated a few times

whether through their readings or listening skill. The language learners will focus more on the words that they had seen before a few times.

Second principle is using meaning-bearing comprehensible input when presenting new words. The foreign language terms are presented not only using text but also audio, giving opportunities for language learners to correct their pronunciations of the new words that they have heard. Additionally, pictures are also used to reinforce the language learners' learning process, especially in vocabulary learning.

The third principle is limit forced output during the initial stages of learning new words. Second language learners are not being forced to learn the new vocabulary in a limited time. They are given opportunities to work at their own pace before being encouraged to use the vocabulary that they learned in a larger context. Exclusive terms in the foreign language need to be mastered before learners learn the new vocabulary to construct sentences.

The fourth principle is limit forced semantic elaboration during the initial stages of learning new words. Second language learners are not encouraged to produce whole sentences because it would produce negative effects on language learning. After all, the second language learners' attention may be distracted if they are asked to perform other tasks while trying to deal with new words.

The last principle is progressing from less demanding to more demanding vocabulary-related activities. Second language learners are encouraged to start with a limited group of words before exploring wide vocabulary. The Byki program focus on

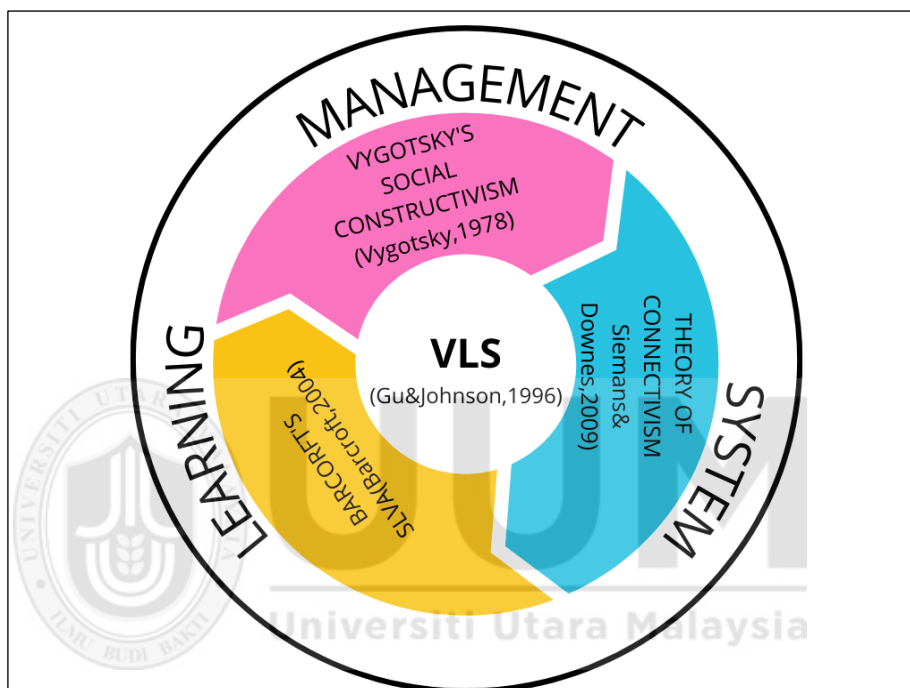
learners' progress from the simplest words learned to the most challenging one, simultaneously, boosting their confidence level in vocabulary learning and producing the foreign language (Barcroft, 2004). In conclusion, the principles highlighted in this programme stress the importance of learning vocabulary to successfully master a new language.

The Five Principles of Effective Second Language Instruction by Barcroft (2004) include presenting new words frequently and repeatedly, using meaning-bearing comprehensible input when presenting new words, limiting forced output during the initial stages of learning new words, limiting forced semantic elaboration during the initial stages of learning new words, and progressing from less demanding to more demanding vocabulary-related activities. These principles were also supported by other study which highlighted positive effects of providing learners opportunities to retrieve target words on their own and positive effects of explicitly instructing learners to attempt to learn new words before they encounter them in a text (Hulme & Rodd, 2021). Besides, these principles also place an emphasis on the allocation of limited processing resources during vocabulary acquisition, the identification of distinct vocabulary knowledge components (such as form, meaning, and mapping), and the selection of suitable forms of instruction for various developmental stages (Barcroft, 2004). It is closely related to the study in such a way that the TESL trainee teachers indirectly used different VLSs in retrieving their target words learned through the references, texts, information and learning resources in their vocabulary learning online via LMS.



These three related theories, VLSs taxonomies, and LMS were combined and became the theoretical framework of the study. This framework also integrates the use of online LMS for highlighting the VLSs of the TESL trainee teachers in the study.

## 2.15 The Theoretical Framework of the Study



*Figure 2.2* Theoretical Framework of the Study (Adaptation from Taxonomies of VLSs by Gu and Johnson, 1996, Social Constructivism Theory by Vygotsky, 1978, Theory of Connectivism by Siemens (2009), and Barcroft's Principles of Effective Second Language Vocabulary Instruction by Barcroft, 2004)

The Theoretical Framework of the study is depicted in Figure 2.2 which shows how the trainee teachers in this study used it as their vocabulary learning strategies in online LMS. The framework above is created based on the Taxonomies of VLSs by Gu and Johnson (1996), Social Constructivism Theory by Vygotsky (1978), Theory of Connectivism by Siemens and Downes (2009) and Barcroft's Five Principles of Effective Second Language Vocabulary Instruction (2004).

Based on Gu and Johnson (2003b), second language learner applied different language strategies for different types of task materials, task purposes and tasks with different level of difficulties. In this study, Taxonomies of VLSs by Gu and Johnson (1996) was selected based on its VLSs classification that suited and relevant to the study. The metacognitive domain and cognitive domain of Gu and Johnson's (1996) Vocabulary Learning Strategies (VLS) were separated into two groups. The planning, monitoring, and evaluating processes involved in vocabulary learning fall under the metacognitive domain. The cognitive domain contains techniques for guessing, using dictionaries, taking notes, memorising information through rehearsing and encoding, and lastly activating strategies. So, in this theoretical framework of the study, Gu and Johnson's VLSs taxonomies are the important elements in the study.

In Vygotsky's Social Constructivism, there are two main ideas had been highlighted in this theory. The first one is learners' active learning in constructing their own knowledge. The second one is this theory stresses on social interactions and experience in knowledge construction process (Bruning, Schraw ,& Norby, 2011). Besides, scaffolding is one of the constructivists approaches that is used by a teacher in making meaningful connection of what he knows and what the students know in assisting and supporting the students' learning development. The Zone of Proximal Development (ZPD) exists when the child has the ability to solve problems with the help of his peers and adult using cultural tools such language, maps, computers, and music.

Barcroft's Five Principles of Effective Second Language Vocabulary Instruction (2004) inform the theoretical framework for this study. First, creating or forming the context of language learning is an important feature in preparing trainee teachers for

vocabulary learning using the online learning management system, Schoology. This is to create their awareness of the vocabulary that they need to acquire based on the specific context by frequently exposing them to the same words or phrases through reading and listening skills.

Next, guided instructions are provided through various techniques such as using text, audio and pictures in reinforcing and guiding trainee teachers in their vocabulary learning. Trainee teachers will be assisted before they start using the LMS for their vocabulary learning as some of them are not familiar with the technical terms used in LMS.

The third principle provides the opportunity for trainee teachers to work at their own pace in mastering vocabulary using online learning in a larger context. They were given some time to share their online postings inside and outside the classroom.

The fourth principle is to avoid distracting the second language learners' attention and interest in vocabulary learning smoothly and having feeling less burden to memorise the whole chunk of the sentences. Through online learning, the trainee teachers were given the freedom to write their reflections using their sentences based on the tasks given spontaneously.

The second language learners are not encouraged to produce whole sentences because it would give negative effects on the whole process of learning the language because it may distract the second language learners' attention if they are asked to perform

other tasks at the same time that they are trying to deal with new words to their memory.

Lastly, the trainee teachers' progress in language learning will be observed using feedback through an online learning management system, Schoology. The trainers can freely communicate with trainee teachers either inside or outside the classroom, providing them with more freedom to express their opinion or disagreement. Modification in vocabulary learning happens when teachers replace the simplest words to help them understand and use these words in their writing.

The best feature which is being highlighted in this online learning management system, Schoology is a self-organised learner. Since the TESL trainee teachers are university students, this is hoped that this training will enable them to become more self-organised learners especially in enriching their vocabulary of the second language. Through LMS, the TESL trainee teachers need to be more systematic and professional in managing the tasks given by the instructor and they need to be more alert in checking the tasks posted by the instructor. At the same time, they have to give feedback to the responses given by the instructor.

Moreover, the vocabulary learning processes can be observed through active student's participation using LMS. They can read their peer's responses and give comments and suggestions, so indirectly they will be actively involved in the virtual conversations through Schoology. Here they learn to collaborate with their peers. Collaboration and sharing are often defined as "a coordinated.... activity that is the result of a continued attempt to construct and maintain a shared conception of a problem" (Roshelle and

Teasley, 1995, p.70). Some scholars defined collaboration as when the students engage in the interaction that serves to develop or sustain shared ideas, problems, outcomes, or deliverable products (Hathornand Ingram, 2002; Stacey, 2005)

In this study, only three principles out of the eight principles in the Theory of Connectivism proposed by Siemen (2009) were chosen: 1) nurturing and maintaining a connection, 2) currency and 3) decision making. These three principles focus on vocabulary learning strategies using online learning which is central in the present study. Trainee teachers must have the ability to nurture and maintain the connection in applying strategies used in vocabulary learning through continual learning. They must also expand their vocabulary knowledge and use it accurately in their language learning process while decision-making in choosing what to learn and how to connect in knowledge sharing is an important element in this study.

This study assumes that TESL trainee teachers have specific strategies in vocabulary learning, which increases their performance in language learning. When they can apply strategies systematically, they will be able to plan and organise their academic contents in a proper way that would be useful for their revision.

The combination of selected components from the underpinning theories in the theoretical framework of the study gives the deeper scope and perspectives on the importance of online LMS in enhancing VLSs among the TESL trainee teachers. Most of the earlier studies used mobile phones as learning tools in acquiring vocabulary (Emrah, 2010; Ferit et al., 2010; Haisen and Jack, 2011; George, 2006; Zoraini et al.,2009).

In other words, through the study conducted, the TESL trainee teachers can work collaboratively with their lecturers and peers in sharing the learning materials. At the same time, the study believes that the use of the learning management systems in the institute will have a direct influence on trainee teachers' commitment towards their studies which will lead them to become more innovative and creative teachers in this 21st Century learning. Some scholars had viewed that general language skills, content-specific language skills, and content learning are critical issues for all English learners (August and Hakuta, 1998; Gibbons and Cummins, 2002; Short, 1994).



## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter reports the methodology used in the study where it employs a qualitative lens using a case study design. It builds on different philosophical assumptions, strategies of inquiry and methods of data collection, analysis, as well as interpretation (Creswell, 2009). This chapter commences with the epistemology of qualitative research, followed by the rationale for using a case study. Subsequently, the data collection methods, procedures and analysis used are also described. Finally, the chapter ends with some ethical issues and ways in enhancing trustworthiness of a qualitative research which include reliability, validity, and generalizability of the study.

#### **3.2 Qualitative Research**

Qualitative research design is used to explain an in-depth and intricate understanding of meaning and actions. Qualitative design is often used when researchers study human behavioral changes in which the data collection is based on what participants do in the learning process (Yazdi and Kafipour, 2014). Creswell (2014) states that qualitative research is an unfolding model of inquiry that involves the diversities of perspectives. In other words, the data and documents can be generated via different methods for the investigation (Merriam, 2009).

There are several distinctive underlying principles in qualitative research consisting of complementary methods which overlap between quantitative and participatory

methods. Qualitative research is considered holistic as it investigates the interconnected process of different dimensions in understanding the interlinkages and tension between them. Qualitative method also seeks to understand complexities as a more precise reflection of reality. The focus of the qualitative method is to understand different perceptions, aspirations and interests and how these influence accounts of “facts” and events rather than attempting to reduce them to one version of reality. In other words, this qualitative study will offer the wide scope of thought in different perspectives based on its findings. Moreover, the qualitative methods are heuristic, interpretative and inductive, emphasising on understanding the \complex scope and focus of the research which are continuously redefined. Qualitative heuristics are applicable to all topics within psychology and the human and social sciences which are open to empirical research. Qualitative data are specially suitable to discover qualitative relations such as structure or patterns and structural changes

Qualitative research requires face-to-face fieldwork where different dimensions are needed to form a cumulative understanding of a particular context. This is consistent with what has been defined by Patton (2002). She asserted that qualitative research is an attempt to understand the unique interactions of individuals in a particular situation. In other words, the purpose of understanding is not necessarily to predict what might occur, but rather to understand in-depth the characteristics of the situation and the meaning assigned by participants and what is happening to them at the particular moment. Thus, in the context of this study, an interpretative qualitative design is the most suitable design as the researcher is interested to explore and understand the vocabulary learning strategies used by a group of TESL trainee teachers at one ITE in



the northern region of Malaysia. Their unique interactions learning English vocabulary using Schoology LMS will be explored.

### **3.3 Research Design**

Research design is the framework of research methods and techniques chosen by a researcher. The design allows researchers to hone in on research methods that are suitable for the subject matter and set up their studies up for success. The study will be more successful if using the right research design. Successful research investigations produce reliable and unbiased information.

#### **3.3.1 Interpretive Case Study Research Design**

This study used a case study design to illustrate a more general principle which can be defined in a variety of ways (Nisbet and Watt, 1984:72). It is defined as a useful approach when there is a need to obtain an in-depth appreciation of an issue, event or phenomenon of interest, in its natural real-life context (Crowe et al., 2011). It is a 'study of particular' (Stake, 1995) and investigates 'a contemporary phenomenon (the case) in its real-world context' (Yin, 2009). A case study is an intensive description and analysis of phenomena or social units bound by time and place (Creswell, 1998; Yin, 2003). Patton (1980) defines a case study as the descriptive, analytic, interpretive, and evaluative treatment of the more comprehensive descriptive data that is in the case record. It enables readers to understand the unique example of real-world actions in real contexts and to connect ideas with abstract principles.

A case study has several characteristics as centres on providing vivid descriptions of events relevant to the case, a chronological of narrative events, and blends a description of events with analysis. The researcher becomes a research participant to understand events and demonstrate the richness of the case in writing a report (Hitchcock and Hughes, 1995). Moreover, this study focused on the critical case by exploring vocabulary learning strategy using Schoology, LMS as proposed by Yin (2009) who suggested that a single-case design focused on a critical case, an extreme case, a unique case, a representative or typical case and a revelatory case. The TESL trainee teachers in this study were unaware of the VLSs utilised or their usefulness in learning some of the difficult or unfamiliar terms they encountered during their learning process. They may be aware when they require the words, such as in writing assignments, or when they must discuss some of the topics or contents of the courses in their presentations.

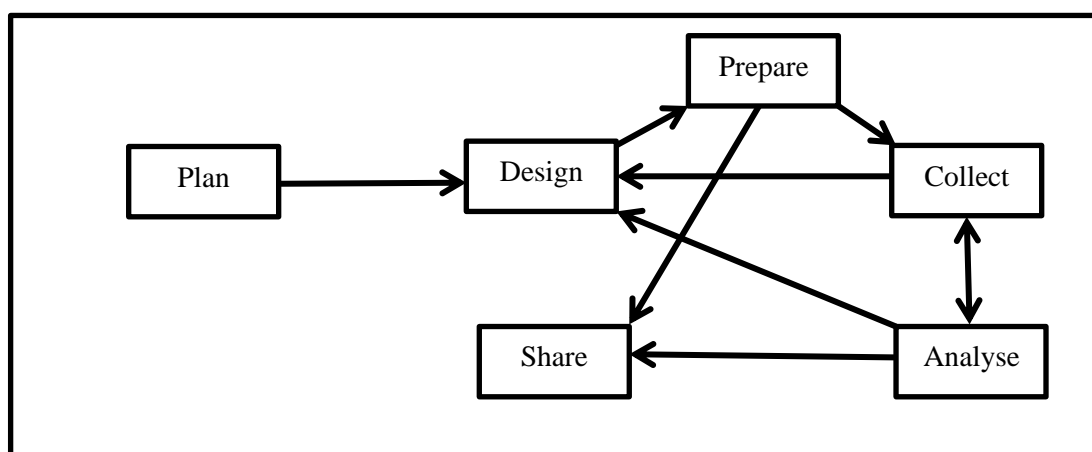
The case study will be founded on the five traditional concerns highlighted by Yin (2009). Firstly, the case study's questions can answer the "how" and "why" types questions where the more specific the questions, the stronger the case study. Second, if applicable, the study's propositions or hypotheses must be tested in the study. Thirdly, the case study's "unit of analysis" which relates to the key issue in the study should be concrete (a real-life phenomenon) rather than abstract (an argument). Fourthly, the data analysis is done via patterns, explanations, or analysis of events. Lastly, the case study needs to have a clear indication of how the interpretation of the findings is done.

Apart from that, the distinction with teaching cases must be made. Furthermore, the researcher must make an effort into knowing how to arrive at a generalized conclusion if desired and carefully manage the level of effort in conducting the case study. Finally, the researcher must also be able to understand the comparative advantage of the case study. In the context of this study, it fits the case study design as it investigates a 'contemporary phenomenon' which provides an in-depth description of a social unit or a group of participants, 'bounded by time and place'. Second Language Acquisition was one of the key courses that the TESL trainee teachers had to study before graduating. The course, along with the other three major courses in Semester Two Year Three, took fifteen (15) weeks to complete.

In conducting a case study, Nisbet and Watt (1984) acknowledge the strengths and limitations of a case study. The first strength is that the results are more explicitly stated and understood by the audience. Additionally, the results are immediately intelligible, provide unique features in understanding the situation, are realistically strong, and can provide insights into similar situations and cases. Finally, the case study can also be conducted by a single researcher where she becomes one of the participants in the study. On the other hand, Nisbet and Watt (1984) also outlined three weaknesses of the case study. One of them is that the results may not be generalized except when other researchers see their application. The second weakness is the case study is not easily open to cross-checking, hence they may be selective, biased, personal and subjective. The case study is also prone to the problem of observer bias. There were few steps to be taken in avoiding bias for example when planning a study, the researcher remains aware of the potential for bias in every part of the process

including finding a purposive sampling method to find participants. The researcher needs to be mindful of using parameters suited for reducing bias in type of research. Besides, by using some systematic reflection protocols for before submitting the online reflective postings using online LMS, it will reduce the possibility of bias systematically. Taking these weaknesses into consideration, a few measures have been taken to ensure validity of the research.

It is important in a qualitative study where the participants experience the issue or problem in a natural setting (Creswell, 2009). In this case study, an institution located in the northern area is selected. The participants are TESL trainee teachers whilst the researcher was a trainer who participated actively and had face-to-face interaction with the participants while conducting the study. The researcher became the key instrument in gathering the data needed through observations, using the researcher's reflective journal, conducting interviews, and examining the personal video of the classrooms. By using multiple sources of data as mentioned by Creswell (2009), a complete understanding of the phenomenon can be achieved.



*Figure 3.1* Case study research processes (Yin, 2009)

Figure 3.1 presents the six processes in conducting a case study research by Yin (2009). The research starts with planning the case study research, followed by designing the methods, preparing the setting of the study and focusing on the data collection methods, such as how data triangulation helps to address the distinctive technical condition since a case study will have more variables of interest than data points (Yin, 2009). Subsequently, the research involves analyzing and sharing data by looking for pattern explanations, analysis of events as they unravel over time, cross-site and cross-case analysis (Yin, 2009).

Case study is the most appropriate design for the present study as it investigates into specific instances in its real context. The use of different methods such as interviews, observations, students' reflective journals, and the researcher's reflective journal helped to triangulate the multiple data sources in exploring vocabulary learning strategies using Schoology among TESL trainee teachers in ITE. Besides, the study also explored some of the issues and challenges that TESL trainee teachers faced in using an online learning management system.

### **3.4 Preliminary Study**

The purpose of the preliminary study was to examine the online LMS usage in the study and also to test the instruments used in the study. The findings of the study were presented descriptively based on the Seven Principles of Learning by Weibell (2011) and had been analysed qualitatively. The preliminary of the research is on application of online learning management system in TESL trainee teachers'

acquisition and application in learning the content subject on Language, Culture and Society. Learning Management System (LMS) is one of the virtual learning environments which delivers e-learning using applications such as Moodle, Blackboard, and Rcampus. LMS is described as the software application for the administration, documentation, tracking, reporting, and delivery of electronic educational technology in creating and managing courses online. It will ease the digital learning objects created on the system to be supported, reused and shared by the learners.

Choosing Schoology, as one of learning management system which can be summarized as the management software that ease the learning content, resources, activities planned, and easily being administered (Hobbs,2005).

The study aims to explore learning management system in TESL trainee teachers' acquisition of the content subject and to gauge the extent to which the learning management system assist the TESL trainee teachers' application of the content subject.

#### **3.4.1 Methods of the preliminary study**

The preliminary study was using qualitative approach, and explorative in nature. The data was collected based on trainee teachers' online structured interview questions (Appendix B) after each interaction/lesson/session in order to gain insights on the usage of learning management system, Schoology. The preliminary study was based on the framework from Creswell et. al (2011) which was the qualitative phase. It involved five (5) TESL trainee teachers Second Semester of Foundation Programme

of Institute of Teacher Education (ITE) of Darulaman Campus. The online structured interviews were posted by the trainee teachers through Schoology. Data were analyzed using Thematic Analysis (Boyatzis, 1998) which was subjected to the participants' personal reflections, and using field notes based on researcher's observation. The findings were based on Seven Principles of Learning by Weibell (2011).

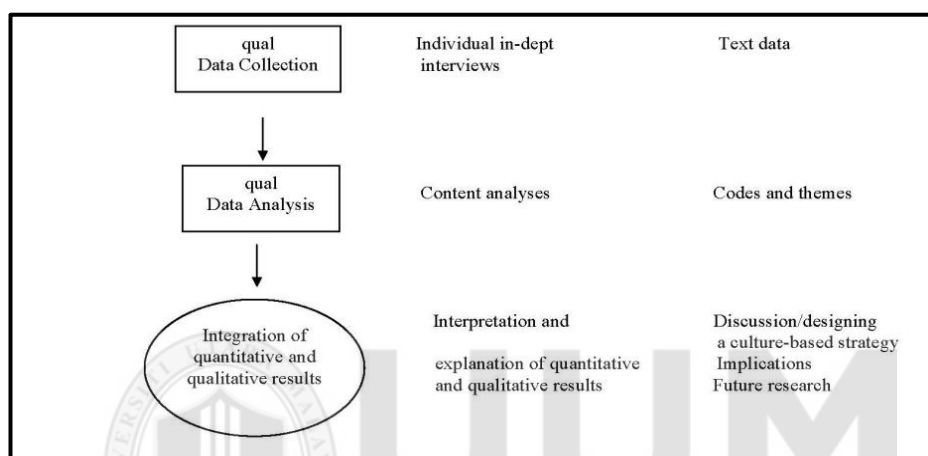


Figure 3.2 The study framework derived from (Creswell et al.,2011)

### 3.4.2 Findings and Discussion of the Preliminary Study

The findings of the study were presented descriptively based on Seven Principles of Learning by Weibell (2011).

**Principle #1 – Potential.** Humans are endowed with an inherent potential for increase in capacity, the establishment of habit, and the definition of being.

Majority of the participants had the potential to increase their capability of doing something in understanding the content that they had learnt using learning management system.

**Principle #2 – Target.** Human potential may be channeled intentionally toward a specific, predetermined target of learning, or will otherwise follow incidentally from the conditions to which a person is subjected

Majority of the participants responded that learning management system assists them in getting the input of the content subject and at the same time helping them in conducting other activities

**Principle #3 – Change.** Learning is a specific type of change, which is governed by principles of (a) repetition, (b) time, (c) step size, (d) sequence, (e) contrast, (f) significance, and (g) feedback.

Majority of the participants were aware of some changes in their learning style in

**Principle #4 – Practice.** Principles of change are activated and aligned with learning targets through models of practice, exercise, or experience.

Majority of the participants felt that learning management system ease them in practicing and exercising some skills such as writing skill and reading skills effectively.

**Principle #5 – Context.** Learning is facilitated by a context of practice that is the same as, or accurately represents, the context of performance.

Majority of the participants were aware of useful distinction is made in the framework between internal context and external context. Internal context is defined by one's state



of thought, emotion, and belief. External context is defined by the presence of other people, the physical setting, and any tools or objects present.

**Principle #6 – Engagement.** Learners will often engage in certain activities as a matter of habit, though they are also influenced by their current capacity to engage, as well as factors of motivation and inhibition related to the activity as a whole, part of the activity, its circumstances, or its expected results.

Majority of the participants engaged in certain activities, do things in a certain way, or avoid certain activities, based on previously established habits.

**Principle #7 – Agency.** Learners are not passive recipients of learning, but active agents with the ability to choose how they will apply their attention and effort, and to choose what learning activities they will engage in. Others may exercise their agency to promote or inhibit the agency of the learner, and may play a role in facilitating or impeding successful learning.

Majority of the participants are assumed to be an active agent, able to determine his or her own learning targets, practice models, contexts of practice, and reasons for engagement. A learner is also able to choose whether or not to engage with learning opportunities that are determined by others, and to decide what level of effort to give.

The major findings of this preliminary study indicated evidence of a teacher centered, content focused e-learning approach, both teacher trainer and trainee teachers indicated willingness to learn and engage more in the online environment. In other words, the instruments were applicable to be used in the main study.

LMS as learning enhancer which it is tend to make the content management simpler with one centralized repository for the users personal, shared, and third-party resources. It can be implemented by building and engaging content by creating, integrating, or embedding any media, including audio and video, to personalize learning. Besides, it ensures the consistency by aligning the content to the learning objectives and share it with the entire department. Furthermore, the trainee teachers were able to share the content instantly by housing all the content of the lesson in one place.

The practitioners were able to immediately adapt their curricular and pedagogical approach to fit individual demands by making data-driven decisions. The LMS also encourages trainee teachers to share content with their peers, effectively closing the instructional gap across schools and explore VLSs in understanding some of the difficult words and terms in the content subject. Besides, in this preliminary study, they were exposed to write reflections on the usage of LMS. Some trainee teachers were able to change shared resources by exploiting and adapting them to meet the needs of their students without jeopardising the resources' original integrity.

### **3.4.3 Conclusion of the Preliminary Study**

With the widespread adoption of the internet and technology, an increasing number of LMS are becoming available for use in both educational and non-educational settings. Teachers must be highly selective in selecting the proper teaching platform for the right goals due to the variety and sophistication of LMS. It's not so much what teachers do with learning tools as it is how they do it that makes for an effective teaching and

learning process. LMS provides unequalled access to a vast network of dedicated educators, instructional resources, best practices, and cutting-edge ideas. It facilitates peer collaboration and sharing in a more efficient manner than before.

The teacher trainer and practitioner should serve as a role model for how to use the most up-to-date learning platform to help trainee teachers become more focused on learning content subjects and using various VLSs to vocabulary learning. This preliminary study made a methodological contribution as a key platform for employing an online learning management system, and it will be further investigated in the main study. Figure 3.2 below presents the research procedures of the study.



### 3.5 Data Collection Procedures

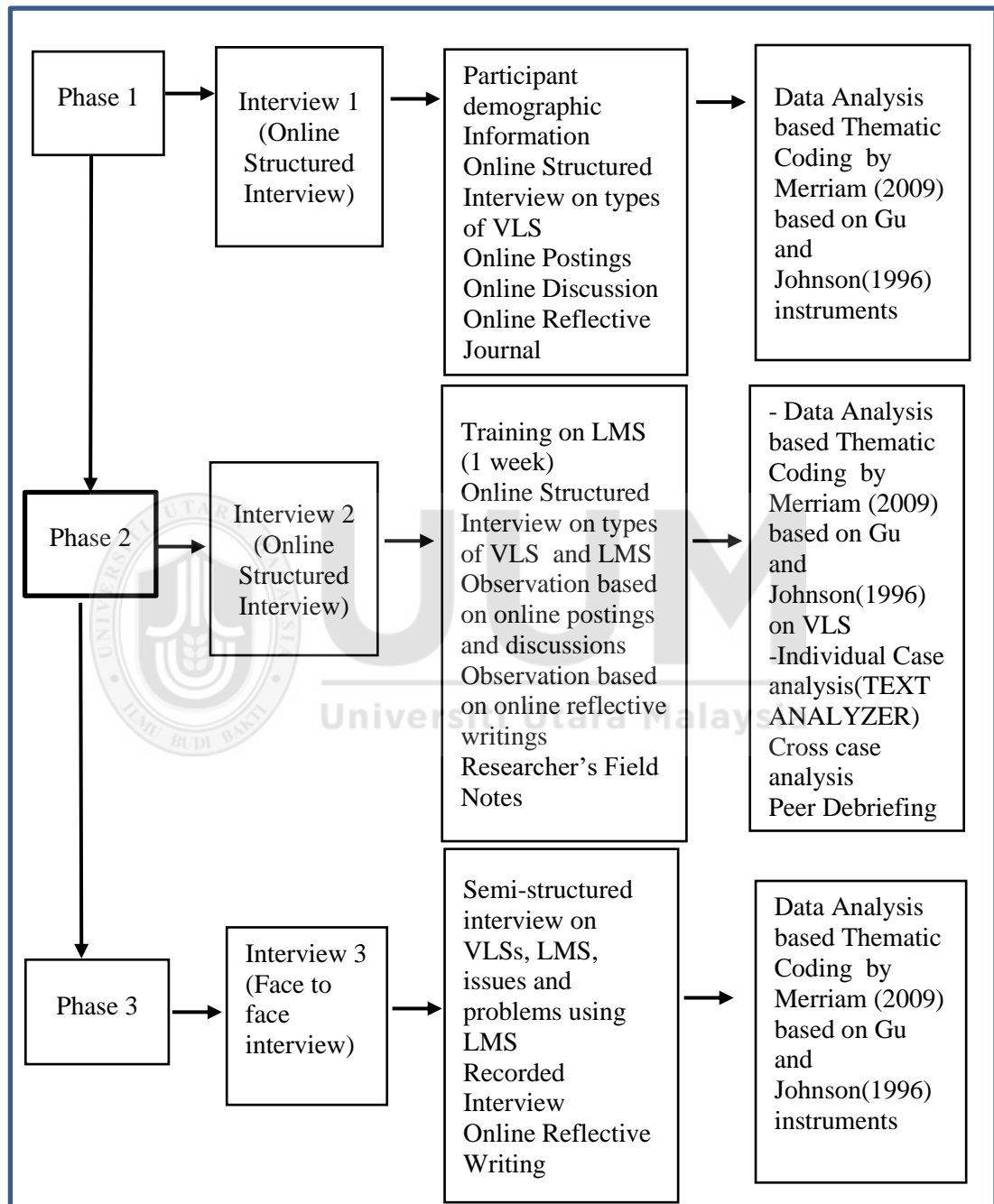


Figure 3.3 Data collection procedures of the main study

The research procedures of the study comprised three phases. In the first phase, the researcher conducted an Interview 1 to obtain the demographic information of the research participants using a structured online interview via LMS. This preliminary data provided an overview of the researcher participant's knowledge and experience in using online learning management system and their current vocabulary learning strategies. Besides, the researcher also collected the profile of each research participant in the study for understanding the personality of each research participant.

The second phase involved the training on LMS, interview 2 with the participants, which focused on the types of VLS and LMS observations on the VLS used, online postings and discussions, online reflective journal writing, and the researcher's field notes. The training on LMS took one week before the actual study was conducted. The research participants were introduced to the Schoology interfaces using the module provided. The research participants were able to manage and use the LMS using the module provided (Refer Appendix C)

The observation on the online structured interview on types of VLS and LMS was done by the researcher during the phase. The researcher uploaded the online structured interview and downloaded the responses after all the research participants had answered the online structured interviews.

Besides, observation based on online postings and discussions was also important in the study. The researcher observed the online postings and discussions of each research

participant, so the researcher could keep track of the research participants' records after each activity and tasks assigned to them.

The observation based on online reflective writings was one of the main sources for monitoring the research participants' involvement in the study. The researcher needed to prepare a checklist by print screening the online postings of the research participants using official institution email since all the research participants needed to use the institution's official email for their learning purposes.

In phase 3, interview 3 was conducted after the end of the online discussion. The face-to-face interview sessions were conducted with six selected research participants on a voluntary basis. The interviews were recorded using the audio and video recordings. The interviews were transcribed based on a few steps. In the first step, the researcher listened to and watched the full video recording of the six research participants carefully. Secondly, the researcher used a computer to draft the transcriptions in the formatted form prepared by the researcher, which contains the details of the interviews (Appendix L).

Next, the research participants' online reflective writings were analyzed using Text Analyzer to rate the difficulty level, including the number of words, average sentence length, average word length and word complexity. The participants' online reflective writings were also analyzed based on the Common European Framework (CEFR) to determine the language proficiency band.

### **3.6 Context of the study**

The context of the study elaborated on the location of the study, the research participants and the role of the researcher.

#### **3.6.1 Location of the study**

This case study adopted purposive sampling which is largely used in qualitative studies and can be defined as selecting units (e.g., individuals, groups of individuals, institutions) based on specific purposes associated with the research questions (Certini et al., 2014). The location of the study was the ITE Darulaman Campus (ITEDC) which is one of the ITEs in Jitra, Kedah situated in the north of Malaysia. It becomes the “flagship” of the five other ITEs known as the “satellites” in the northern zone of Malaysia namely, ITE Sultan Abdul Halim Campus, ITE Tuanku Bainun Campus in Bukit Mertajam, ITE Perlis Campus in Kangar, ITE Penang Campus in Penang Island and ITE Ipoh Campus in Ipoh. ITEDC consists of 198 lecturers and 688 trainee teachers. There are two full-time programs offered which are Foundation Degree Programme or *Persediaan Program Ijazah Sarjana Muda Pendidikan (PPISMP)* and Degree Programme or *Program Ijazah Sarjana Muda Pendidikan (PISMP)*. There are also two in-service programmes which are: In-Service Teachers Degree Programme or *Program Pensiswazahan Guru (PPG)*, and Diploma of Education Programme for In-Service Teachers or *Kursus Dalam Cuti (KDC)*

#### **3.6.2 The research participants**

This study involved a group of 14 TESL trainee teachers from the same class, year of study and age where they enrolled in the same programme. The participants were

selected based on purposive sampling and all the qualified participants met the standard processes and procedures for their ITE admission. All the research participants selected for this study were studying at ITEDC and they were in their Sixth Semester of the Bachelor of Education TESL programme. This programme was specially designed to train prospective teachers set by the Ministry of Education Malaysia to cater to the various specializations for the needs of primary schools. They were selected based on homogeneity of their courses, age and qualifications.

### **3.6.2.1 The Research Participants' Profile**

There were fourteen (14) research participant involved in the study. Below the detailed research participants' profile who involved in study in general.

#### **Felix**

He is a 19-year-old Christian-Indian who lives on Langkawi Island and is a good-looking student. He is a TESL student in his sixth semester of the Bachelor of Education degree. He was a dedicated student who became a member of the ITEDC Students' Representative Committee. Because English is his mother tongue, he was extremely fluent in the language. He was a laid-back guy who got along well with his Malay colleagues. He was a tech knowledgeable individual who knew how to use technology effectively.

#### **Maizatul**

She is an 18-year-old Kelantanese girl with a sweet personality. She is a sixth-semester TESL student in the Bachelor of Education programme. She was a gifted young lady,



despite the fact that she mixed her Kelantanese dialect with her friends and lecturers. She had, however, demonstrated an enthusiasm in learning the second language by actively participating in all group and individual activities.

### **Nini**

She is 19 years old and has a one-of-a-kind personality. She is a sixth-semester TESL student in the Bachelor of Education programme. She is a Kelantanese native who studied at a local university before enrolling in the ITEDC in Engineering Programme. She received strong support from her friend Ain, who was also her ITEDC hostel roommate. They were inextricably linked, especially when working in groups.

### **Miswar**

He is an 18-year-old Kedah boy from Kulim. He is a TESL student in his sixth semester of the Bachelor of Education degree. He had a strong command of the English language, which he demonstrated throughout class presentations. He was a very good performer in English theatre, despite his basic appearance, and he was a highly smart and informative person. He attended one of Kedah's boarding schools.

### **Syadia**

She is a 19-year-old Kelantanese who is now enrolled in the sixth semester of the Bachelor of Education TESL programme. She enrolled in a local university before pursuing her education at ITEDC. She was also a committed student who was chosen to go to Laos for three weeks with Yayasan Sukarelawan Siswa (YSS), or Student Volunteers Foundation, which is dedicated to cultivating a culture of volunteering

among Malaysia's tertiary students. She was also a students' representative committee for the ITEDC, and she spoke English well enough to communicate with friends and lecturers.

### **Helmi**

In the class, he is an 18-year-old modest and humble boy. He is a TESL student in his sixth semester of Bachelor of Education TESL programme. He travelled to Laos with Syadia, as part of the Yayasan Sukarelawan Siswa (YSS) or Student Volunteers Foundation. He has a lot of experience from his volunteer work, and he has an excellent command of the English language when it comes to class activities and talking with his classmates and lecturers.

### **Shazwani**

She is an 18-year-old Kedah girl from Bukit Mertajam. She is a sixth-semester TESL student in the Bachelor of Education TESL programme. She is a dedicated and humble student. She has a moderate command of the English language. During the class presentations, though, she was able to interact with others.

### **Asma**

She is 18-year old girl from Chuping, Perlis. She is a sixth-semester TESL student in the Bachelor of Education TESL programme. She is a very outstanding and presentable student in the class. She is very fluent in communicating using the second language especially during the class presentations. She studied at one of the top boarding schools for her secondary education in Malaysia

**Ain**

She is 18-year old Kelantanese girl and she is a sixth-semester TESL student in the Bachelor of Education TESL programme. She has an interesting personality and she had an experience to be a choir conductor for ITEDC. She is highly motivated and supportive student with high proficiency in the second language.

**Atikah**

She is an 18-year-old Kedahan girl enrolled in the Bachelor of Education TESL programme for the sixth semester. She is a quiet student who works hard. Her English language skills are at a medium level.

**Syuhada**

She is 18 years old and is in her sixth semester of the Bachelor of Education TESL programme. She is from Kedah and attended one of the state's national secondary schools. She has an inferiority complex at first and has trouble conveying information during the presentation. But she has shown her interest to learn the language successfully.

**Fatin**

She is an 18-year-old and enrolled in the Bachelor of Education TESL programme for the sixth semester. She is from Baling, Kedah and she studied at one of the boarding schools in Kedah. She has shown her good communication skills in using English language in the classroom.

### **Insania**

She is an 18-year-old and enrolled in the Bachelor of Education TESL programme for the sixth semester. She is from Kangar, Perlis and she studied at one of the national secondary schools in Kedah. She has medium level of proficiency but she has shown her interest and hardwork to learn the language successfully.

### **Zafrina**

She is an 18-year-old and enrolled in the Bachelor of Education TESL programme for the sixth semester. She is from Kedah and she studied at one of the national secondary schools in Kedah. She is a very quiet person and has medium level of proficiency in using English as her second language. She has shown her interest and hardwork to learn the language successfully

All the fourteen research participants involved in the study. Only six of them include Asma, Ain, Insania, Syadia, Syuhada, and Shazwani volunteered for face-to face interviews.

#### **3.6.2.2 Research Participants General Requirement**

The research participants were required to take PPISMP for twelve months in two semesters at the ITE where they have to pass the PPISMP program and then offered to do the degree program. They will take 4 years at the ITE pursuing the course in a full-time mode. In terms of qualification, most of them are students who achieved excellent grades in any five subjects in *Sijil Pelajaran Malaysia (SPM)* or Malaysian Certificate of Education including Malay Language and History. The participants must pass

English and not exceed 22 years old. The participants were selected based on the same system used throughout Malaysia. Therefore, they are considered homogeneous sampling. They had to apply for the programme using the online application through the Ministry of Education and Institute of Teacher Education of Malaysia (ITEM) Portal and upon fulfilling all the qualifications based on the program that they had applied, they had to sit for Teacher Personality Inventory Test or *Inventori Sahsiah Keguruan (INSAK)* for the interview. The interviews were conducted by qualified panels were selected by the Institute of Teacher Education (ITE) Malaysia. Participants were chosen based on their academic merit score, their interview performance, and personality test. The priority was given to the participants who actively participated in co-curricular activities. By narrowing the participation selection, the study hopes to yield realistic responses.

Choosing informants with insider's knowledge of the research domain is a major concern in any case study (Bonner, 2002). As such, the pedagogical exposures and skills of the research participants were also part of the selection criteria in this study.

Since the study involves phases, a small size of researcher participants is needed to ensure that the results are unbiased and representative. Furthermore, samples in qualitative research tend to be small in order to support the depth of case-oriented analysis that is fundamental to this mode of inquiry. Besides, qualitative samples are purposive, that is, selected by virtue of their capacity to provide richly-textured information, relevant to the phenomenon under investigation (Vasileou et.al, 2018).

Apart from courses, age, and qualification, another selection criterion was ability in using technology. The participants in this study had some skills in using technology

and computer since they had been in the institute for at least six months where all of them had personal computers and subscribed to the internet service at ITEDC. The researcher also sought guidance from the computer technicians while conducting this study especially in managing the LMS with the participants.

### **3.7 Role of the researcher**

Participant observation enables researchers to learn the perspectives held by the population. In a qualitative study, participant observation involves the researcher being part of the researched group and reflected on the experiences and interpreted on the meaning of the interaction they gathered in the process (Di Domenico and Phillips, 2009). The researcher plays a vital role in accomplishing this through observation alone or by observing and participating in the community's daily activities where they approached participants of the study in their environment. As the researcher was teaching at ITEDC, she played the roles as the teacher, the trainer, the researcher, and also observer to understand the phenomenon in this study. Particularly, she observed the participants' behaviours while training them using LMS (Appendix C), interviewed them and examined relevant documents (Creswell, 2009). She also conducted interviews with six TESL trainee teachers to gauge their vocabulary learning strategies in their second language before and after using the online learning management system (LMS). By introducing online LMS Schoology as a learning platform, it has boosted the participants' interest and engagement in this case study. Ultimately, the researcher had exposed the TESL trainee teachers with the 21st Century tools for preparing them with the current digital skills for their future as teachers

### 3.8 Methods of Data Collection

In this case study, the researcher used multiple data collection methods such as online observation, structured and face-to-face interviews, document analysis, and reflective writings. Table 3.1 summarizes the research methods of the study based on the research questions.

Table 3.1

*Summary of the Research Methods Based on the Research Questions.*

Research Questions	Methods Used	Instruments Used	Methods of Data Analysis
1. What are the types of vocabulary learning strategies used by TESL trainee teachers?	Interview 1	Structured online interview protocol	Data Analysis based Thematic Coding by Merriam (2009) based on Gu and Johnson(1996) instruments, Barcroft (2004), Connectivism(2009) - Data Analysis based Thematic Coding by Merriam (2009) based on Gu and Johnson (1996) on VLS, Barcroft (2004), Connectivism(2009)
2.How does the online - learning management system assist TESL trainee teachers in enhancing their vocabulary learning strategies?	Interview 2	Structured Online Interview on types of VLS and LMS Observation Checklist-based on online postings and online discussions Observation Checklist-based on online reflective writing Researcher's Field Notes	-Individual Case analysis (TEXT ANALYZER) Cross case analysis Peer Debriefing Data Analysis based Thematic Coding by Merriam (2009) based on Gu and Johnson (1996) Barcroft (2004), ,Connectivism(2009) instruments
3. What are the issues and challenges faced by TESL trainee teachers in using the online learning management system?	Interview 3	Face to face interview on issues and problems using LMS  Online Reflective Writing	

### **3.8.1 Observation**

At the heart of a case study is the observation method (Cohen, et.al.,2011). Observation is a way of gathering data by watching behaviour, events, or noting physical characteristics in their natural setting in this study, there were two types of observation

#### **3.8.1.1 Online observation**

First is the online observation using LMS is an instrument used in the study. It can be overt where everyone knows they are being observed or covert where no one knows they are being observed and the observer is concealed (Methods and Evaluation, 2008).

Covert observation happens when people are more likely to behave naturally as they do not know they are being observed. In the context of this study, overt observations were conducted where the participants were informed of the purpose of the study due to ethical issues. The consent from the research participants is important when conducting the observation by providing to the participants is about the future consequences and possible implications of participation in the research. Research participants' privacy was taken into consideration with the trustful relationship between the researcher and the research participants. Additionally, they were informed about the minor or major details of their participation in the observation. (Appendix D)

Kovalainen (2008) asserted that observation is a method of collecting empirical data by human, mechanical, electrical, or electronic means. The researcher used various methods of data collection either through direct observation or using technology such using LMS in implementing the online observation The researcher may or may not



have direct contact with the people being observed. Direct observation is when the researcher watches interactions, processes, or behaviours as they occur, while indirect observation involves watching the results of the interactions, processes, or behaviours (Methods and Evaluation, 2008). In this study, both direct and indirect observations were conducted through online observation since most postings and the activities were done online using LMS. The research participants posted at least eight (8) online reflective journals based on the tasks assigned but they were allowed to comment and response their peers' postings by giving constructive feedback. The focus of the online observation was to examine how VLS was used in their reflective writings and to observe the problems faced by them. These observations allowed the researcher to monitor the ongoing process of vocabulary learning strategies used by the research participants. The use of immediate awareness, or direct cognition, as the principal mode of research contributes to valid and authentic data. In this case, semi-structured observation was employed to record the spontaneous behaviour of the research participants in natural surroundings. While observing, the researcher also took some field notes and recorded the classroom interaction in a video.

In observing the participants' responses and actions, the researcher cum the participant-observer focused on the situation or context featured in the case study (Yin, 2009). The active participation of the researcher in activity engagement is crucial. Some scholars agree that the advantages of the participant observation approach of non-verbal behaviour provide more impact as it records action naturally and differs from people describing what they said or did, or what they believe they do or say in the future (Borg, 2004; Kovalainen, 2008). Since the researcher had more

opportunities to determine the ongoing behaviour of the participants, the researcher attained more awareness on the learning environment, as well as observed other issues and problems pertaining to the study. In this study, the researcher extensively used observations throughout Phases 1 and 2. The first observation was based on the updates of the research participants' online postings from the LMS such as their comments, responses, or feedback from the tasks given or activities conducted during the study. Additionally, the researcher would be able to see what the research participants were reading or posting. If research participants were required to do any tasks, researchers could easily keep track of updates by monitoring their emails or frequently visiting the LMS.

The second method used was online reflective writing. Online reflective writings were posted by the research participants after each activity or task conducted during the study (Refer Appendix Q). They had to produce the online reflective writings using online LMS. The research participants were first instructed on how to create online reflective writing by posting questions based on the task or activity they had completed. Ismail et al. (2012) stated that in order to improve the students' writing ability, their writing attitude, and their writing interest, the online writing programme should also provide students with the opportunity to access appropriate writing practise and materials. So, online LMS, Schoology is the best platform for the TESL trainee teachers to practice their writing skills. Their online reflective writings' progress could be observed directly from the online LMS. The observations were conducted during class interactions with the research participants as participants could focus on the tasks assigned to them more readily.

The participants in the study were given complete freedom to write their online reflective writings about the content subjects taught and their feelings. The research participants were urged to compose online reflective essays in this study, but there was no set format. This was done to prevent the research participants from becoming anxious about adhering to the format before posting them on an online LMS. Therefore, only eight (8) online reflective essays of six randomly selected research participants were analysed using Text Analyzer in this study. There were 48 online reflective essays to be analysed. As the researcher who played a crucial role in the study and used a personal lens, one of the obstacles is in addressing data saturation. When the data collected in the study had reached the depth of the data, the researcher had to make decision to stop analysing when there was no new data, no new themes, no new coding and ability to replicate the study (Guest et.al.,2006).

The researcher standardizes the recorded sheets based on the tasks assigned for the particular phase and online observation field notes. These forms were used for collecting data that can be easily described in advance including the tasks assigned for each phase. Besides, the researcher also lists the interactions, processes, or behaviours with space to record open-ended narrative data. By using the online observation field notes, the researcher also collates the collection of data by having narrative data that can be written or dictated onto a tape recorder (Methods and Evaluation, 2008).

### **3.8.1.2 Online observations based on online postings and discussion**

In this study, online observation-based online postings, presentations and discussions were utilised in data collection. In this study, the research participants' online postings

were very important document in depicting the active involvement of the research participants using online LMS. Some research participants did some discussions based on their peers' posting based on the content subject that they had learned. (Appendix I)

After each interaction during the study and when the tasks were assigned depending on the topic addressed, the researcher would review the online postings from each research participant. The study participants were urged to respond to their peers' ideas or opinions on the issues by posting their own discussions of what they had learnt about them. The researcher would utilise the field notes to observe the replies of the research participants and to write up the observation in detail for subsequent analysis.

#### **3.8.1.3 Online reflective journal writing**

In this case study, reflective writing was incorporated to provide a data set of participants' reflections and also the researcher's reflection on the research act (Valerie, 1999). In their reflective writings, the participants were also asked to write about their experiences and their feelings when using the learning management system, Schoology, in their vocabulary learning. They also refined their ideas, personal beliefs, and their responses in their reflections.

The research participants wrote their online reflective writing in all three phases of the study within the 15-week interaction. They expressed ideas and knowledge freely in their online reflective writings on the vocabulary learning strategies that they have used especially in understanding the content subject. The researcher observed the research participants in preparing their personal reflective writings and collected them

after each session. The participants could also e-mail if they did not have enough time or needed more time to prepare it in detail. Alternatively, they could directly post it through LMS. The reflective writings contribute to the inner feelings of the participants on the vocabulary learning strategies they used in an online learning management system.

Furthermore, the researcher conducted learning sessions in the classroom, observing the research participants' responses through the online learning management system. Since the learning sessions took 15 interactions, the researcher managed to develop close and informal relationships with the participants in a more natural environment.

### **3.8.2 Interviews (Interactive data collection)**

The third method used in this study was interview. Qualitative interviews are the basis for many studies, but an understanding of what it means to carry out such interviews have shifted over time in line with particular philosophical approaches, seeking to understand the social world and its workings (Edwards and Holland, 2013). The purposes of the interview listed by Cohen et. al. (2011) are varied in the broader context of the study. For example, an interview serves to evaluate or assess a person in some respect, to test or develop hypotheses, to gather data, and to sample respondent's opinions.

#### **3.8.2.1 Types of Interviews**

There are four types of interviews outlined by Patton (1980). First, the informal conversational where the questions asked to emerge from the immediate context and

are asked in the natural course of things. Second, the interview guide approach, where the topics and issues are being prepared in advance and the interviewer will decide the sequence and working questions in the course of the interview. The third type of interview is standardized open-ended interviews where interviewees will be asked by the interviewer the same basic questions in the same order. Lastly, closed quantitative interviews are where the questions and response categories are determined in advance and the responses are fixed. The respondents would need to choose among these fixed responses (Patton, 1980).

The interviews used for this study were in the form of semi-structured and open-ended questions using online and face-to-face interviews as the research participants will answer the same questions, increasing the comparability of responses. Interview 1 was the online structured interview which had conducted for 14 research participants in Phase 1 and 2. In Phase 3, only six (6) selected research participants involved in face-to-face interviews. In Phase 1 and 2, the researcher wanted to gather the important data on the types of VLSs and beliefs of VLSs among the TESL trainee teachers. For Phase 3, the face-to-face interview was conducted in getting the in-depth information about the online LMS, issues and problems faced by the TESL trainee teachers in using online LMS. Besides, it will also reduce bias and interviewer effects.

The face-to-face interviews with 6 research participants were conducted in a suitable place where participants were comfortable. The researcher had chosen ITEDC Language Lab to conduct the interviews on 30<sup>th</sup> April 2018 (from 10.00am to 5.00pm). The researcher waited the research participants in the language lab and they took turn for the interviews. The interviews were recorded using a video camera during the

interviews Each session was recorded for transcription and was kept in folders. A consent letter was needed to protect the rights of the research participant. The data were transcribed verbatim and the thematic content analysis was applied to interpret the interview findings.

Because each interview has unique strengths and shortcomings, a combination of in-person and online interviews was used for the study. Face-to-face interviews gave the researcher and research participants the chance to communicate directly without being held up by unforeseen technical issues (Saarijärvi & Bratt, 2021). It was a lengthy session that required careful planning with the research participants to arrange their schedules and with the researcher to schedule times and appropriate locations for the interviews. Therefore, only six research participants were chosen for one face-to-face interviews in Phase 3.

Furthermore, the research participants could be reached more easily and it was more structured with an online structured interview. It gives the research participants some time to think before responding to the inquiries. They were more comfortable expressing their opinions about VLSs, and it also provided more possibilities for them to apply the vocabulary they had picked up through responding to the two online structured interviews in Phase 1 and 2.

#### **3.8.2.2 Sample of Interview Questions**

There some sample questions used during the interview session. These questions were adapted from Gu & Johnson (1996) and (Mizumoto (2008).

## **Phase 1**

The purpose of Interview 1:

- Participant demographic Information
- Types of VLS

---

### **Instrument 1: Interview 1 Online Structured**

---

1. How do I require my vocabulary in my second language?
  2. Do I have any strategies to retrieve the vocabulary?
  3. How does the vocabulary that I have learned, help me in my studies?
  4. How far do I think vocabulary assists me in my teaching in the future?
  5. Any suggestions on vocabulary learning strategies that you know are effective for a second language learner?
- 

## **Phase 2**

The purpose of Interview 2:

- Types of VLS
- Online LMS

---

### **Interview 2: Online Structured**

---

1. Did this platform give any impact on your acquisition of the content of the subject? If yes, how?
  2. How, did the activities conducted in the classroom contribute to your understanding of the content subject?
  3. How did the notes help you in improving your understanding of the content of the subject?
-



4. Did the presentations of the topics done by your friends give you an idea about the topics? If yes, How?

5. Did the contents of the subject learn to help you in applying them in your teaching in the future? If yes, how will it help you as a future teacher?

6. Do you think this platform helps us a lot in sharing, collaborating and discussing the content subject? How?

---

### Phase 3

The purpose of Interview 3:

Semi-structured interview on VLSSs, LMS, issues and problems using LMS

Face to face Interview Questions
1. In your L2 vocabulary learning process, do you prefer to use learning strategies to learn new words or just memorizing new words without any learning strategies? Why?
2. How important do you think of L2 vocabulary learning strategies in the learning process?
3. Who is helping you in learning L2 vocabulary at home? Any technology used?
4. What do you think about <i>Schoology</i> , a learning management system, as one of your vocabulary learning strategies in learning L2?
5. Do you face any problems or difficulties in using <i>Schoology</i> in learning and acquiring the vocabulary?

### **3.8.2.3 Limitation of Face to Face Interview**

There are some limitations of face-to-face interviews. First, it was time-consuming since the researcher needed to schedule and conduct the interview. The researcher set a specific time outside the classroom to conduct the interviews where an arrangement with the TESL trainee teachers was done before conducting the interviews. The researcher also spent time analyzing the transcriptions of the interviews.

Next, the researcher faced errors or biases while conducting the interviews. According to Creswell (2009), early in the research process, the researcher must identify and express their initial ideas and biases in order for the readers to comprehend their viewpoint, and then bracket or suspend those biases as the study progresses.

Factors such as intonation, question rephrasing, voicing an opinion, inadequate note-taking, and even the gender and appearance of the interviewer can affect the interview. For example, the researcher spent inconsistent time with different participants for the interviews or the researcher would give more attention to active participants compared to the passive one. The setting of the interview can affect the consistency of the interview process.

This study involved six research participants and it would be critical to planning the analysis before conducting the interviews to improve data entry and analysis. Some data may be redundant and have answered the research questions. Sauder et.al (2018) stated that saturation occurs when the sociologist is unable to develop properties of the category due to a lack of additional data.

The researcher feels empirically confident that a category is saturated after seeing similar cases over and over again. The results derived from the interviews may be subjective and more time may be needed to code the themes (Minter, 2003)

### **3.8.3 Researcher's Field Notes**

Field notes were used during the observations and training sessions. The researcher reported the actions carried out by the participants, especially during the training sessions. The field notes were useful supplement to support other collected data. In this case study, the researcher's field notes were used in the triangulation process to ensure trustworthiness of the research.

Field notes were originally only the researcher's private, individual thoughts, ideas, and questions about their study observations and interviews (Phillippi & Lauderdale, 2018). These notes were kept private because they were merely considered to be the researcher's 'jottings' and were not deemed to be helpful for analysis (Ottenberg, 1990). Researcher's Field Notes were used in this qualitative study most often used in ethnography. In this study, field notes were recorded during or immediately after each observation. These field notes were in the form of scratch notes (Allen, 2017) which include observation protocol, reflective notes and instructions given to the participants throughout the study.

The field note was used in this study during each interaction. The researcher took note of specifics regarding the assignments, activities, postings, comments, and responses from the online LMS. The postings made by study participants expressed their beliefs, thoughts, and

feelings at the time. Reading, observing, and taking notes inside this field notes were all possible for the researcher.

### **3.9 Data Analysis**

The inductive approach in qualitative research involves the gathering of information from the participants and the organisation of information into categories or themes. Creswell (2009) discussed how the inductive approach is being applied in qualitative research where the themes are developed into patterns, theories, or generalisations. In this case study, the researcher has the opportunity to interpret different data sources (Freebody,2003) and it allows the researcher to analyse the data from different angles and views, strengthening the findings of the research.

#### **3.9.1 Analysing the Transcriptions of the interviews, online reflective writings**

The interview data were analysed using the computer-assisted software tool, ATLAS.ti, which can group, retrieve, organise, and search single and multiple data sets besides preparing them to be analysed in forms of patterns, themes and narratives. This study was on based on thematic analysis proposed by Braun and Clark (2006) which serve as flexible and useful research tool which can potentially provide rich and detail data, yet complex account of data. It is a method for identifying, analysing and reporting the pattern(themes) within data.

The data from interviews and personal reflective writings were compiled, organised, scanned and kept in folders. The researcher read all the documents and generated codes using thematic content analysis. This approach is a particularly useful approach when

the purpose is to classify, summarize, quantify and tabulate qualitative data (Harris, 2007).

The researcher prepared the transcriptions of the interviews using the recorded interviews. Subsequently, the researcher read the transcriptions to gauge the emerging themes or patterns of the data. Besides, the data from the interviews, research participants' personal reflective writings, research participants' postings, and also the researcher's field notes throughout the phases were analysed to get the themes of the study.

### **3.9.2 Coding**

One of the major features of qualitative research data analysis is coding. The coding process is defined by Cohen et.al (2011) as an indexing or categorizing system which functions as references. In this case study, the researcher gathered all the data and coded them based on their contents to identify similar information, besides searching and retrieving data with the same code. The coding process for the research question was based on Gu and Johnson (1996) and revised by Mizumoto (2008) as shown in Appendix A. It is not a 'one-off' process as the researcher needed to repeat the process several times.

Creswell (2009) suggested the following coding steps in qualitative research which include organizing data, reading through them, coding, putting them into categories or themes, presenting the themes and interpreting them. The following are the steps involved in the coding process.

### **Step 1: Organising and preparing the data to be analysed.**

The researcher requires systematic ways of keeping and maintaining all the data that have been collected for the case study. The first step that the researcher did was labelling using specific indexes to make the data accessible to her during the reporting stages.

### **Step 2: Reading through all the data.**

In the second step, she had to read through all the data gathered from various data sources to gain an overall understanding of her initial findings. This step was the most important part for the researcher to gauge the overall view and meaning of the case study. Here, the researcher needed to critically read the information based on the data from the study.

### **Step 3: Using the coding process in analysing the data.**

The third step was analysing the data. Here, the process involved taking text data or pictures gathered during data collection, segmenting sentences or images into categories, and labelling those categories brings meaning to the information (Rossman and Rallies, 1998, p.171, as cited in Cohen, et. al, 2011). The researcher also coded the data based on the past literature. Codes that are unusual or emerging from the data, and that could address a larger theoretical perspective in the research were also recorded. In this case study, the researcher was able to develop more codes based on the context of the study, perspectives held by subjects, process codes, activity codes, strategy codes, relationship and social structure codes and also reassigned coding

schemes (Tesch, 1990, as cited in Creswell, 2011). The coding process in thematic analysis can identify themes or patterns in data in one of two ways: inductive or "bottom up" (e.g., Frith & Gleeson, 2004), or theoretical or "top down" (e.g., Frith & Gleeson, 2004). (e.g., see Boyatzis, 1998; Hayes, 1997). The themes identified in an inductive approach are strongly tied to the data itself (Patton, 1990) (as such, this type of thematic analysis is similar to grounded theory). So, in this study, the data had been analysed based on the three underpinning theories and the taxonomies of VLSs by Gu and Johnson.

#### **Step 4: Using the coding process in generating a description of the setting or people as categories or themes**

In step four, the researcher used the coding process to generate themes. The coding helped the researcher to generate a small number of themes or categories that illustrated different perspectives supported by the evidence from the raw data. This would help the researcher to shape the added layers of complex analysis when the themes were analysed individually and across different cases especially in this case study.

#### **Step 5: Presentation of the themes and descriptions of the case study**

In Step 5, the themes and descriptions were represented in the qualitative narrative. The researcher use narrative analysis to understand how research participants construct story and narrative from their online reflective writings. That means there is a dual layer of interpretation in narrative analysis. First the research participants interpret

their own reflections through narrative. Then the researcher interprets the construction of that narrative. Creswell (2011) highlights that a narrative passage is the most widespread approach in describing the findings effectively.

### **Step 6: Interpretation of data**

Finally, in the final stage the researcher linked all the data gathered according to the researcher's personal interpretation, by linking theories related to the case study with the researcher's experience, and also suggesting new questions which emerged from the data. Moreover, different forms of interpretation were derived from this qualitative research and could strengthen the objectives of the whole study.

### **3.9.3 ATLAS.ti Software**

The ATLAS.ti software was used in this study to assist the researcher with data coding, management, and analysis. In analysing the qualitative data of this study, the software was used to analyse the texts and documents by coding data resources and keeping track of the interrelations of the collected data.

First, all the data was compiled and labelled accordingly in the files. During the coding and analysis, the researcher started to analyse according to the research questions (ROs) of the study by creating different folders for different RQs. After that, the researcher uploaded all the data needed based on each RQ in the software, and started creating the codes for each research participant's data, such as the online structured interviews and face-to-face interview transcriptions, accordingly to avoid confusion. The codes were analysed based on the themes.



#### **3.9.4 Text Analyzer**

This study also employed Text Analyzer (Appendix Q), a computer program that performs lexical analysis and rates the level of difficulty of the text according to the Common European Framework (CEFR) Levels. It determines the approximate level of proficiency that the text is suitable for, generate a suggested vocabulary list, compare the difficulty levels of two texts and obtain meanings for the suggested vocabulary list. Text Analyzer highlighted some TESL trainee teachers' performance in their vocabulary knowledge. The research participants' CEFR and IELTS Levels were assessed based on eight Online Reflective Writings posted in online LMS, Schoology. From the application used, the TESL trainee teachers' performances were assessed based on the number of words used in their online reflective writings, average sentence length, average word length, and word complexity. The special feature of the words' complexity in each reflective writings was shown based on different colour. (Refer Appendix K).

#### **3.9.5 Ethical Consideration**

Ethical consideration in the data collection was important to help the researcher to face the ethical issues that surface during data collection in the field and in the analysis and dissemination of qualitative reports (Creswell, 2013). Therefore, in the context of this study, the selected TESL trainee teachers were briefed on their involvement in this study and how the research would be conducted. The researcher needed to take some measures in ensuring the rights of the participants in this research were taken care of. The following are the steps taken:

- a) The researcher informed the TESL trainee teachers about their privacy as participants especially during the interviews and during the online observations throughout the research. Informed consent was given to them to make them aware of their involvement in the study, protecting their rights and privacy.
- b) The researcher also informed the TESL trainee teachers that their participation was voluntary and explained the benefits of the research to ITEDC.
- c) They were also informed that the information gathered from the TESL trainee teachers were confidentially filed and kept for a reasonable period for research purposes (Creswell, 2009).
- d) The participants' progress was updated and they were allowed to view their performance at any stage whenever they wanted. For this reason, Creswell (2011) suggested that the researcher discuss the data and the findings with the participants to ensure the accuracy of the data. This process is also known as "member checking" whereby the researcher showed the data findings and interpretation to them for verification. In addition, the researcher must possess the awareness and consider several ethical aspects in ensuring the study is conducted professionally. The four criteria proposed by Jones and Barlett (n.d.) such as avoiding conducting harmful research, protecting the confidentiality of the participants, being objective, as well as maintaining integrity in conducting and reporting the research are vital in conducting the research successfully.

### **Gaining Access into the research site:**

Below are the steps taken during the sampling procedures and the data collection process:

1. Permission to collect data was obtained from the Institute of Teachers Education (ITE) of the Darulaman Campus (ITEDC). The list of the TESL trainee teachers involved in the case study was obtained from the institute alongside the class schedule of the trainee teachers. The consent forms were distributed to all research participants before the study started. This was to inform them officially that they were involved in the research, understand what the research was and what was they consenting to.
2. Once the participants were identified, the study was conducted by giving the content input based on the subject taught. They were guided using the learning management system in their previous semester before the study was being conducted.
3. The hands-on activities using Schoology, a learning management system, is treated as ongoing processes. The participants were given guidance on how to access their learning materials before they started searching and sharing collaboratively with their peers.
4. The researcher recorded the necessary details for future references.
5. The research participants started writing and posting personal reflections for each interaction in their own time. They could also email their reflective writing based

on the tasks given by the researcher or participants could write and post their reflective writing using the online LMS suggested in this study in any format they like.

6. The reflective writings were administered without any pressure so that the responses provided reflected the participants' true opinions.

### **3.10 Trustworthiness**

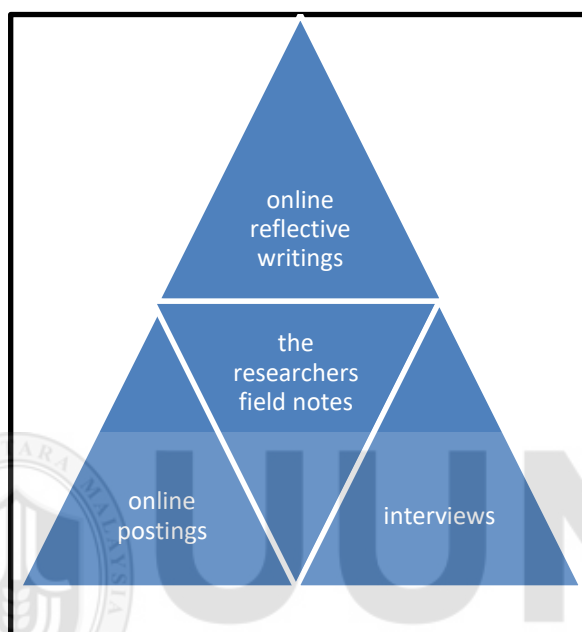
Trustworthiness of the case study was important to gain its validity and reliability as well as the rigour of the instruments and methodology to increase the quality of the study (Merriam & Grenier, 2019). One of the ways to strengthen the validity and trustworthiness of the data is to use multiple methods in data collection for the purpose of triangulation.

#### **3.10.1 Triangulation**

Triangulation is the mixing of data types to validate the claims that might arise from an initial pilot study. Mertens & Hesse-Biber (2012) view triangulation as a need for the integration of data that positively impacted the design of the study. It also provides a detailed justification for the various methods used in the study. Triangulation integrates data that can contribute to informed decision making (Mertens & Hesse-Biber, 2012).

In this study, the triangulation has also been used as an approach for determining validity by combining data from several sources. Methodological triangulation involves the use of several qualitative methods in getting reliable data. In this study, interview, observation, online postings, reflective writing and field notes were used to

triangulate the findings. Figure 3.3 below depicts the triangulation methods based on Mertens & Hesse-Biber (2021).



*Figure 3.3* Triangulation Methods Based on Mertens & Hesse-Biber (2021)

This study obtained different perspectives in exploring the vocabulary learning strategy among TESL trainee teachers using online learning management system. Valerie (1999) described reflective writing as an interactive communication tool between the researcher and the research participants as a type of interdisciplinary triangulation of data to provide different dimensions on the same phenomenon. Similarly, Olsen (2004) defines triangulation as mixing approaches to acquire two or more understandings of the things being studied.

### **3.10.2 Validity, reliability, and transferability**

In ensuring the accuracy and creditability of this qualitative study, the researcher needed to ensure the validity, reliability and transferability of the study.

#### **3.10.2.1 Validity**

It is the role of the researcher to ensure the qualitative validity of the case study by checking the accuracy of the findings through the proposed procedures. By using the multiple approaches suggested by Creswell (2014), the researcher's ability in assessing the findings can be improved.

In this study, the researcher has taken some steps to ensure that the validity of the study as proposed by Creswell (2014). The researcher triangulated the data sources from the interviews, online observations, research participants' personal reflective writings, field notes and reflections in assuring the validity of the study. Creswell (2014) claims that triangulation builds a coherent justification for the themes.

Then, the researcher used member checking to check the themes, codes, and analysis procedures to ensure data accuracy. A follow-up interview with the participants is one of the procedures for the participants to comment on the findings (Creswell, 2014). (Appendix H). A detailed description of the findings needs to be delivered clearly by the researcher to add to the validity of the study. In a qualitative study, the researcher was part of the research instrument, whereby she was directly involved in the training. The researcher conducted online observations and semi-structured interviews to clarify the personal bias brought to the study. The semi-structured interviews were validated

by six experts who were ITEs lecturers and university lecturers to ensure the validity of the instruments used using the Validation Form.

Next, the researcher used peer debriefing to review and ask questions about the qualitative study in assuring the validity of the study. Peer debriefing is the process of working with one or more peers to improve the research's validity. A peer is an unbiased and independent individual who has no personal interest in the project. Allowing a qualified, unbiased colleague to analyse and critique your transcripts, methods, and conclusions is part of this process. In order to reveal bias and preconceptions in this research, peer briefing is essential. It aids the researcher in detecting issues from her point of view and raising awareness of the study process. Peer briefing input aids in the improvement of study credibility and the detection of issues that the researcher may have overlooked. One of the colleagues, experienced lecturer from ITEDC was selected to in peer briefing stage in making the study more meaningful and improve the research validity.

#### **3.10.2.2 Reliability**

Gibb (2007) stated that qualitative reliability refers to the consistency of the researcher's approach across different researchers and different projects. Salkind (2009) stressed that the failure of the instruments in the study will fail the study. Thus, the researcher ensured the implementation of the methods, instruments used, and the data gathered are reliable in producing reliable findings. Below are some steps taken to ensure the reliability of the study:

- a) The transcripts of the interviews conducted were checked.

b) The themes and codes used were carefully identified and consistently used throughout the study.

c) The researcher referred to and cross-checked the codes or themes with different researchers whom Creswell (2014) termed "inter coders." In this study, the researcher and the subject matter expert together read and classified the excerpts of the interview transcriptions of the research participants that suited the themes of the study. Once there was an agreement between the intercoder and the researcher, the excerpts would be taken from the report of the study. One of the subject matter experts from ITEs was selected as the independent coder in evaluating the characteristics of codes or themes used in the study.

#### **3.10.2.3 Transferability and Generalizability**

Gibbs (2007) viewed qualitative generalization as 'a term that is used in a limited way in qualitative research since the intent of this form of inquiry is not to generalize findings to individuals, sites, or places outside of those understudied. In a case study research, Yin (2003) suggested that it can be generalized to broader theory. However, the results of this study were not generalized to other groups of language learners as the purpose was to understand and explore the complexity of VLS among a specific group of participants.

#### **3.11 Summary of the Chapter**

The study was designed to explore the VLSs using the online learning management system, *Schoology*, as the platform for the L2 language learning especially in acquiring



the vocabulary actively. This study enabled the researcher to understand the effective tool in language learning especially for vocabulary learning that becomes the heart of second language learning.

Through the prepared context, guided instructions, feedback from progressive language learning, self-organised, active participation, modification, collaboration, and sharing, the researcher gained fruitful findings that could contribute to the body of the knowledge especially in vocabulary learning strategies.

In summary, this chapter discusses the methodology that was used to explore the *Schoolology* concept in vocabulary learning strategy among the TESL trainee teachers in ITEs. Firstly, this chapter started with a brief introduction of the qualitative research, followed by the description of the case study, the participant observation, population, sample, the research methods and procedures.

Then, it is followed by the data collection methods including observation, interviews, reflective journal writing, personal reflective journal, researcher's field notes, and the triangulation of the methods used. Finally, the data analysis procedures were explained in a comprehensive description for getting the best result of the research.

In the next chapter, the findings of the study will be discussed based on the research questions. Figure 5.1 shows the themes derived from the analysis regarding online connections using (LMS).

## **CHAPTER FOUR**

### **FINDINGS OF THE STUDY: TYPES OF VLS USED BY THE TESL TRAINEE TEACHERS**

#### **4.1 Introduction**

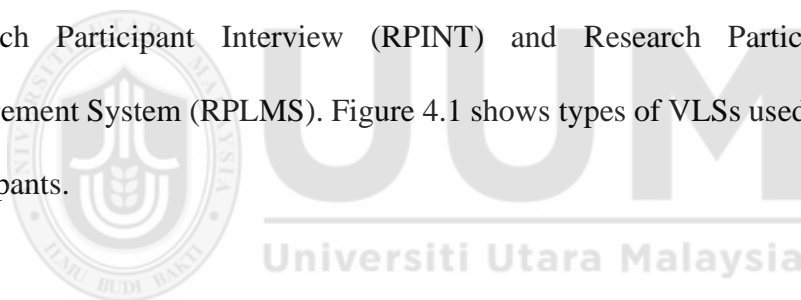
In this chapter, the analysis of the data collected was discussed based on Research Question 1 which was to explore the types of VLS employed by the TESL trainee teachers. The data were gathered through interviews (two online structured interviews and face-to-face interviews) and online reflective writings.

The interviews used for this study were in the form of semi-structured and open-ended questions using online and face-to-face interviews to answer the Research Question 1. The research participants answered the same questions, increasing the comparability of responses. Interview 1 was the online structured interviews which were conducted for 14 research participants in Phase 1 and 2. In Phase 3, only six (6) selected research participants involved in face-to-face interviews. In Phase 1 and 2, the researcher wanted to gather the important data on the types of VLSs and beliefs of VLSs among the TESL trainee teachers. For Phase 3, the face-to-face interview was conducted in getting the in-depth information about the online LMS, issues and problems faced by the TESL trainee in using online LMS.

The analysis was conducted based on eight vocabulary learning strategies derived from the Gu & Johnson (1996), and revised by Mizumoto (2008).

## 4.2 Vocabulary Learning Strategies

Gu and Johnson's (1996) Vocabulary Learning Strategies (VLS) were divided into two categories: metacognitive domain and cognitive domain. Metacognitive domain includes the planning, monitoring, and evaluating processes in vocabulary learning. Meanwhile cognitive domain includes guessing strategies, dictionary strategies, note taking strategies, memory strategies: rehearsal and encoding, and finally, activating strategies. Therefore, in this chapter the analysis was conducted based on these two categories. It starts with the findings of the cognitive strategies, followed by the metacognitive strategies. The abbreviations were used for presenting excerpts from the data represents, for example, for Research Participant Structured Interview (RPSI), Research Participant Interview (RPINT) and Research Participant Learning Management System (RPLMS). Figure 4.1 shows types of VLSs used by the research participants.



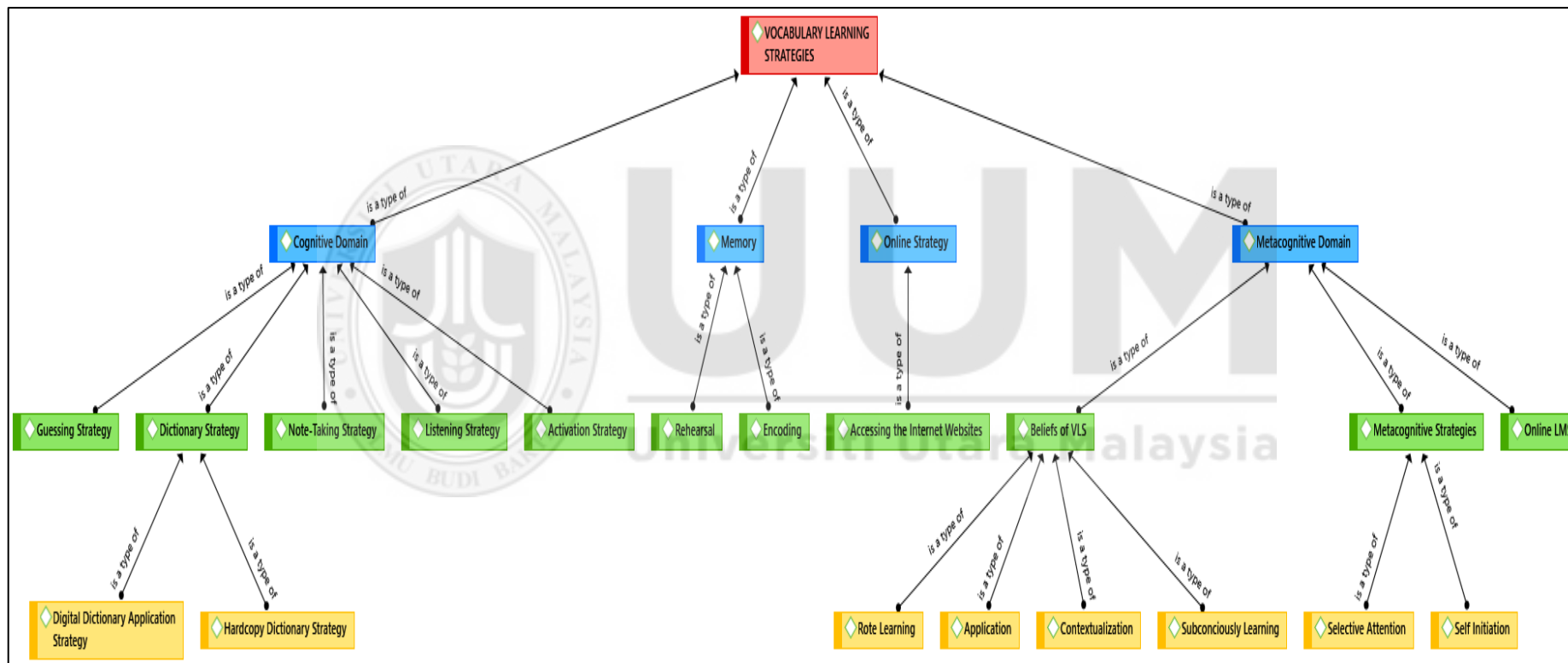


Figure 4.1 Types of vocabulary learning strategies used among the research participants

Table 4.1

*Summary Table Of Types Of VLSSs Used (Cross Case Analysis) of Six Research Participants*

RESEARCH PARTICIPANTS	TYPES OF VLSS USED											
	COGNITIVE DOMAIN				MEMORY		ONLINE		METACOGNITIVE DOMAIN			
									BELIEFS OF VLS		METACOGNITIVE STRATEGIES	
	Guessing	Dictionary	Note taking	Listening	Activation	Rehearsal	Encoding	Accessing internet	Application	Subconscious	rote learning	contextualization
Ain	/	/	/	/	/	/	/	/	/	/	/	/
Asma		/				/				/		/
Syadia		/	/			/	/		/		/	/
Shazwani								/		/	/	/
Insania	/	/	/			/	/	/	/	/	/	/
Syuhada		/				/				/	/	/

Table 4.1 displays the summary of types of VLSs used (cross case analysis) by the six selected research participants in the study. Most of them used online LMS as one of their VLSs in language learning.

#### **4.2.1 Cognitive Strategies**

In this study, cognitive strategies consist of guessing strategies, dictionary strategies (hardcopy dictionary and digital dictionary applications), note taking strategies, listening strategies, activation strategies.

##### **4.2.1.1 Guessing Strategies**

Subon (2013) has mainly discovered in his study that the students' preferences in vocabulary learning strategies were using guessing strategy followed by perception and encoding by using the taxonomy of Gu & Johnson (1996) and Fan (2003). The findings in this study have shown most of the research participants had used guessing strategies in figuring the meaning from their reading.

Miss Maizatul pointed out that she read the sentence before and after the words in guessing the meaning before checking in a dictionary or with her friends.

*I read the sentence around the words and try to figure out the meaning of the contexts. Then I check the **guess** using the dictionary or with peers.*

*RPSI 2, Maizatul*

In contrast to Miss Maizatul, Miss Ain, would ask her father if she had a problem understanding the storyline of the movie that she watched even though her father had tried hard to make her guess before she successfully understood the story.

*Um, when we watch a movie, when there are some times that I think I'm a bit confused with the storyline, and I do not understand what the characters are trying to convey, so, I would tend to ask my father what the characters are saying and he will explain it, uh, by using translation and also there are, uh, he is trying to beating around the bush so that I understand what the storyline is all about.*

*RPINT 1, Ain*

For Miss Insania, listening and guessing the lyrics of the song became her strategies in figuring the meaning of the words that used in the song.

*R: When you listen to the songs, that means you are just listening without taking any, uh, dictations of the lyrics? You are just listening?*

*RP 3: Yeah, I just listen and I try to guess what they are saying.*

*RPINT 3, Insania*

The findings have shown the different guessing strategies applied by second language learners in vocabulary learning.

#### **4.2.1.2 Dictionary Strategies**

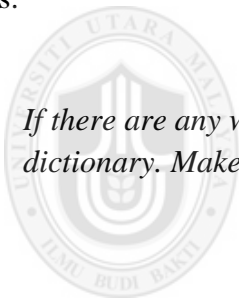
Gu and Johnson (1996) classified that dictionary strategy is one of cognitive strategies in vocabulary learning strategies and becomes the elementary strategy for the beginner of second language learners. Dictionaries were considered as “reference materials: especially for second language learners in acquiring vocabulary (Maasum & Maarof, 2012). In this study, the research participants highlighted the important usage of hardcopy dictionary and digital dictionary application in their second language learning. The findings indicated that the participants used hardcopy dictionary as well

as digital dictionary downloaded into their computer. Below are the extracts which illustrate the use of dictionary as a vocabulary learning strategy.

#### 4.2.1.2.1 Hardcopy Dictionary

In Malaysia, since in primary school, it was a necessity for the pupils to have *Kamus Dwibahasa Oxford Fajar* (Bilingual Dictionary) translated English to Malay and Malay to English (Hawkins, 2004).

Miss Nini claimed that the dictionary was second language learners' close friend. She seemed to know the importance of the dictionary as the guidance for second language learners.



*If there are any words that the learner does not understand, use a dictionary. Make dictionary as one of their best friends.*

RPSI 1, Nini

For Miss Insania, dictionary served as a flexible medium for her to check and match the difficult words that she wanted to learn from the subtitles.

*Sometimes there are words I don't know so I would stop and rewind it to hear what exactly the words they were saying and look at the words in a dictionary or try to match it with the subtitle...*

RPSI 5, Insania

Miss Asma also highlighted the importance of that dictionary in understanding the story and the content of the articles that she had come across in her readings and while watching the movies.



*After that, if there are words that I did not know, I will use the dictionary and look for the meaning. I used the same method when I read books or magazines. First, I will try to understand the story or the context in the articles. If there are words that I do not understand, I will search for the meaning using the dictionary*

*RPSI 7, Asma*

Furthermore, she took the initiative to memorize the words after discovering the meaning of the words for future usage. This depicted Miss Asma's effort to learn more about the words that she had come across in her readings.

*So, from the books and the movies, I can, like, encounter certain words and from there I, like, recognize and find the meaning of the vocabulary in the dictionary and that's how I memorize the words or vocabulary.*

*RPINT 2, Asma*

However, Miss Syuhada explored more usage of the dictionary not only to find the meaning of the words but also to help her in using the words correctly in the context.

Miss Syuhada took the advantage to learn the words learned based on different classes of words and tenses.

*Uh, first, I found that uh, the vocabulary is unfamiliar words for me, I will uh, find the meaning of the words first and then after that I, by uh, finding the meaning in the dictionary, I can know how to use the uh, words correctly.*

*RPINT 5, Syuhada*

Jotting down the unfamiliar words before finding the meaning became one of Syadia's strategies in learning and memorizing new vocabulary before finding the meaning of

the words from the dictionary during her childhood. It shows that Syadia was a very systematic child during her childhood because she was able to discipline herself in her learning process. She was able to create her strategy in learning her second language.

*I still remember when I was a kid, uh, I often jot down every new word that I found from the books, or movies, or cartoons because at that time, we, I loved cartoons so I love, I will jot down every single word and I will uh, **find the meaning of the vocabs from the dictionary** and when after I already jot down the vocabs and also the meaning, I will memorize the word and try to use it, try to use it, uh, with my sister, or my mother but uh, that was my first strategy*

*RPINT 6, Syadia*

In sum, the findings indicated that most participants used dictionary as one of their vocabulary learning strategies.

#### **4.2.1.2.2 Digital Dictionary Applications Strategies**

Another strategy used by the participants was digital dictionary. Nowadays, in the modern and sophisticated era, most language learners rely entirely on the latest digital technology, such as digital technology and personal mobile phones to learn new words. By installing the Dictionary Application in the mobile phone, Miss Maizatul was able to save time in searching the meaning of the difficult words from finding them using a typical dictionary.

*Usually, I used the dictionary apps on my hand phone and look for the meaning of words. These steps do not only help me to enrich my vocab, but also help me to save my time as I don't have to open the dictionary.*

*RPSI 2, Maizatul*

In addition, Miss Syuhada believed that she learned better with all digital technologies since her primary school days.

*...when I was in primary school, I used Besta, the digital dictionary, I used Besta uh, and... but nowadays we have gadgets, smartphones, and if we go...surf the internet, we can learn English better compared to when I was in primary school, so, nowadays I only use my smartphone to search uh, unfamiliar words or to uh, go through Twitter. On Twitter, I also can learn English because there is account that teaches English.*

*RPINT 5, Syuhada*

In addition, the participants could choose any application depending on what they needed to do. Some digital dictionaries are available without a connection and some applications take up a lot of space on their phones. It depends on the users' needs and interests when installing the digital dictionary application. The most important thing is that the dictionary application can be a great way to add to the second learners' vocabulary.

#### **4.2.1.3 Note-Taking Strategies**

Keeping a written record of the new vocabulary in the form of a notebook, a loose-leaf binder, vocabulary card, a memo in the margin or between lines, or a scribble on a piece of paper is one of the VLS for some second language learners (Folse, 2004: Gairns & Redman, 1986; Mc Carthy, 1990; Schmitt & Schmitt, 1995). Normally, the second learners will do anything that are beneficial for them in acquiring good vocabulary. As for Miss Fatin Syuhada, she practiced note taking by having a small

notebook to write new words either during informal learning or informal learning time in boosting her vocabulary learning.

*Moreover, I also have the strategy of providing small books. In the small book, I can write new words or unfamiliar words including the meanings. As a small book, I can bring it anywhere, I can learn the vocabulary while waiting for the lectures to enter the class, during my free time, or even in the car. Writing a journal also can help me with vocabulary. If I practice writing my journals every day by using many kinds of vocabulary, it will help me to improve my knowledge and boost up my vocabulary.*

*RPSI 4, Syuhada*

Similarly, Miss Insania would write the words on a piece of paper before checking in the dictionary. She put the effort to use the words that she had written in her daily conversations and in the social media.

*Then, I would write it on a piece of paper and try to use it in my daily conversations whether with my family or friends or whoever I'm talking to on social media using the words I learned.*

*RPSI 5, Insania*

Miss Asma also preferred to list all the words before searching the meaning of the words. In the interview, Miss Syadia stated that she would replay the movies to detect the words and the meanings from the actions of the characters, jotting down the words, memorising them, and trying to use them in her writings.

*If I don't have the time to search for the words, I will list them on a piece of paper and search for them afterward*

*RPSI 7, Asma*

*I loved to watch cartoons and movies. I also use uh, when I watch cartoons, movies or whatsoever, usually, uh, if I don't know what is the meaning of the words, I will tend to, uh, like **playback the video and try to uh, get the meaning from what the, from the action from the story**, from the movies because it actually can help me in understanding the meaning of the words. And I also **tend to jot down**, uh, the, the vocabs but, but that one is when I was a kid, but nowadays, if I don't understand a word, I usually will, uh, search the word and I **try to memorize it and try to use it in my writing** to help it so that it can, I can remember the words.*

*RPINT 6, Syadia*

The above findings, it has shown that note-taking strategies play important roles for second language learners in acquiring good vocabulary. Some of them wrote the words, searched the meaning of the words and tried to use them in their writings.



#### **4.2.1.4 Listening Strategies**

In some studies, listening skill is always considered an incidental vocabulary learning strategy, and it seems to be the most effective VLS, especially for intermediate to advanced second language learners who generally acquire basic language skills (Elzubeir, 2016).

Most of the research participants loved to listen to songs. Miss Fatin shared her interest in memorising lyrics by listening to songs, and this was one of her strategies in vocabulary acquisition.

*I also think English songs help me a lot in requiring my vocab because of the usage of simple yet meaningful words in the lyrics.*

*Well, I can say that I'm quite good in remembering lyrics and yes, English songs do help a lot!*

*RPSI 6, Fatin*

Some research participants were obsessed with using their listening skills in learning new vocabulary. Like Miss Ain, listening to songs became her routine activity wherever she went.

*Um, one of common thing I use is, uh, through listening to songs. Because I love to listen to songs anywhere I go, even when I'm on my way to class, I would listen to songs.*

*RPINT 1, Ain*

Most of the respondents in this study used listening comprehension as a strategy that was used daily and became their routine in learning their second language vocabulary.

#### **4.2.1.5 Activation Strategies**

Activation strategies are also referred to as consolidation strategies by manipulating various strategies, such as note-taking strategies, cognitive strategies, rehearsal strategies, and memory (encoding) strategies (Gu & Johnson, 1996), which are then actively used in their writing and speaking skills.

Miss Ain believed in activation strategies because she would be a future teacher and she would use the vocabulary with her students in class. She believed that it would be beneficial for her in the future if she would equip herself with all the vocabulary learning strategies and use them in her teaching and learning process with her students.

*When I'm teaching I need to use vocabs to help my students learn English language*

*RPSI 3, Ain*

Miss Ain further indicated that practicing and using L2 vocabulary in everyday activities such as communication and reading are the main strategies for activation and familiarization with others. She also applied the activation strategies by memorizing subtitles of movies and cartoons as she mentions below.

*Try to use second language words every day in your speech, try to read, watch and do things that involves the use of English language*

*RPSI 3, Ain*

*I like to watch English movies and English cartoons through TV so, that is where I learn my English. just memorize and just by looking at the subtitles and the pronunciation of the cartoons, I can, uh, simply use it, eh, apply it in my daily conversations.*

*RPINT 1, Ain*

In addition, Miss Ain took the opportunity to learn new vocabulary words through her friends' comments and online postings. She could choose the words she wanted to use and she applied them in her texts. This shows that Ain was easily motivated by her friends' postings and she used the VLS with the intention of improving her vocabulary learning.

*Uh, sometimes, yes, because most of our lecturers use that platform to put their task so that we can do our task through it and yes, sometimes it helps me to uh, learn new vocab because I can see, uh, from the, uh, from the system, from the website, uh, my friends' comments, my friends' answers, so from that I learn the new vocab because sometimes my friends tend to use, uh, low frequency words, which is alien to me so that is where I learn new vocab*

*RPINT 1, Ain*

Apart from that, Miss Syuhada showed an excellent ability in writing her journal online reflective writings based on the assigned tasks such as her presentations, class discussions on the weekly topics and also her assignments. She confidently pointed out that the activation strategy she used in writing journal online reflective writings was able to increase her vocabulary.

*Writing a journal also can help me in vocabulary. If I practice to write my journals everyday by using many kinds of vocabulary, it will help me to improve my knowledge and boost up my vocabulary.*

*RPSI 4, Syuhada*

In sum, the participants indicated that they used activation strategies in their vocabulary learning.

#### **4.2.2 Memory Strategies**

Memory strategies are classified into two distinct categories; rehearsal and encoding categories. Word lists and repetition are instances of rehearsal strategies. Encoding strategies encompass such strategies as association, imagery, visual, auditory, semantic, and contextual encoding as well as word structure which includes; analyzing a word in terms of prefixes, stems, and suffixes' (Gu & Johnson, 1996).

##### **4.2.2.1 Encoding**

Encoding is one of the memory strategies used by the subject in this study. Most second-language learners have high expectations in learning the second language for



their future use. Bastanfar & Branch (2014) defined encoding strategies as strategies that involve association, imagery, visual, auditory, semantic, and contextual coding, and word structure.

Miss Maizatul believed that placing the learned words in context is one of the strategies when she has to use them in her future teaching. She asserted that:

*I agree that a good knowledge of vocabulary will assist my teaching in the future. It is because in teaching we have to deal with students from various kinds of backgrounds. Some of them do not master English and do not have any interest in learning. So as a teacher, I have to use a different kind of way of explaining things to my students. **A teacher who masters vocabulary can help the students to understand tasks and introduce them to many new words in learning.***

*RPSI 2, Maizatul*

She also varied her reading activities by discussing the new words on a particular topic to improve her memory by encoding the words she learned.

*I suggest that we have to do lots of reading and try to discuss the issues or tell new words in that particular topic to close friends afterward. These help us to remember new words well.*

*RPSI 2, Maizatul*

Miss Maizatul's strategy in encoding the words as part of her memory strategies is quite different when the researcher compares it with Miss Ain's strategy. Miss Ain preferred to use her observing and listening skills over reading to acquire her vocabulary. Perhaps these strategies will help her in exploring new vocabulary.

*For example, I hate reading but I love watching and listening. So I would like to choose the method of watching and listening to acquire my vocabulary.*

*RPSI 3, Ain*

Helping parents acquire good vocabulary for their children is very important. Some children are fortunate to have parents who are very supportive in helping them acquire good and correct vocabulary and have a good background in the second language. Miss Insania added that her father would help her translate the words if she had difficulty understanding the words she encountered while watching the movies. This motivated Miss Insania to easily scramble the words because she knew that with her father's guidance, she would learn more words effectively. In the interview, she expressed that she would use the strategies that suited her in memorizing the words.

*So, he would usually watch English movies and shows. Well, it also helps me because they would speak in English and I would have to somehow translate it myself or I would ask my dad what they were saying. This is kind of helping for my English vocabulary.*

*RPSI 5, Insania*

*I tend to memorize and then I find out what strategies that suit me the most...*

*RPINT 3, Insania*

Sometimes, it is undeniable that the classroom lecturers had a great impact on the respondents' acquisition of some unfamiliar words while implementing their teaching and learning processes which was highlighted by Miss Ain in the interview who said that:

*I learn new vocab, and also through my classes with my lecturers because my lecturers, mostly English lecturers use words that is sometimes alien to me.*

*RPINT 1, Ain*

Encoding strategies are about a second language learner being able to link the new words he or she already knows by forming mental images and making an association between the information he or she needs to remember in the context in which the words are used.

#### **4.2.2.2 Rehearsal**

Rehearsal is one of the cognitive strategies. It is part of specific learning actions for maximizing one's language learning. As a cognitive strategy, it is considered as a light mechanical repetition process, but as memory strategy, it is involved deep processing (Dornyei, 2005; Hsiao & Oxford, 2002)

Miss Syuhada in her structured interview mentioned that by speaking and listening to the native speakers, she would be able to acquire more vocabulary through their conversations. She further informed that she used and practised all the vocabulary that she had learned through writing.

*Moreover, I also can acquire my vocabulary by speaking and listening to native speakers. As we know native speakers always have a powerful vocabulary in their conversations.*

*RPSI 4, Syuhada*

*In this way, the learners will practise the vocabulary that they have in their speaking and writing as well as boost up their vocabulary.*

*RPSI 4, Syuhada*

Anyway, Miss Insania rehearsed the words by stopping and rewinding them to get the clear pronunciation of the words.

*Sometimes there are words I don't know so I would stop and rewind it to hear what exactly the words they were saying....*

*RPSI 5, Insania*

Miss Fatin felt that singing along to her favourite songs helped her to remember the expressive lyrics well, which also helped her to increase her vocabulary. She also pointed out that she also learned vocabulary by watching movies.

*I also think English songs help me a lot in requiring my vocab because of the usage of simple yet meaningful words in the lyrics. Well, I can say that I'm quite good at remembering lyrics and yes, English songs do help a lot!*

*RPSI 6, Fatin*

*Watching movies and listening to songs in that language will also help the learner to be more accustomed to a lot of vocabulary that the actor or the singers used*

*RPSI 6, Fatin*

Miss Asma followed the same strategies as Miss Fatin, but added that she placed more emphasis on the pronunciation of the words in the song lyrics by the singers.

*Firstly, I acquired my vocabulary skills by listening to English songs and reading books, magazines, novels... When I listened to songs, I will listen to the pronunciation of the singer too... Nursery rhymes and other English songs can be used in teaching English in classrooms. First, the teacher needs to prepare the lyrics and sing*

*along together with the students. Singing also helps in promoting correct pronunciation in English words, especially words that are similar in spelling or same spelling, but different pronunciations based on how it is used, like the word 'read'.*

*RPSI 7, Asma*

Miss Syuhada stated that she was supported by her family in encouraging her to practise English at home as she comes from a family with a non-English background. She informed me that she became a role model for the family by practicing English for communication.

*.... my family's background is not um, a family that's practising English in conversation, but my mother always supports me to learn English, to keep learning English because uh, my family members, for example, my...my...sister is Malay...Bahasa Melayu teacher, but actually if they keep supporting me in learning English, I can be a role model to my niece and nephew for them to learn English better in the future, and uh, since I was in primary school, my mother kept supporting me if I wanted to buy English storybooks, she will buy um, for me, and she also supported, she also supports me to uh, participate in storytelling when I was in primary school even though she's not uh, a, what we call, a teacher or person **that practices English** but she always supports me to learn English.*

*RPINT 5, Syuhada*

From the above results, it is evident that the respondents used various VLSs and had numerous opportunities to refine their vocabulary learning.

### **4.2.3 Online Strategies**

#### **4.2.3.1 Browsing the Internet Websites**

Nowadays, university students are exposed to internet usage widely in their daily life for social and academic purposes. Rickard (2010) in her study highlighted how online

learning addresses a multitude of needs, issues, and obstacles that challenge learning organizations and students alike. This includes accommodating diverse learning styles and putting students at the center of the learning process.

The first finding has shown that Miss Insania Miss Ain had no difficulties in finding the meaning of the word that they came across by surfing the internet using the search engines. Since that, most of the students have had internet access through their mobile phones which eases them in their learning process especially in learning their second language.

*And then, when reading, there will be words that I don't know and I never came across to so **I would google it** or look in the dictionary.*

*RPSI 5, Insania*

*I use a dictionary through the internet, um, Google or I just browse through my **online dictionary**...*

*RPINT 1, Ain*

Learning new vocabulary by playing online games is currently becoming one of the VLSs for teenagers. During the interview, Ms. Shazwani mentioned how her brothers learned new vocabulary through online games. It shows that the instructions in online games were able to provide these teens with vocabulary words to learn in order to make them actively participate in the online games.

*Many children nowadays, they have, they know how to use the gadgets and most of them know how to play games and from playing games they have the vocabulary like 'Start' and 'End the Game',*

*'Game Over', they know the words, even sometimes for me, I don't know the words and my brother, I have my brother in Year 5, he knows everything, the terms in the game even I don't know, but he learns from playing that game.*

*RPINT 4, Shazwani*

Most of the university students including the ITEs have no restriction in bringing their mobile phones into the classroom as long as they do not distract their learning and teaching processes.

#### **4.2.4 Metacognitive Strategies**

Researchers discovered that not only students' knowledge of their learning processes and vocabulary acquisition benefit from the development of metacognitive methods, but also their self-directed behaviors, which may have further aided their vocabulary learning (Trujillo Becerra et al., 2015). Thus, in order to help students to take more effective control of what they learn and to facilitate the transfer of those methods to different learning contexts, these line of researchers recommended including metacognitive strategy training into the language classrooms which involves beliefs about vocabulary learning, words are learned by rote learning( repetition or memorization), words are learned through contextualization, and words are learned subconsciously (Yang & Dai, 2011; Sinhaneti & Kyaw,2012 ; Ali & Zaki ,2019)

Metacognitive strategies are used by the second language learners to manage their vocabulary learning including planning, monitoring, and evaluating (Halilah et al., 2014). Metacognitive strategies are categorized into selective attention, self-initiation and cognitive strategies involve guessing strategies, dictionary strategies, and note-taking strategies (Mokhtar, 2009). Online strategies and digital application strategies. Since the study was conducted to explore the VLS using online learning, the research findings indicated that the participants had used a variety of VLS through the learning management system, Schoology as their learning platform.

#### **4.2.4.1 Beliefs about vocabulary learning**

The objective of research question One (i. e What are the types of vocabulary learning strategies used by the TESL trainee teachers?) is to identify the VLS used by the TESL trainee teachers in ITE. Most of the research participants had their own beliefs about vocabulary learning which they had acquired since they were young. Moreover, they used varieties of strategies in vocabulary learning which they acquired during their early childhood exposure through their parents, friends, and siblings. Their perceptions towards the importance of learning vocabulary in their second language had geared them to give more focus to learn the second language effectively. The analysis of data from this research participants' online structured interviews and face-to-face interviews discovered their beliefs about vocabulary learning and understanding of some VLSs used during the study in Figure 4.2 below.



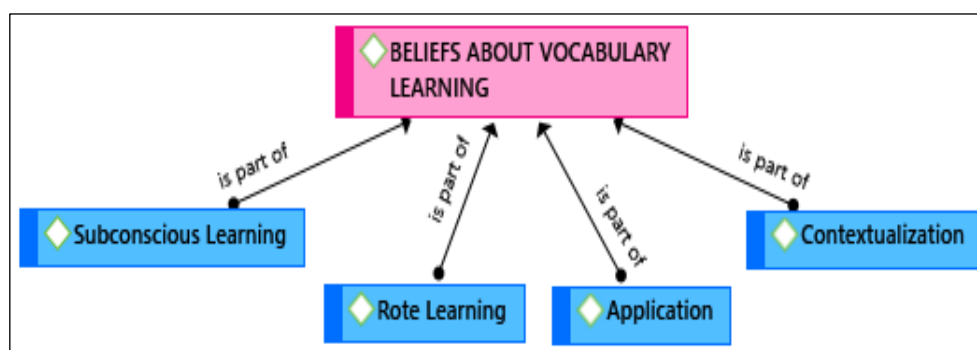


Figure 4.2 Beliefs about Vocabulary Learning

#### 4.2.4.1.1 Words are learned by rote learning (repetition or memorization)

In the recent studies, some researchers highlighted that pre-service teachers' preferences were more towards rote learning and less given attention to other strategies in improving their learning practices, especially in vocabulary learning (Mohamad Ta'amneh, 2014).

In addition, Miss Nini believed and discovered that memorizing strategy was very effective and meaningful for her future use. As a language learner, she should attempt to use the words regularly in knowing the words well.

*As I said earlier, I tend to remember the words that I found interesting or useful to me.*

*RPSI 1, Nini*

*The next way is, try to use the new words that they have learned as frequently as they can. Of course, when it is suitable to use. But if the first usage is wrong, I think that is okay. Because it will help the learner to understand the new words better. The reason why the learner should use new vocabulary as frequently as they can be to help them to remember the words for future usage.*

*RPSI 1, Nini*

Miss Insania recalled her childhood experience in acquiring her vocabulary by watching television with her parents. Her father corrected her and guided her to say the correct word in English once she came across the advertisements that appeared on television. Her father was using drilling techniques in emphasizing some vocabulary indirectly.

*During my childhood, he would usually teach a few vocabularies I needed. For example, when watching television, he would correct me when I said “oh, **dah iklan**” < It’s an advertisement> and he would like, “No. Don’t call it **iklan**<advertisement> call it advertisement”. And it grew to be a habit to say advertisement instead of ‘**iklan**’<advertisement>. So, it may sound weird to my peers or cousins but in the family, it is a common thing to say a few words in English.*

*RPSI 5, Insania*

Besides, she took the initiative to replay the words, finding the words in the dictionary to fit with the subtitles. It shows that Miss Insania had put the effort to learn the words that she came across intensively. During the face-to-face interview, she believed that there was no appropriate strategy in learning vocabulary because she can learn in an informal situation.

*Sometimes there are words I don't know so I would **stop and rewind** it to hear what exactly the words they were saying and look at the words in a dictionary or try to match it with the subtitle.*

*RPSI 5, Insania*

*It is important because if we don't have learning strategies that are appropriate and suitable for us, how can we acquire the vocabulary to its fullness.*

*RPINT 3, Insania*

#### **4.2.4.1.2 Words are learned through contextualization**

Student's vocabulary can be improved and learned if the language learners used context clues as one of the strategies (Kesler, 2016). It had been studied by the researchers stating that context clues become the indications that were around unfamiliar words or phrases in the form of words and phrases in sentences or paragraphs (Almunawaroh & Tamansiswa, 2018).

Miss Nini had an opinion that language learners need to familiarize themselves with the language that they want to learn by reading books, watching movies, and listening to songs.

*First, they need to be familiar with the language that they want to learn. Try to read books or other reading materials in that language. Watching movies and listening to songs in that language will also help the learner to be more accustomed to a lot of vocabulary that the actor or the singers use*

*RPSI 1, Nini*

Miss Syuhada's vocabulary learning in L2 was coming to her interest after going through some activities during her school days.

*I acquire my vocabulary in my second language by doing some activities that can encourage my interest to learn vocabulary*

*RPSI 4, Syuhada*

Moreover, Miss Maizatul pointed out that, by playing language games, she was able to improve her vocabulary with her friends. Most of the language games assist them to learn vocabulary and know the meanings in context.

*Next, I also think that one of my hobbies which are playing words game with friends also helps a lot to acquire my vocab in my second language. My friends and I usually love to play boggles, scrabbles, and word searches. But actually, there are so many great games out there that can help to teach new words to us. Therefore, I think that playing games also help me in enriching my vocabulary.*

*RPS1 2, Maizatul*

*In reading, when I come across any words that I don't know, I read the sentence around the words and try to figure out the meaning of the contexts.*

*RPS1 2, Maizatul*

Miss Syuhada noticed that once the new words were regularly exposed and constantly used in the second language, she tended to remember them very well. It shows that the words that have been commonly used in the second language context will contribute to a great impact for second language learners.

*One of the strategies that I know is to present new words frequently and repeatedly in input. Because the more frequently language learning learners are exposed to foreign vocabulary, the more likely they are to remember the words.*

*RPS1 4, Syuhada*

For Miss Syuhada, knowing a good vocabulary in the second language is an advantage when she has to communicate with native speakers of District English Officers who are assigned to English programmes in some schools.

*As we know native speakers always have a powerful vocabulary in their conversations. So, if I cannot understand the meaning of the words that they use in the conversation I can ask them directly and they can answer my question at that time*

*RPSI 4, Syuhada*

She further stated that practicing speaking and writing using the words learned in the real context will increase the wide vocabulary. As stated by Dewey (1910), a word is acted as an instrument for thinking about the meanings which it articulates and it is important in communication.

*In this way, the learners will practise the vocabulary that they have in their speaking and writing as well as boost up their vocabulary.*

*RPSI 4, Syuhada*

For Miss Shazwani felt the importance of the roles of teachers in equipping themselves with various skills and strategies in helping the pupils in acquiring a good vocabulary especially in their writings.

*I think it is important to acquire vocabulary because, um, you need a vocabulary to deliver what you need to say or what you need to write and uh, there are many ways for any pupils, uh, to learn and the teacher needs to use many ways to help the pupils to learn vocabulary, so, the teacher needs to use everything every way and use the various kinds of strategies to help the pupils, to help them in acquiring the vocabulary.*

Miss Insania expressed her strategy to use cartoons with native speaker's voices and its subtitles to attract second language learners' interest. She thought by exposing the students to the real voices of the native speakers, would give the experience and situation like in the real context in acquiring good vocabulary. She believed that it is important to master a few vocabularies before using them in contexts.

*I would use their interest to teach vocabulary by using cartoons with voices in the mother tongue language but make use of subtitles as it helps...*

*RPSI 5, Insania*

*It is really important to master the vocabulary first to at least know some words.*

*RPSI 5, Insania*

#### **4.2.4.1.3 Words are learned through the application**

Words are learned better if they are applied by language learners in their daily usage. Derry and Murphy (1986) highlighted the words applied as a collection of mental tactics employed by an individual in a particular learning situation

Like Miss Nini, she took the advantage to use the words that she had found them stimulating to be used in her writing and while communicating with others such as with her family members and friends. She has confidence that by using the words frequently, she will be able to practise them in a motivating environment.

*If I find any words that are interesting for me, I'll tend to remember them. And sometimes, I might use it in my writing or when I communicate with other people.*

*RPSI 1, Nini*

*I also love to share new words that I previously never heard with my friends or my family because, for me, knowledge is meant to be shared!*

*RPSI 1, Nini*

As a trainee teachers in a higher learning institution, Miss Nini presumed that she needed to acquire high vocabulary since she had to read the academic reading materials for her study. In this research, the researcher had used Second Language Acquisition Course (SLA) (Refer Appendix S) which required the research participants to read articles and academic texts. Some of the words and terms used in the articles were quite confusing and difficult to understand. For Miss Nini, she needs to understand the words and apply them to understanding the content of the course. Besides, Oxford (1990) also acknowledged vocabulary learning strategies were needed as learners' support learning. Furthermore, Miss Syuhada's statement has also stressed the importance of having a good vocabulary as a student in a higher institution.

*I think it helps me a lot in understanding lectures and the reading materials that I have to read. Because, studying here, a higher learning institution requires me to use reference books that have a far more difficult language level. So, my vocabulary does help me in understanding difficult words thus, enhance my understanding of the particular content that I try to learn.*

*RPSI 1, Nini*

*So, if I do not have a good vocabulary I might do not understand the lectures. In conclusion, vocabulary does not only help me to write and speak but it also helps me to understand while listening to the lectures in the class.*

*RPSI 4, Syuhada*

As a future teacher, Miss Nini had the awareness to acquire the basic vocabulary well for teaching her students the second language. Miss Nini personally had the serious ability to use the correct vocabulary since that she was a Kelantanese and her dialect sometimes affected her confidence to communicate well using good vocabulary.

*I think vocabulary will, surely, help me a lot in my teaching because to teach students about a new language, I, as a teacher need to know more about the language than them. And I believe, by knowing more about the language means that I need to know the most basic thing about the language which is vocabulary.*

*RPSI 1, Nini*

It was supported by Miss Syuhada's opinion too, that strong vocabulary is needed for a future English teacher to give clear instruction to students in the classroom during teaching and learning processes.

*Vocabulary does not only help me in my studies but also my teaching soon. In my opinion, if I know many words and have a strong vocabulary I can deliver my teaching very well and my students can understand my instructions.*

*RPSI 4, Syuhada*

Miss Maizatul agreed that by applying some unfamiliar words and phrases in her academic writing tasks and presentations, they helped her a lot in producing good



essays and explaining the contents of the courses learned effectively and successfully to the audience.

*So, of course, all the vocabs that I have learned help me in my studies. In my studies, when it comes to writing tasks and presentations. In writing an academic essay, I usually try to use some unfamiliar words or jargon words that I know and apply them in my essay. For example, the word 'libido', I learned it when I read a psychology book in the library. and I also learn the word in Child Development this semester. I apply these kinds of words and apply them to come out with a good essay. Meanwhile, in the presentation task, the vocabs that I have learned also help me in explaining things by using more various meanings of words. It helps a lot to gain an understanding of my audience.*

*RPS1 2, Maizatul*

She also realised by reading and doing a lot of discussions using new words as good strategies in retrieving vocabulary.

*. Okay there are a lot of methods and strategies that can be applied to retrieve our vocabulary in English. I suggest that we have to do lots of reading and try to discuss the issues or tell new words in that particular topic to close friends afterward*

*RPS1 2, Maizatul*

Miss Syuhada also had a similar opinion as Miss Maizatul regarding sharing and practicing the knowledge in vocabulary with others either in pairs or groups as one of them was in applying them actively.

*I have many strategies but one of the strategies is I would like to form a small group or in pairs and we will share the knowledge in vocabulary that we have with each other. In this way, I can share the*

*words that I know and learn the new words that I do not know with my friends.*

*RPSI 4, Syuhada*

Miss Ain simply stated that she used the word in her everyday conversations and that can be identified as communicative competence in learning strategies (Oxford 1990). Moreover, Miss Ain used to travel abroad with her parents, and both parents communicated with her using the English language. So, she had been exposed to the language extensively.

*.... I try to use the word in my everyday communication...*

*RPSI 3, Ain*

One of the activities in this SLA course is to write a reflection. The research participants were asked to write online reflective writings based on the topics that they had learned in the SLA course. Miss Syuhada, a very hardworking TESL trainee teacher, is always positive to learn and she knew her weaknesses in acquiring the language. She put her efforts to write the online reflective writings well even though she had problems in delivering them orally. This was how she tried to apply the vocabulary that she had learned throughout the session through writing online reflective writings.

*Writing a journal reflection also can help me in vocabulary. If I practice writing my journals every day by using many kinds of vocabulary, it will help me to improve my knowledge and boost up my vocabulary.*

*RPSI 4, Syuhada*

Miss Syuhada's performance in the CEFR findings is presented in Table 4.2, and it reflects changes she made based on her online journal reflections. The outcome validated Miss Syuhada's claim that she would be able to improve her knowledge and have more confidence in using a broad vocabulary in her writings if she practised composing online journal reflective writings.

Table 4.2

*Analysis of Miss Syuhada's Reflections Based on CEFR Level Using Text Analyzer*

NO. OF REFLECTION	R1	R2	R3	R4	R5	R6	R7	R8
CEFR LEVEL	CEFR Level: CEF Level B2 (Intermediate) IELTS Level 5-6	CEFR Level: CEF Level C1 (Upper Intermediate) IELTS Level 6.5-8	CEFR Level: CEF Level B2 (Intermediate) IELTS Level 5-6	CEFR Level: CEF Level C2 (Advanced) IELTS Level 8+	CEFR Level: CEF Level C2 (Advanced) IELTS Level 8+	CEFR Level: CEF Level B2 (Intermediate) IELTS Level 5-6	CEFR Level: CEF Level C1 (Upper Intermediate) IELTS Level 6.5-8	CEFR Level: CEF Level C1 (Upper Intermediate) IELTS Level 6.5-8
	number of words: 373 average sentence length: 16 average word length: 4.9 word complexity: 1488	number of words: 170 average sentence length: 14 average word length: 5.2 word complexity: 2095	number of words: 199 average sentence length: 18 average word length: 4.9 word complexity: 1627	number of words: 407 average sentence length: 16 average word length: 5.7 word complexity: 2538	number of words: 84 average sentence length: 21 average word length: 4.9 word complexity: 2477	number of words: 84 average sentence length: 14 average word length: 5.3 word complexity: 1501	number of words: 171 average sentence length: 17 average word length: 5.1 word complexity: 2151	number of words: 871 average sentence length: 15 average word length: 4.9 word complexity: 2175

Based on the above analysis, her online journal online reflective writings were analysed according to Cambridge Assessment English (CEFR) Level, International English Language Testing System (IELTS) Level using Text Analyzer Application. The application rated the level of difficulty of each of the online reflective writings according to CEFR and was able to determine the approximate level of proficiency that the reflection is suitable for. Miss Syuhada had posted eight journal online reflective writings based on the tasks assigned using LMS. The outstanding improvement had been shown by Miss Syuhada in her CEFR Level when the last result

of her CEFR Level had achieved CEFR Level C1(Upper Intermediate) and IELTS Level 6.58.

Some of us were being pushed by our teachers in the school to learn vocabulary intensively. In this online structured interview, Miss Asma had shared her experience of how she learned new words from reading materials and constructed them in a special scrapbook that was created by her primary English teacher.

*When I was in primary school at SK St. Anne's Convent, my English teacher, Miss Kamala introduced me to a scrapbook named 'My Daily Words' book. At that time, we are asked to read a book a day, by the teachers in the school, especially the English teacher. We are 'forced' to learn new words every day and build sentences using the words found in any books or reading materials that day.*

*RPST 7, Asma*

In the interview, Miss Insania claimed that listening to songs and watching cartoons one of the helpful platforms in acquiring vocabulary in the most enjoyable ways. She believed that students were able to apply and understand the meaning of the words learned through songs and cartoons. By reading the subtitles of the cartoons, she was able to learn phrases and sentences, she then practise them with her family.

*Um, if I were to be, uh, teacher or if I were to educate pupils and my children, I would personally use, uh, listening to songs and maybe watching cartoons or things because it is interesting and it is very beneficial to acquire vocabulary in a way that they, uh, enjoy it.*

*RPST 3, Insania*

*Okay. So, if we watch cartoons, they are subtitles below, and usually what the cartoons say and the subtitles are parallel, so I tend to*

*guess what the cartoon is saying based on the subtitles. So, maybe it says, "I want to eat", but then kat bawah<below> "Saya nak makan"<I want to eat>. So, I can guess that "I want to eat" is "Saya nak makan"<I want to eat>. **I tend to use that with my parents.***

*RPINT 3, Insania*

For Miss Syuhada, she was claiming that when the language learners were being exposed to appropriate VLS, the learning process would be much efficient and effective for them.

*Um, it is important because without knowing some strategies, we just learn it subconsciously, but if we know some of the learning strategies in uh, learning vocabulary, we can um, manage ourselves to learn properly. So we, if we, such as if we know some...certain learning strategies, uh, **if we face the situation that relates with the learning strategies, we can learn, we can take place in learning...***

*RPINT 5, Syuhada*

It was being supported by Miss Syadia's statement during the interview that knowing basic vocabulary is needed in communicating with others.

*I think it is very important because uh when we...we are learning in L2 if we don't know, I mean like basically if uh, vocab is the basic, is the base when we learn a language. So if we didn't, did not know a vocab, how can we converse, how can we communicate with others, how can we uh, convey to the others what we are going to say if we don't have the basic knowledge which is the vocabulary.*

*RPINT 6, Syadia*

#### 4.2.4.1.4 Words are learned subconsciously

The two terms which are normally become the main attention to all researchers on the effectiveness of explicit and implicit learning (Hulstijn,2005; N. Ellis,2005; DeKeyser,2003). As Hulstijn (2013) clearly defined explicit learning is “input processing to find out whether the input information contains regularities and if so, to work out the concepts and rules with which these regularities can be captured”. “Implicit learning is the other side of the coin; learning without conscious attention (subconscious) or awareness. John Williams (2013) stated that “implicit learning occurs without intention to learn and without awareness of what has been learned.”

Miss Ain, during the interview, agreed that parents played important roles in introducing new vocabulary to their children since they were at a young age.

*...during my childhood, I subconsciously learned new vocab through my interaction with my parents*

*RPINT 1, Ain*

It was being supported by Miss Asma’s statement that having good exposure from the family in learning L2, would increase the interest and motivation of oneself to explore the language itself.

*I was exposed to learning the English language from my parents and my siblings. So, from there, I built the interest and motivation to learn English.*

*RPINT 2, Asma*

Besides, reading and watching movies is also helping her to encounter the new vocabulary subconsciously. Furthermore, Miss Shazwani added watching cartoons and listening to songs were implicitly helped her to acquire some new vocabulary.

*Uh, I think, uh, because, I don't have a specific time to find or to expose myself to such vocabulary, so when I indirectly read books or watch movies, I will get some of the vocabularies that I encounter in the movies or books, so I will, like, uh, **subconsciously** learn and that is, uh, better than just reading and memorizing.*

*RPINT 2, Asma*

*I learn informally without using any learning strategies. For example, , learning through cartoons, watching movies, listening to songs, like that.*

*RPINT 4, Shazwani*

Miss Syuhada believed that she would learn vocabulary better if she knew more appropriate strategies rather than subconsciously learned them. She further stated that she was continuously using the language in her daily life in improving her vocabulary.

*Um, it is important because without knowing some strategies, we just learn it subconsciously, but if we know some of the learning strategies in uh, learning vocabulary, we can um, manage ourselves to learn in the proper way*

*.... keep learning in our daily lives so we acquiring the vocabulary subconsciously.*

*RPINT 5, Syuhada*

#### 4.2.4.1.5 Selective attention

From the findings, it was discovered that the research participants tended to be very selective in using some words. This is one of the metacognitive strategies in paying more attention to words that are important for them to understand the text or passage.

Miss Maizatul preferred to search for the difficult words from the text and get their meanings as part of her vocabulary learning process.

*So, to acquire my vocab, first of all, I love to look for any words that I do not know the meaning, whenever I encounter them.*

*RPSI 1, Maizatul*

Besides, in her second online structured interview, she pointed out that she was so ambitious to use the sophisticated words that she had acquired from her readings in her academic writings. It shows that she knew which words were important for her to be learned.

*Reading these materials helps me when I have to **use sophisticated words in academic writings.***

*RPSI 2, Maizatul*

Furthermore, Miss Maizatul took an effort to use her reading skills to recognize the meaning of the words that she came across by reading the sentences before and after the sentence or phrases that mentioning the words that she wanted to remember and use later. It shows that when she met a new word or phrase, she knew whether she needs to remember it or not.



*In reading, when I come across any words that I don't know, I read the sentence around the words and try to figure out the meaning of the contexts. Then I check the guess using the dictionary or with peers.*

*RPSI 2, Maizatul*

#### **4.2.4.1.6 Self-initiation**

In the study, most of the research participants looked for other reading materials that come to their interest in widening their vocabulary besides their academic texts. Miss Insania stated that she loved to read novels during her free time. In the interview, she mentioned that she started reading at an early age and she took the initiative to read the words that come to her interest that were printed on the food packaging.

*I love to read so I have a lot of novels and books in my house. So during my leisure time or when I don't know what to do, I would read.*

*RPSI 5, Insania*

*I begin reading during my three years old or four and something. So, from there I learn to, uh, find new words because I want to know what **the television or the food packaging** said.*

*RPINT 3, Insania*

Similarly, with Miss Fatin, she focused on English reading materials such as English articles and English Graphic Novels. I discovered that there were two different types of reading materials, one was too academic and the other one was in simple features.

*I love reading and most of my reading materials are in English. I usually read English books, **English articles**, and **English graphic novels**.*

*RPSI 6, Fatin*

Besides reading, Miss Asma is fond of listening to English songs and watching movies. Watching cartoons is one of Miss Ain's interests in acquiring vocabulary. Moreover, cartoons were considered as the language input and able to increase the vocabulary of second language learners (Karakaş & Sariçoban, 2012).

*Firstly, I acquired my vocabulary skills by **listening to English songs** and reading books, magazines, and novels*

*RPSI 7, Asma*

*I read a lot of books and I watch a lot of movies*

*RPINT 2, Asma*

*I like to watch English movies and **English cartoons** on the TV so, that is where I learn my English*

*RPINT 1, Ain*

Miss Maizatul stressed that the vocabulary that she had learned would be used and applied in her studies for example in her writing tasks, and during the presentations. She focused on certain words that she felt that important and ease her studies especially during her oral presentations in the classroom. As she stated below:

*So, of course, all the vocabs that I have learned help me in my studies. In my studies, regarding writing tasks and presentations. In writing an academic essay, I usually try to use some unfamiliar words or jargon words that I know and apply them in my essay. For example, the word 'libido', I learned it when I read a psychology book in the library. And I also learned the word in Child Development course this semester. I apply these kinds of words and apply them to come up with a good essay. Meanwhile, in the*

*presentation task, the vocabs that I have learned also help me in explaining things by using more various meanings of words. It helps a lot to gain understanding of my audience*

*RPSI 2, Maizatul*

Next is the activation strategy which becomes a common strategy among parents when some of them have entrusted their children with a large vocabulary from an early age. This happened with Insania when she repeatedly mentioned her father's role in the interview.

*...my father introduced me to English songs during my childhood, so, when I heard the songs I tend to memorize how they speak, how they sing, and then, uh, I tend to use that words even though I didn't know what that means, and then later then my father told me the meaning and then I keep on using it.*

*RPINT 3, Insania*

Moreover, Insania's opinion was supported by Syuhada's testimony by stating that, teachers and friends also play an important role in improving vocabulary learning.

*.... after I know how to use the words, I will use the words uh, in my conversation with my uh, teachers, my parents and also my friends.*

*RPINT 5, Syuhada*

Reading programmes in school also had a great impact on arousing students' interest in reading and providing them with an excellent vocabulary. Miss Shazwani mentioned how she spent her time reading in one of the reading corners in school during her free time and while waiting for her parents to pick her up from school. This research

participant had highlighted the role of school in promoting reading activities among students. Once students have their own conceptions of VLS, their lexical competence can be improved with the materials and activities developed by teachers to improve students' vocabulary (Subon, 2013)

*...we have the Nilam Programme in schools nowadays and I think it is very excellent for the teachers to put uh, 'reading corner' in the class and around the school so that uh, even the pupils uh, do not like reading, when they waiting for their parents before they went back home, they can take a look at least and then tomorrow maybe they will read uh, look at the pictures and then they start to read slowly just to, uh attract their interest first before they be into the reading part and then by doing that they will learn more vocabulary even they just came across...*

*RPINT 4, Shazwani*

#### **4.2.4.2 Online Learning Management System (LMS)**

Most second language learners today are exposed to all kinds of asynchronous Internet technologies as a substitute for live classroom discussions and teaching-learning interactions. Kabilan et al. (2010) confirmed that online platforms such as Facebook are an important platform in the learning process of university students. In the Institute of Teacher Education in Malaysia, most of the students are familiar with different types of learning management systems social medias and networkings such as *Schoology*, Google Classroom, Google Engine Search, Telegram Messenger, WhatsApp Messenger and Facebook.

For example, one participant in the study, Miss Maizatul, claimed that she uses Google Search Engine as one of her strategies to enrich her vocabulary. She believed that this strategy was more applicable in the 21st Century Learning age.

*These help us to remember new words well. Next, in this twenty first century we also can look for any method that is interesting and worth to try in the internet. We can try to google any method that is suggested by the well-known people in academic field to enrich our vocab.*

*RPS1 2, Maizatul*

Furthermore, Miss Maizatul, in her online structured interview on LMS stated how the platform helped her in the acquisition of the content subject and improving her writing skill. It is being proven that LMS assisted her in understanding the content by understanding the meaning of the words learned in her writings.

*Of course, it did. For me, Schoology gives positive impacts on my acquisition on the content of the subject. When madam asked us to write reflections on what we have learnt, I realise that indirectly it helps me to enhance my writing skill.*

*RPLMS 7, Maizatul*

It was supported by Ms. Insania stating that she "Googled" the words she did not know. "Google" is a common word incorrectly used as a verb, referring to searching the Internet using the Google search engine.

*And then, when reading, there will be words that I don't know and I never came across to so I would **google** it....*

*RPSI 5, Insania*

In addition, Miss Ain felt that the use of the Internet is more relevant and meaningful in this day and age, especially with the mobile phone that can be easily accessed.

*I would prefer using online because it is more applicable and also very, um, practical because I can easily browse it through my phone.*

*RPINT 1, Ain*

It was a must for the trainee teachers in ITEs to have their own computer and access to the internet while studying in the institute. Miss Asma pointed out that she increased her vocabulary by watching YouTube channels on her personal computer posted by her friends in LMS.

*And also I had access to computer, so I had access to **internet**. So, I can find videos in YouTube to further enhance my vocabulary.*

*RPINT 2, Asma*

Miss Syadia added that the platform contributed more input which she gained a lot of information through activities conducted by her friends. She indirectly acquired some vocabulary through the materials and activities that she accessed from the platform.

*Yes, it helped a lot by adding more input other than you had have us. You can say that it was like the comprehensible input because in order for us to conduct the activities we need to have more information on it.*

*RPLMS 2, Syadia*

Miss Syuhada felt secured with online LMS which she could refer to when she needed all the materials and the most important was she believed that by reading her friends' reflections repeatedly, she would learn more vocabulary.

*Um, because uh, the content that we have shared in the Schoology um, will not be deleted. So, I can keep uh, learn the words...the words uh, by looking, by reading back, by rereading the reflections that being shared by my friends*

*RPINT 6, Syuhada*

From the above findings, it was clearly the research participants had the positive beliefs on VLSs which assisted them in learning the second language successfully.

#### **4.3 Summary of the Chapter**

In this chapter, VLSs were categorized four of strategies, metacognitive strategies, cognitive strategies, memory strategies and online strategies as in Table 4.3 below.

Table 4.3

*Summary of Themes or Categories of Vocabulary Learning Strategies*

Themes/Categories	Sub-Themes/Strategies	Sub-sub Themes
<b>1. Types of VLSs (Gu and Johnson,1996)</b>		
1.1 Metacognitive Strategies	1.1.1 Selective attention 1.1.2 Self-initiation	
1.2 Cognitive Strategies	1.2.1 Activation 1.2.2 Inferencing	1.2.2.1 Guessing strategies
	1.4 Dictionary Strategies	1.4.1 Hardcopy Dictionary Strategies 1.4.2 Digital Dictionary
	1.5 Note Taking	1.5.1 Choosing which word to put into a notebook 1.5.2 Deciding what information goes into notes 1.5.3 Keeping records of the words
1.3 Memory Strategies	1.3.1 Rehearsal	1.3.1.1 Use of the word list 1.3.1.2 Oral repetition 1.3.1.3 Visual repetition
	1.3.2 Encoding	1.3.2.1 Visual encoding 1.3.2.2 Auditory encoding 1.3.2.3 Use of word structure 1.3.2.4 Contextual encoding
1.8 Online Strategies	1.8.1 Browsing the Internet Websites	
<b>2. Beliefs of VLSs</b>		
2.1 Beliefs about vocabulary learning	4.3.1 Words are learned by rote learning (repetition and memorization) 4.3.2 Words are learned through application 4.3.3 Words are learned through contextualization 4.3.4 Words are learned through contextualization	



## **CHAPTER FIVE**

### **THE USE OF ONLINE LMS IN ENHANCING VOCABULARY LEARNING STRATEGIES**

#### **5.1 Introduction**

This chapter discusses the findings in relation to the second research question: How does the online learning management system help the TESL trainee teachers in enhancing their vocabulary learning strategies? The findings focused on how the LMS helped in enhancing vocabulary learning strategies (VLSs) of the TESL trainee teachers based on the observation of online postings, structured online interviews and face to face interviews with the participants. Apart from that, reflective writings were also analysed to show that LMS not only increased students VLSs but also improved their writing skills. The findings which were analysed using the 'Theory of Connectivism' (Siemen & Downes, 2009) uncovered several themes related to online learning LMS which are: 1) Diversity of opinions in learning and knowledge; 2) Connecting process in gathering information; 3) Learning involves non-human appliance; 4) Capacity to know more; 5) Nurturing and maintaining social connection; 6) Connection between fields, ideas, and concepts; 7) Currency; 8) Involvement in decision making, and 9) an emergent theme, simplification. In relation to the analysis of reflective writing using Text analyser, the findings indicated that the participants' CEFR and IETLS levels improved particularly in terms of the number of words, sentence length, word lengths and word complexity.

This chapter will start with the presentation of the findings on how LMS enhances the participants' usage of LMS in enhancing their VLSs followed by the findings based on the improvement in their writing.

## **5.2 Online Connections: The Use of LMS in Enhancing Students' VLSs**

In this section, the data are presented based on the themes gathered through the “Theory of Connectivism” (Siemens & Downes, 2009). Nine themes were obtained which are: 1) Diversity of opinions in learning and knowledge; 2) Connecting process in gathering information; 3) Learning involves non-human appliance; 4) Capacity to know more; 5) Nurturing and maintaining social connection; 6) Connection between fields, ideas, and concepts; 7) Currency; 8) Involvement in decision making; 9) and one emergent theme, that is simplification. Figure 5.1 shows the themes derived from the analysis regarding online connections using (LMS).

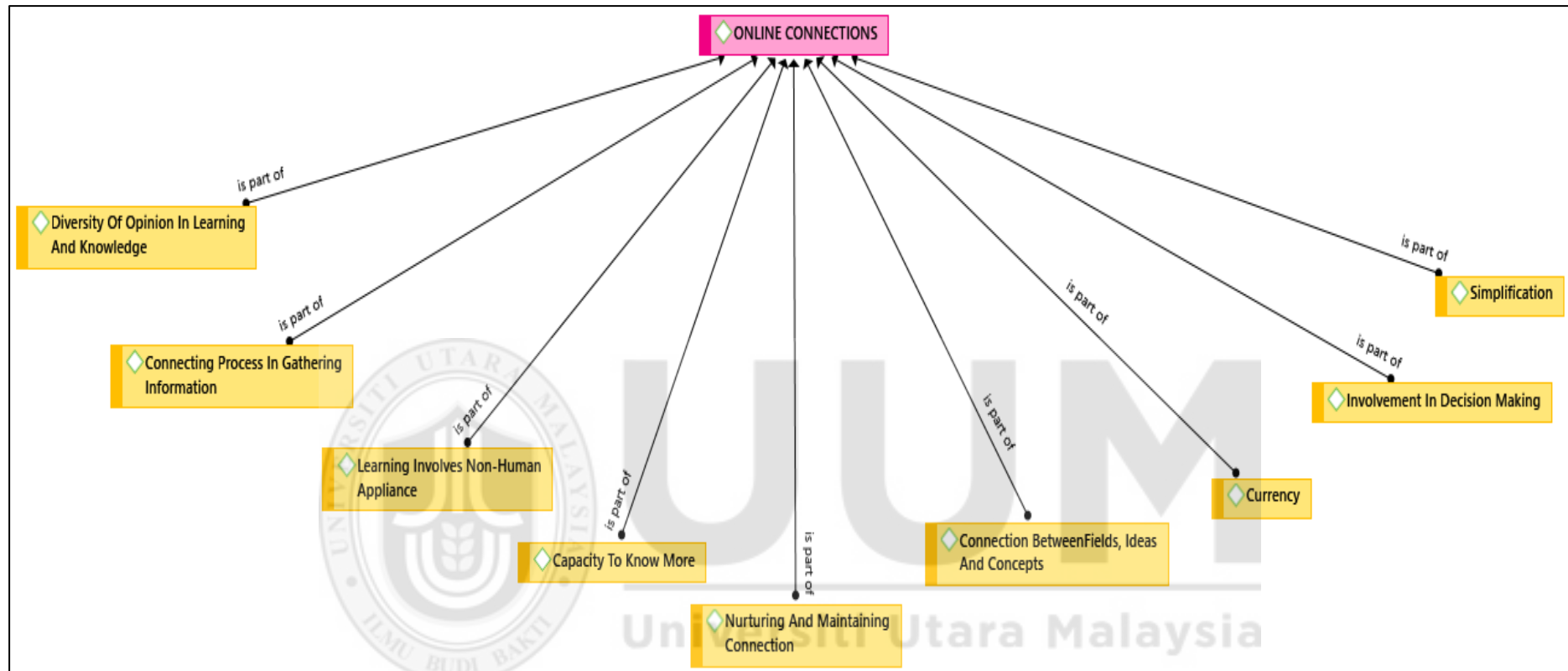


Figure 5.1 Themes regarding Online Connections Using LMS

### 5.2.1 Diversity of opinions in learning and knowledge

The first theme found was related to diversity of opinion in learning and knowledge that involves both cognitive and affective elements. It depicts the knowledge that is distributed through the network and is stored in various digital formats (Siemens, 2008). Siemens & Downes (2009) argue that online learning celebrates diversity of opinions in learning and knowledge. The participants in this study mentioned that through LMS they shared materials and contents with their friends and gained new knowledge on how to use new words. One of the research participants Miss Shuhada expressed her experience in sharing the contents that her friends had uploaded onto the LMS. She spent time reading the posted online reflective writings to improve her vocabulary usage in her writing.

*Because the content that we have shared in the Schoology will not be deleted. So, I can keep on learning the words by looking, by reading back, by rereading the online reflective writings that are being shared by my friends.*

*RPINT 5, Syuhada*

From the interviews and the researcher's field notes, she observed that Miss Syuhada was a student who always grabbed the opportunities to learn vocabulary of her second language by using different VLSs. It can be seen that the online learning management system immediately boosted a great social interaction and experience of the participants with their peers without any prejudice.

Mr. Miswar also shared a similar view with other participants on how online LMS impacted positively in his development of knowledge through compiled discussions and presentations in the learning system.

*Yes, it did give positive impact towards acquiring the content of the subject as the discussion made by our friend and the reading materials and presentations are all compiled here to provide easy access to those resources.*

*RPLMS 11, Miswar*

As indicated in the extract, Mr Miswar explained that he discussed the contents and ideas based on varied reading materials and presentations shared by his friends.

Another research participants Miss Asma and Fatin agreed that the platform also met their needs in the learning process. Learning content with difficult words and phrases, such as in a Second Language Acquisition (SLA) course, requires more attention for the research participants to understand the meaning of the words or phrases in depth. This is because they would use the terms or words correctly in their exams. By sharing the discussions, presentations, notes, and articles with their friends, they learned words and terms that were used specifically for the course and were able to use them in their written online reflective writings, coursework, and exams.

*Yes. It is relevant to the current needs of education and enhances cooperative and collaborative learning as we can discuss and share ideas here.*

*RPLMS 2, Asma*

*Yes, because the notes are all here and my friends are also providing their own notes here, which is beneficial for me and the exam.*

*RPLMS 3, Fatin*

In addition, Miss Fatin personally described her problem in understanding some of the lengthy presentations in the LMS, but with the help of her friends, she was able to digest and understand the words mentioned in the presentations.

*Most of the time, yes. Honestly sometimes I don't really understand their presentations if it's too wordy, but I want to thank my friends who made it simpler to digest.*

*RPLMS 3, Fatin*

Like Fatin, Miss Insania also made use of the vocabulary that she had learned using LMS in her online reflective writings. She kept mentioning that she referred to her friends' reflective writings and learned how to use the newly learned vocabulary in her own writing.

*Yes. For example, in Schoology when I read my friends' online reflective writings or posts, they usually use vocabulary that I am not that familiar with, so it excites me to use that vocabulary, so the next time I write or reflect, I would tend to use that vocabulary to make my own online reflective writings and writing more interesting.*

*RPINT 6, Insania*

In sum, most of the research participants in this study shed light on the importance of online learning management system (LMS) in assisting and enhancing their vocabulary learning strategies particularly in acquiring the content subject, such as Second Language Acquisition Course. They mentioned that they appreciated diversity

of opinions and ideas from their friends. They had to understand the meaning of the words that they discovered or read in the texts, articles, and also to use them in the discussions and presentations to avoid misunderstanding of the contents that they discussed or presented. The findings suggest that the research participants showed an optimistic perspective regarding the role of online LMS in their cognitive and affective processes in learning. The research participants' awareness in making this online learning management had drastically increased in reducing the gap in delivering education and giving a new dimension to their VLSs.

### **5.2.2 Connecting process in gathering information**

The second theme was on how online LMS acts as a part of a learning process that includes the process of gathering information. The findings of the study indicate how the research participations find a new information and process it, then connect to a network to share it with others using online LMS. Moreover, finding new information is a cyclical learning process (Kop & Hill, 2008). Most of the participants in this study reported that they learned to gather plenty of information in the internet to support their learning.

Miss Syadia shared that she used a learning management system to compile all the learning materials shared by her friends. She felt that the LMS used enabled her to change her learning strategies and make herself a self-organised person.

*Yes, because I used this platform to get all the materials from the topic that we had discussed in the class.*

*RPLMS 1, Syadia*

Miss Fatin agreed that she had benefited from all of the notes provided in the LMS, which she would use for exam revision. This demonstrates that some TESL trainee teachers recognised the value of LMS as a learning platform for their second language.

*Yes, because the notes are all here and my friends also provide their own notes here, which is beneficial for me and the exam.*

*RPLMS 3, Fatin*

Miss Zafrina stated that the learning management system was a very useful tool for sharing her learning activities. She emphasised that in order to prepare her coursework and online reflective essays, she always visited her friends' online postings for specific information and word usage in the subject content.

*Yes, because we can always refer back to this platform because we shared everything here and it is a very useful platform for me.*

*RPLMS 8, Zafrina*

Similarly, Miss Insania took the initiatives to study the notes and print them out even though she preferred to study using online learning.

*Obvious. This is where I looked up most of the notes, though I printed them all out. I have a tendency to look them up online rather than print them out.*

*RPLMS 9, Insania*



The findings indicated that the research participant's VLS used online LMS in getting a better understanding of the content subject during the study. Miss Syadia stated this in her structured interview on LMS:

*Yes, because sometimes I tend to **remember** more when I heard others explanation than I read it by myself.*

*RPLMS 1, Syadia*

Miss Syadia had mentioned one of her VLSs was understanding the words in the content subject used in this study. Some research participants applied words and phrases that they had learned by connecting them with other reading texts that they were familiar with as their preparations to be proficient language teachers. The following extract can be quoted here, as an example:

*Yes. It helps me in understanding **the concept or words** by relating to the actual things that may occur at school. It also helps in preparing me for the practicum. I can understand the importance of teacher to comprehend the **phrases** of SLA to help my pupils in the future.*

*RPLMS 2, Asma*

Miss Ain expressed her agreement that online LMS sped up her process of getting, sharing, and discussing information needed with others in the most convenient way. Miss Ain stated:

*Yes! This platform helps me a lot in getting the information that I need, sharing them and also discussing with my colleagues. Definitely, useful, easy and ideal way to learn in this era.*

*RPLMS 10, Ain*

Miss Shazwani highlighted how the LMS helped her with vocabulary learning and also provided other benefits that supported her studies.

*I think it helps me a lot because the learning system itself helps me get the notes and everything, and the reading materials are all there, and it's mobile, so we can take it to places and I can read it whenever I want, and it helps me a lot to do assignments and revisions. From there, they also use, we have the terms and everything in one click, so we can know everything from there. So I think it helps me a lot to increase my own vocabulary.*

*RPINT 4, Shazwani*

As a whole, the participants revealed that LMS was used as a connecting process in gathering information as they collected information relevant to their subject matter from their friends and form the network. It indirectly has a close connection with VLSs in understanding the meaning of words used before reusing them in contexts.

### **5.2.3 Learning involves non-human appliance**

The third theme that relates to online LMS is that learning involves non-human appliance. It refers to the notion that information may be held within a group of things, not just a single person and for example, a class of students may know a lot as a group, but each student may not know everything. Therefore, the "class" is a non-human appliance which contains the knowledge. Besides, by allowing the dependency of the students on technology, they will be exposed to vast amount of information available to them.

In the extract below, Mr. Felix showed his dependency on the platform in keeping and sharing materials with his friends since the learning process of the 21st Century learning. From the observation, Mr. Felix was a tech-savvy person and he was attached to all the digital appliances. Normally, he would bring and used his own Tablet into the Language Lab during the study. He was questioning on the use of the traditional way in keeping the learning materials. He expressed the following:

*Yes. But why do we have to print everything if we are going towards 21st century learning? what's the point? might as well use printing and not use this platform at all. if we just want to share files, email or even "drop box" is also fine. save the trees!*

*RPLMS 6, Felix*

The browsing page of the online LMS, *Schoology* displays the latest postings, and the users need to scroll back the pages needed by clicking the word "More" at the end of each page. This is one of the weaknesses of this LMS, *Schoology*. Most of the research participants had that difficulties in browsing and retrieving the previous postings.

Figure 5.2 show the features of the browsing page of *Schoology*.

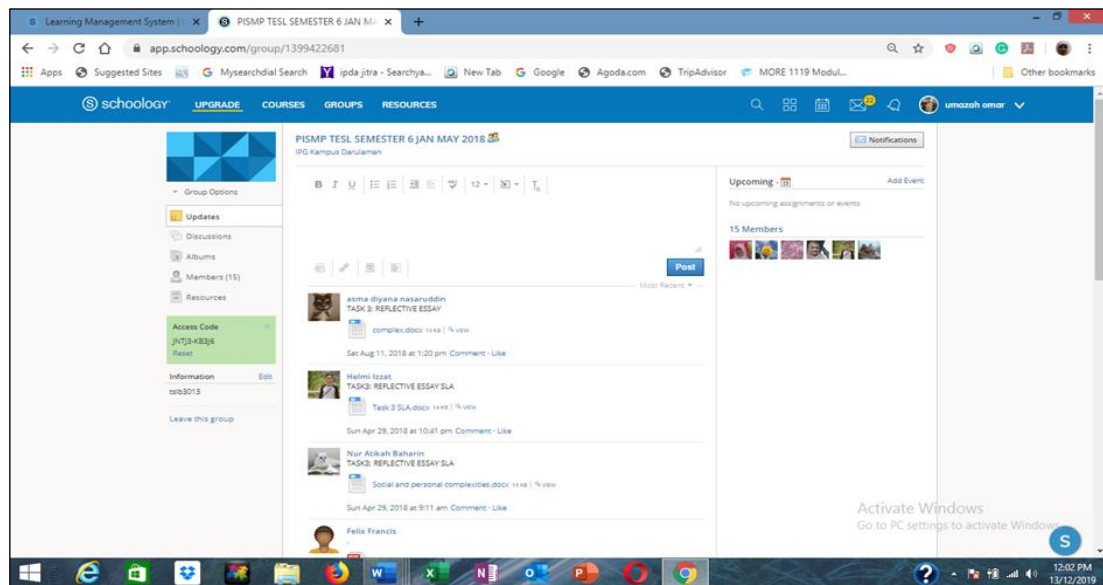


Figure 5.2 The Features of the Browsing Page of Schoology

The most favourable features of the online LMS are the details of postings containing the names of the users, the dates of the postings and the posting times. These features smoothed the researcher's study in tracking the research participants' actions after completing some of the tasks planned for the study. Figure 5.3 below shows the detailed features of the postings.

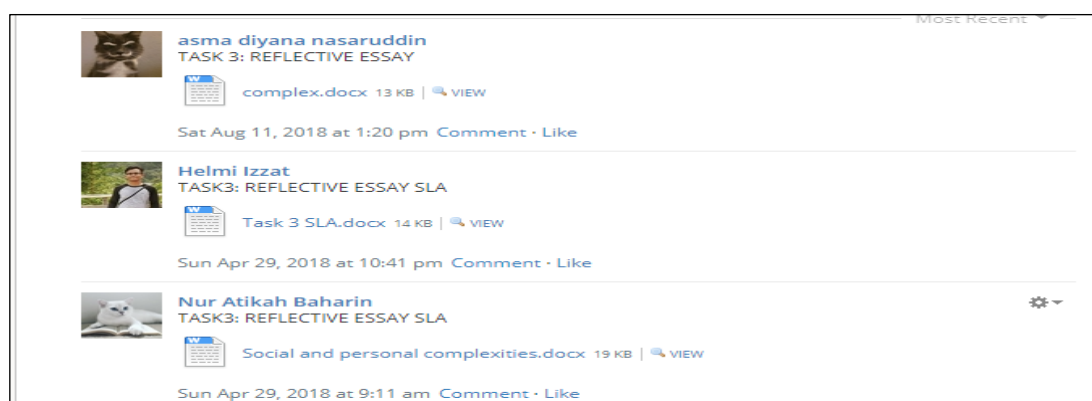
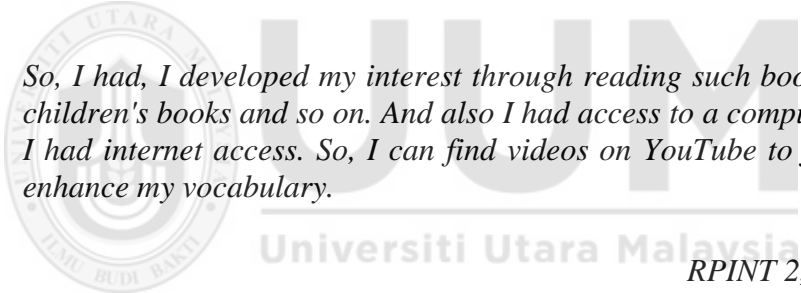


Figure 5.3 The Detailed Features of Research Participants' Postings

#### 5.2.4 Capacity to know more

Since the study was dealing with online learning using LMS, the research participants felt at ease in getting the latest information from the internet using various VLSs in understanding some difficult words in their academic materials. Working with online LMS offers some enjoyment besides introducing some digital learning applications such as Storybird Application and PowToon. This fourth principle points out that the student's learning capacity to know more is more critical than what is currently known by one of the research participants. It comprises of using various strategies for assimilating and updating most recent data, knowledge, and concept. Miss Asma explained the following in her interview:

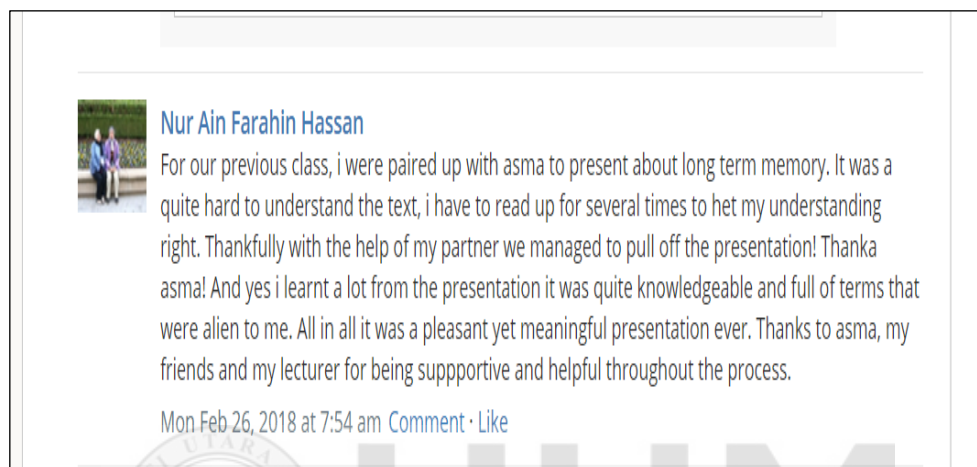


*So, I had, I developed my interest through reading such books, the children's books and so on. And also I had access to a computer, so I had internet access. So, I can find videos on YouTube to further enhance my vocabulary.*

*RPINT 2, Asma*

In this extract, Miss Asma mentioned that she used other materials such as YouTube videos to further enhanced her vocabulary. This shows that LMS has aroused her interest to know more about the subject matter. Miss Asma recalled her early childhood experience of boosting and updating her vocabulary using various platforms to improve her reading skills. From my observation, Miss Asma had shown her achievement and effort in using all the bombastic words, especially during her presentations. She became the center of reference among her friends. Her friends showed their interest in adopting and adapting the words used in her postings and online reflective

writings. She was very helpful and very committed student. As mentioned by Miss Ain in her online posting below in Figure 5.4 below.



*Figure5.4* Online Posting in Schoology: Nur Ain Farahin Hassan

Miss Ain used to be Miss Asma's partner in one of the presentations. She declared that with Miss Asma's help and assistance their presentation went effortlessly and gained success.

Miss Shazwani also used this LMS as her first reference platform before turning to other sources. It demonstrates that online LMSs have become the primary learning platform, in addition to providing opportunities for improving vocabulary learning through the use of various strategies. This indicates that she kept on searching for more information in her learning. She said,

*My first reference is in Schoology even when I did my assignments I came here first before I search for other reference from other sources.*

*RPLMS 12, Shazwani*

#### **5.2.4 Nurturing and Maintaining Connection**

The next theme was nurturing and maintaining connections which are important in aiding student's continuous learning. It is not only for preserving networks but also for constructing more advanced ones.

Through continuous learning, TESL trainee teachers must be able to cultivate and manage connections by applying the mechanisms utilised in vocabulary learning. Miss Syadia's endeavour to understand a topic that she did not understand with her colleagues owing to her lack of interest in reading is depicted in the next finding. The research participants employed a variety of strategies to make their knowledge of what they had learnt more meaningful through the use of an online LMS.

*Yes, since I am not a person who loves reading but by reading my friends' notes I was able to improve my understanding on the topic.*

*RPLMS 1, Syadia*

In addition, Miss Fatin added that she shared and discussed with her colleagues in order to understand the meanings of the words, phrases, and sentences in the reading texts as follows:

*Yes, because I honestly think when we discussed issues related to what we learn, we tend to 'crack' our heads and produce brilliant ideas regarding the subject.*

*RPLMS 3, Fatin*

Miss Asma felt how difficult it was to remember some difficult sentences of the course, and she realised how important it is for her to remember these sentences in the future.

*I can understand the importance of teacher to comprehend the phases of SLA to help my pupils in the future.*

*RPLMS 2, Asma*

In sum, nurturing and maintaining connections with colleagues and friends in and out of the classroom through an online LMS has a number of advantages, including improving TESL trainee teachers' VLSs in acquiring some difficult words, phrases, terminologies, and complex sentences, and making their learning process more meaningful without feeling inferior.

#### **5.2.4 Connection between fields, ideas, and concepts**

The learners' ability to see connections across disciplines, ideas, and concepts that span different knowledge domains is supported by the sixth theme. This ability is critical for the trainees to have as a foundational skill. Miss Nini and Miss Shuhada mentioned that They managed to make connection between what she was learning this semester with her experience during her practicum. She also stated that she was able to make some connections with the theories that she has learned.

*The content that I'm learning this semester is closely related to what I have been doing in my last practicum. Learning it more thoroughly this semester helps me to understand those theories better and this will definitely help me in applying it more effectively in my next practicum next semester.*

*RPLMS 13, Nini*



*Yes. The notes provided help me to do additional reading regarding the topics. The notes provided also can help me to get reliable resources.*

*RPLMS 14, Syuhada*

Miss Shuhada added that the knowledge she learned helped her to do additional readings in the process of making connections between ideas and concepts.

### **5.2.5 Currency of Knowledge**

The seventh principle is a currency of knowledge (accurate and up-to-date knowledge) and the application of authentic experiences provided and supported by teachers are skills needed by the students especially when using technology. As they strive to grasp concepts or occurrences, online learners begin by themselves and build relationships between nodes of information and individuals. Learners must find information and determine whether and how the new knowledge fits into the networks they are establishing as part of a new skill set in online learning. The ability to seek out current information and the ability to reject secondary and unnecessary information are two crucial skills that contribute to learning as indicated in 'Connectivism' (Siemens, 2005).

In this study, the research participants had to be very selective in choosing appropriate vocabulary because the content subject consisted special terms and vocabulary. Besides, they have to update their vocabulary knowledge and know how to use it accurately in their language learning process. For Miss Maizatul, whatever she had learned from the online LMS, she felt the information that she could fit in her teaching and learning process in the future. She stated as follows:

*Of course the contents of this subject help me a lot as it is very practical and applicable. For example, when we learn about the learning hypothesis by Krashen, I think that all them are really related to our teaching and learning in future.*

*RPLMS 7, Maizatul*

Furthermore, Mr. Miswar had planned the strategies in designing his future lesson with the input that he had acquired from the online LMS for his students:

*The content of this subject will help me in future especially during the next practicum as I will be particular when I design my lesson plan so that I can sufficient input to my pupils.*

*RPLMS 11, Miswar*

Next, Miss Syuhada realised after utilising the online LMS that adopting appropriate wording in her online postings was essential in avoiding misunderstandings about the meanings of the postings.

*If I want to post something on the Schoology, I need to use correct vocabulary so I need to find new vocabulary so that if uh, I use the correct vocabulary, my friends can understand what I am going to say.*

*RPINT 5, Syuhada*

The above findings clearly highlighted that online LMSs functioned in enhancing the TESL trainee teachers VLSs by finding the new information especially the vocabulary and able to fit them with the appropriate networks which are up-to-date and relevant for the 21<sup>st</sup> Century Learning.

### 5.2.6 Involvement in Decision Making

According to Siemens (2005), making decisions is a learning experience in itself. The significance of incoming information and the decision of what to learn are viewed through the lens of a dynamic reality. While there may be a correct response right now, it may be incorrect tomorrow due to changes in the information climate influencing the decision. Decision making in choosing what to learn and how do they connect in knowledge sharing is important element in this Theory of Connectivism. Miss Fatin had made decision to download the online LMS application in her mobile phone for her convenience in accessing all the materials and information regarding the updated tasks and the activities. So, she had choices to complete the tasks given at any time as she had downloaded the APP in her hand phone. She stated as following:

*As I downloaded the App in my phone, so it'll be easier for me to access the notes.*

*RPLMS 3, Fatin*

For Miss Syuhada, making decision in choosing the right materials was important to avoid some misunderstanding of the content subject during the presentations:

*We can learn together based on the explanation and discussion on the mistakes done in the presentation. However, we still need to understand the topic well before we present to avoid misunderstanding on the topics.*

*RPLMS 14, Syuhada*

Miss Fatin revealed that she would engage in a discussion with her peers during the decision making process and this process has managed to produce brilliant ideas.

*Yes, because I honestly think when we discussed issues related to what we learn, we tend to 'crack' our heads and produce brilliant ideas regarding the subject.*

*RPLMS 3, Fatin*

Another research participant, Mr. Felix, felt that the LMS was important as a platform to improve students' critical thinking and language acquisition. He acknowledged the benefits of LMS for effective language learning.

*Yes. it helps in understand pupils' thinking process and Language acquisition.*

*RPLMS 6, Felix*

In Miss Shazwani's reflection dated 14 Mac 2018, she also commented about the confusions of the topic during her presentation with her peers. She interestingly discovered the existing of a word "circumlocution" and it was one of the new words that she would learn and use in future.

*Today, we have learnt about communication strategy and Asma and I have presented about semantic avoidance. Actually, when I look up into this, there is not much about it and I almost got it confused with other types of avoidance. Basically, it is focusing on the meaning on the words used. when others presented on their strategies, I found that circumlocution is very interesting. It happens when a speaker uses many words when they don't know the actual words. For me, it can enhance pupils' ability to think creatively and critically. as for others, it was quiet common and I already learnt about them before. overall, I learnt many new things today.*

Online learning (LMS) helped the research participants to have a dynamic discussion through some presentations. Based on the researcher's observations, most of the participants started that they applied their own VLSs to learn new words from their friends' presentations and also from their discussions. In this way, some of them gained confidence to effectively use the new words they heard in the right contexts either in their postings or online reflective writings based on the tasks given.

### **5.2.7 Emergent Theme: Simplification of online LMS**

One emerging theme from the research was the simplification of online LMS in terms of usage and availability.

*Yes, because it has been simplified and in points form. They also explained it very well.*

*RPLMS 6, Atikah*

The research participant felt online LMS plays its role in simplifying some of the task assigned and helps in enhancing the research participants' VLSs in the simplest way through various learning strategies.

### **5.3 Improvement in Writing**

In this study, Text Analyzer was used to analyze six research participants' online reflective writings. The application assists the researcher to identify Common European Framework (CEFR) levels and International English Language Testing System (IELTS) levels to identify their English Proficiency. The findings were used to triangulate with the findings found in the interviews and online postings. The findings indicated that LMS not only improved the students' VLS but also improved

their writings. This could be seen from the increase in the number of words used, the sentences and word lengths were longer and the word complexity has been improved.

Figure 5.5 below shows the elements in the analysis of data using Text Analyzer based on the research participants' online reflective writings.

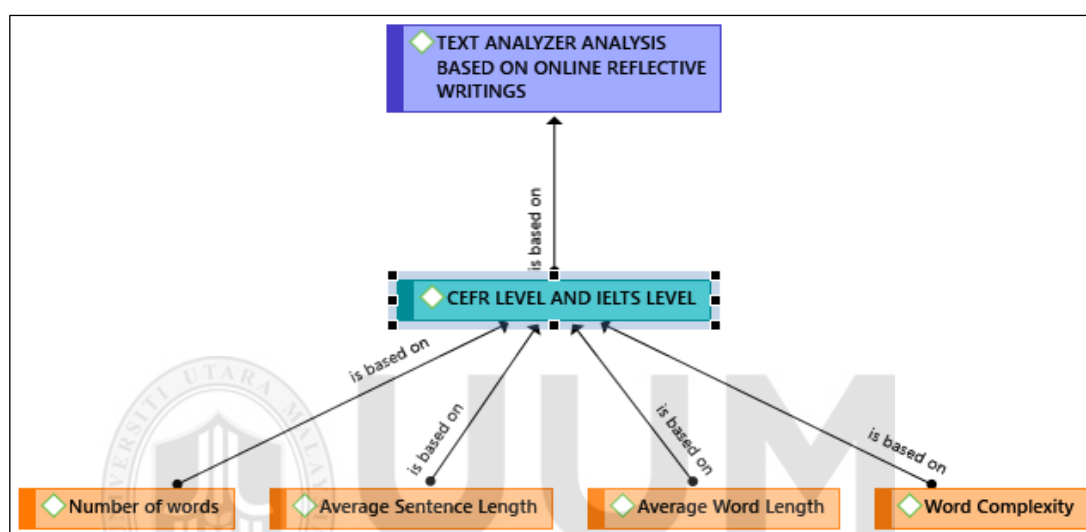


Figure 5.5 Analysis of Online Reflection Writings based on CEFR levels

### 5.3.1 The analysis based on Common European Framework (CEFR) and International English Language Testing System (IELTS) Levels

The findings show some developing performance of six research participants' CEFR and IELTS Levels based on their eight individual online reflective writings that they had posted in LMS. Table 5.1 below depicts the CEFR and IELTS level of the six research participants in the study.

Table 5.1

*Research Participants' CEFR and IELTS Levels Based On Online Reflective Writings(ORW)*

RP	ORW1	ORW2	ORW3	ORW4	ORW5	ORW6	ORW7	ORW8
<i>Ain</i>	CEFR Level: CEF Level B2 (Intermedi ate) IELTS Level 5-6	CEFR Level: CEF Level B2 (Intermedi ate) IELTS Level 5-6	CEFR Level: CEF Level C1 (Upper Intermedia te) IELTS Level 6.5- 8	CEFR Level: CEF Level B2 (Intermedi ate) IELTS Level 5-6	CEFR Level: CEF Level C1 (Upper Intermedia te) IELTS Level 6.5- 8	CEFR Level: CEF Level C1 (Upper Intermedia te) IELTS Level 6.5- 8	CEFR Level: CEF Level B2 (Intermedi ate) IELTS Level 5-6	CEFR Level: CEF Level C2 (Advanced ) IELTS Level 8+
	CEFR Level: CEF Level B2 (Intermedi ate) IELTS Level 5-6	CEFR Level: CEF Level B2 (Intermedi ate) IELTS Level 5-6	CEFR Level: CEF Level B2 (Intermedi ate) IELTS Level 5-6	CEFR Level: CEF Level C1 (Upper Intermedia te) IELTS Level 6.5- 8	CEFR Level: CEF Level B2 (Intermedi ate) IELTS Level 5-6	CEFR Level: CEF Level B2 (Intermedi ate) IELTS Level 5-6	CEFR Level: CEF Level C1 (Upper Intermedia te) IELTS Level 6.5- 8	CEFR Level: CEF Level C2 (Advanced ) IELTS Level 8+
<i>Asma</i>	CEFR Level: CEF Level B1 (Elementar y) IELTS Level 4-5	CEFR Level: CEF Level B1 (Elementar y) IELTS Level 4-5	CEFR Level: CEF Level C1 (Upper Intermedia te) IELTS Level 6.5- 8	CEFR Level: CEF Level B2 (Intermedi ate) IELTS Level 5-6	CEFR Level: CEF Level C1 (Upper Intermedia te) IELTS Level 6.5- 8	CEFR Level: CEF Level C1 (Upper Intermedia te) IELTS Level 6.5- 8	CEFR Level: CEF Level B1 (Elementar y) IELTS Level 4-5	CEFR Level: CEF Level C1 (Upper Intermedia te) IELTS Level 6.5- 8
	CEFR Level: CEF Level B2 (Intermedi ate) IELTS Level 5-6	CEFR Level: CEF Level C2 (Advanced ) IELTS Level 8+	CEFR Level: CEF Level C1 (Upper Intermedia te) IELTS Level 6.5- 8	CEFR Level: CEF Level C1 (Upper Intermedia te) IELTS Level 6.5- 8	CEFR Level: CEF Level B1 (Elementar y) IELTS Level 4-5	CEFR Level: CEF Level B2 (Intermedi ate) IELTS Level 5-6	CEFR Level: CEF Level B2 (Intermedi ate) IELTS Level 5-6	CEFR Level: CEF Level C2 (Advanced ) IELTS Level 8+
<i>Shazwa ni</i>	CEFR Level: CEF Level B2 (Intermedi ate) IELTS Level 5-6	CEFR Level: CEF Level C1 (Upper Intermedia te) IELTS Level 6.5- 8	CEFR Level: CEF Level C1 (Upper Intermedia te) IELTS Level 6.5- 8	CEFR Level: CEF Level C1 (Upper Intermedia te) IELTS Level 6.5- 8	CEFR Level: CEF Level C2 (Advanced ) IELTS Level 8+	CEFR Level: CEF Level C2 (Advanced ) IELTS Level 8+	CEFR Level: CEF Level C1 (Upper Intermedia te) IELTS Level 6.5- 8	CEFR Level: CEF Level C1 (Upper Intermedia te) IELTS Level 6.5- 8
	CEFR Level: CEF Level B2 (Intermedi ate) IELTS Level 5-6	CEFR Level: CEF Level C1 (Upper Intermedia te) IELTS Level 6.5- 8	CEFR Level: CEF Level B2 (Intermedi ate) IELTS Level 5-6	CEFR Level: CEF Level C2 (Advanced ) IELTS Level 8+	CEFR Level: CEF Level C2 (Advanced ) IELTS Level 8+	CEFR Level: CEF Level B2 (Intermedi ate) IELTS Level 5-6	CEFR Level: CEF Level C1 (Upper Intermedia te) IELTS Level 6.5- 8	CEFR Level: CEF Level C1 (Upper Intermedia te) IELTS Level 6.5- 8
<i>Syuhad a</i>	CEFR Level: CEF Level A2 (Beginner) IELTS Level 0-4	CEFR Level: CEF Level A2 (Beginner) IELTS Level 0-4	CEFR Level: CEF Level B2 (Intermedi ate) IELTS Level 5-6	CEFR Level: CEF Level A2 (Beginner) IELTS Level 0-4	CEFR Level: CEF Level B2 (Intermedi ate) IELTS Level 5-6	CEFR Level: CEF Level B2 (Intermedi ate) IELTS Level 5-6	CEFR Level: CEF Level B1 (Elementar y) IELTS Level 4-5	CEFR Level: CEF Level B2 (Intermedi ate) IELTS Level 5-6
	CEFR Level: CEF Level A2 (Beginner) IELTS Level 0-4	CEFR Level: CEF Level A2 (Beginner) IELTS Level 0-4	CEFR Level: CEF Level B2 (Intermedi ate) IELTS Level 5-6	CEFR Level: CEF Level A2 (Beginner) IELTS Level 0-4	CEFR Level: CEF Level B2 (Intermedi ate) IELTS Level 5-6	CEFR Level: CEF Level B2 (Intermedi ate) IELTS Level 5-6	CEFR Level: CEF Level B1 (Elementar y) IELTS Level 4-5	CEFR Level: CEF Level B2 (Intermedi ate) IELTS Level 5-6

From the above analysis, most of the research participants scored level B2(intermediate) for CEFR level and Level 5-6 for IELTS Level. Based on the CEFR Global Scale (CEFR, 2001a:24) (Refer Appendix N), the six research participants are independent user who can understand the main ideas of complex text on both concrete and abstract topics, including technical discussions using the content subject used in the study, and produce clear, detailed online reflective writings. Out of 48 online reflective writings, 20(R1-R8) of them were categorized as CEFR B2 Level, and 5 in CEFR B1 Level.

Next, 14 of the research participants' online reflective writings(R1-R8) were at CEFR C1 Level and 5 at CEFR C2 Level. This level shows that the research participants were described as proficient users who could understand a wide range of demanding longer texts, and recognize implicit meaning. Their online reflective writings showed that they could express themselves fluently, and spontaneously without much obvious searching for expressions. Besides, they could use the language flexibly and effectively for social, academic and professional purposes. In their online reflective writing, they could produce clear, well-structured, detailed text on complex subjects, showing controlled use of organisational patterns, connectors, and cohesive devices.

For CEFR C2 Level, the research participants were also categorised as the proficient user based on the online reflective writings (R1-R8) who can understand with ease virtually everything heard or read. Besides, at this level of proficiency, they could summarise information from different spoken and written sources, reconstructing arguments and accounts in a coherent presentation. In addition to, at this level, they



could express spontaneously, very fluently, and precisely by differentiating finer shades of meaning even in complex situations.

One of the six research respondents was categorised as a basic user, Miss Syadia scored CEFR A2 Level for her three out of eight her online reflective writings. This reflects that her first three writings used simple connected text on topic or tasks given which were familiar or of her personal interest. Table 5.2 portrays the number of six research participants' online reflective writings based on CEFR Level.

Table 5.2

*Numbers of Six Research Participants' Online Reflective Writings Based on CEFR Levels (A1-C2)*

ONLINE REFLECTIVE WRITINGS(ORW)	CEFR LEVEL					
	A1	A2	B1	B2	C1	C2
ORW1	1	1	4			
ORW2		1	1	2	2	
ORW3				3	3	
ORW4	1			2	2	1
ORW5			1	2	2	1
ORW6				4	2	
ORW7			2	2	2	
ORW8				1	2	3
<b>TOTAL ORW(48 ORW)</b>	<b>0</b>	<b>3</b>	<b>5</b>	<b>20</b>	<b>15</b>	<b>5</b>

The IELTS score for 48 research participants' online reflective writings were assessed by using Text Analyzer. The results were displayed in the Table 5.3 below.

Table 5.3

*Research Participants' Online Reflective Writings based on IELTS Level*

ONLINE REFLECTIVE WRITINGS(ORW)	IELTS LEVEL				
	0-4	4-5	5-6	6.5-8	8+
ORW1	1	1	4		
ORW2	1	2	2	1	
ORW3			3	3	
ORW4	1	1	2	2	
ORW5		2	2	2	
ORW6		1	4	2	
ORW7		1	2	3	
ORW8			1	1	3
<b>TOTAL ORW(48 ORW)</b>	<b>3</b>	<b>8</b>	<b>20</b>	<b>14</b>	<b>3</b>

From the findings, out of 48 online reflective writings, 20 of them were in Band 5-6 which indicated the research participants were ranked from modest to competent users. The research participants at this band had effective command of language despite some inaccuracies, inappropriate usage and misunderstanding. They could use and understand fairly complex language, particularly in familiar situation. But only three reached Band 8-plus, which indicated the research participants' skill levels were very good users. The data specified that the research participants could handle complex and detailed argumentation well in their online reflective writings. In the next section, the research participants' online reflective writings were analysed based on number of words, average sentence length, average word length, word complexity.

### 5.3.2 The analysis of six research participants' online reflective writings based on number of words

From the analysis below, based on the 48 online reflective writings, produced by six research participants, the findings depict the average number of words used by the them with the total average words per essay is 276. The highest number of words in one online reflective writing was 906 words by Miss Syuhada (ORW 8) and the lowest number of words was 56 words by Miss Ain (ORW5) (Refer Appendix N).

Table 5.4

*Analysis of six research participants' online reflective writings based on number of words*

RP	ORW 1	ORW 2	ORW 3	ORW 4	ORW 5	ORW 6	ORW 7	ORW 8	Average
Ain	236	83	151	227	56	58	363	482	207
Asma	198	94	77	132	68	92	431	542	204
Insania	215	115	126	151	210	77	492	650	255
Shazwani	342	116	120	125	213	182	664	828	324
Syuhada	373	170	199	407	84	84	865	906	386
Syadia	373	65	97	149	195	175	93	539	211
<b>Total Average</b>	300	112	124	193	154	122	509	693	<b>276</b>

The different number of words in each research participants' ORW was depending on the tasks given. Some of them were just writing their ORWs without doing revisions and just responded based on the questions given by the researcher.

### 5.3.3 The analysis of six research participants' online reflective writings based on average sentence length

In the next findings, the average sentence length for 48 online reflective writings was 18 words per sentence. The highest average sentence length was 33 words per sentence in Miss Syadia ORW 5 (Refer Appendix O). Miss Syadia's ORWs average sentence length was the highest compared with the other five research participants' ORWs. Miss

Ain's ORW5 had the lowest average sentence length, which was 11 words per sentence as was shown in Table 5.5.

Table 5.5

*Analysis of six research participants' online reflective writings based on average sentence length*

RP	ORW 1	ORW 2	ORW 3	ORW 4	ORW 5	ORW 6	ORW 7	ORW 8	Average
Ain	12	14	15	19	11	12	17	27	16
Asma	14	16	15	22	17	18	17	18	17
Insania	18	14	14	17	19	15	16	22	17
Shazwani	15	19	17	16	16	15	16	22	17
Syuhada	16	14	18	16	21	14	15	22	17
Syadia	19	16	19	19	33	25	16	14	20
<b>Total Average</b>	16	16	17	18	21	17	16	20	<b>18</b>

From Table 5.5, it was clearly stated that most of ORWs of the research participant's length had similar length in general. A string of long sentences, for example, which has more than 30 words, sometimes give difficulties for the readers to digest and to understand. The next analysis is about the average word length in the six research participants' ORWs.

#### **5.3.4 The analysis of six research participants' online reflective writings based on average word length**

In this study, the next finding was the average word length of the research participants' ORWs, which had been assessed using the Text Analyzer. The average word length of ORWs in this study usually depends on the research participants' writing style. The good average English word length is 5 letters (Bochkarev et al., 2015). In this study,

the average word length of six research participants' ORWs was 4.9. Only two of them had an average word length 5 and above and that were Miss Ain and Miss Shazwani.

Table 5.6

*Analysis of six research participants' online reflective writings based on average word length*

RP	ORW 1	ORW 2	ORW 3	ORW 4	ORW 5	ORW 6	ORW 7	ORW 8	Average
Ain	4.3	4.7	4.9	4.9	5.2	5.7	4.7	5.4	5.0
Asma	4.4	5.1	4.9	5.1	4.9	5.2	4.8	5.5	4.8
Insania	4.7	4.3	5.0	4.8	4.3	5.8	4.4	4.9	4.9
Shazwani	4.6	5.4	5.1	5.0	5.0	4.5	4.5	4.7	5.1
Syuhada	4.9	5.2	4.9	5.7	4.9	5.3	5.1	4.9	4.6
Syadia	4.4	4.6	4.8	4.4	4.6	4.6	4.8	4.4	4.9
<b>Total Average</b>	4.6	4.9	4.9	5.0	4.7	5.1	4.7	4.9	<b>4.9</b>

The average word length is a cumulative parameter which reflects the processes of word frequency changes. So, in this study, the average word length ranged from 4.6 to 5.1. In the last analysis of the findings, which was based on Text Analyzer was on average word complexity.

### 5.3.5 The analysis of six research participants' online reflective writings based on average word complexity

The findings in Table 5.7 below show the average word complexity in the six research participants' ORWs. The Text Analyzer categorises the average position of the word in the list of 10,000 most frequent words in English. Hence, the lower research participants' ORWs scores, the easier ORWs, and the higher research participants' ORWs scores, the difficult ORWs. Miss Syuhada received the highest average word difficulty score from Table 5.7, with 1959 words. This shows that she employed more

sophisticated language in her ORWs. Miss Ain came next, scoring 1883 words for the second-highest average word complexity. Miss Shazwani came in third with a score of 1761 words, Miss Asma came in with a score of 1544 words, and Miss Insania with 1512 words for their ORWs average word complexity. Lastly, Miss Syadia scored the lowest average word complexity which was 981 words.

To summarize, the data below reveals that some research participants utilised challenging words in their ORWs, which were based on discussions and postings in the LMS. Beginning with her first ORW, Miss Syuhada shown her ability to write with complicated terminology. She continued to produce her ORWs as she had in the past.

Table 5.7

*Analysis of six research participants' online reflective writings based on average word complexity*

RP	OR W1	ORW 2	ORW 3	ORW 4	ORW 5	ORW 6	ORW 7	ORW 8	Average
<i>Ain</i>	1552	1742	1961	1790	2238	1798	1786	2196	1883
<i>Asma</i>	1309	1557	1472	1245	1368	1264	1834	2304	1544
<i>Insania</i>	988	1128	2002	1366	1415	2137	1295	1768	1512
<i>Shazwani</i>	1393	2312	2012	1855	1036	1666	1619	2196	1761
<i>Syuhada</i>	1488	2095	1627	<b>2538</b>	2477	1501	2151	2175	<b>1959</b>
<i>Syadia</i>	613	608	1145	647	1237	1137	1149	1311	981
<b>Total Average</b>	1158	1540	1652	1530	1507	1541	1617	1867	1551

The highest score for ORWs was 2538 words by Miss Syuhada (Appendix R). Overall, the average word complexity of all 48 ORWs was 1551 words. The text complexity depends on the words used. Sometimes the text may have simple vocabulary, and be short but still be complex because of subtle ideas that are expressed (Shanahan, 2013).

Table 5.8 and 5.9 below shows two of the research participants' progresses in their vocabulary learning after using various VLSs. The selected analysis was based on the CEFR level and eight online reflective writings using online Text Analyzer CEFR.

Table 5.8

*Miss Syuhada's Reflections Based on CEFR Level*

Reflective Writing (ORW)	ORW 1	ORW 2	ORW 3	ORW 4	ORW 5	ORW6	ORW7	ORW8
CEFR LEVEL	CEFR Level: CEF Level B2 (Intermediate) IELTS Level 5-6	CEFR Level: CEF Level C1 (Upper Intermediate) IELTS Level 6.5-8	CEFR Level: CEF Level B2 (Intermediate) IELTS Level 5-6	CEFR Level: CEF Level C2 (Advanced) IELTS Level 8+	CEFR Level: CEF Level C2 (Advanced) IELTS Level 8+	CEFR Level: CEF Level B2 (Intermediate) IELTS Level 5-6	CEFR Level: CEF Level C1 (Upper Intermediate) IELTS Level 6.5-8	CEFR Level: CEF Level C1 (Upper Intermediate) IELTS Level 6.5-8
	number of words: 373	number of words: 170	number of words: 199	number of words: 407	number of words: 84	number of words: 84	number of words: 171	number of words: 871
	average sentence length: 16	average sentence length: 14	average sentence length: 18	average sentence length: 16	average sentence length: 21	average sentence length: 14	average sentence length: 17	average sentence length: 15
	average word length: 4.9	average word length: 5.2	average word length: 4.9	average word length: 5.7	average word length: 4.9	average word length: 5.3	average word length: 5.1	average word length: 4.9
	word complexity: 1488	word complexity: 2095	word complexity: 1627	word complexity: 2538	word complexity: 2477	word complexity: 1501	word complexity: 2151	word complexity: 2175

From Table 5.8, Miss Syuhada's online reflective writings had revealed her excellent progress in vocabulary learning. By applying numerous VLSs using online LMS, she had improved her CEFR level from Level B2 (intermediate level) to Level C1 (Upper-intermediate). From her online reflective writings, the number of words used in her online reflective writings increased from 373 words to 871 words. Besides, she had improved her average sentence length from 16 words per sentence in her ORW4 to 21 words per sentence in her ORW5. Lastly, Miss Syuhada's progress in vocabulary

learning was clearly shown when her word complexity in online reflective writings enriched from 1488 to 2175 words.

Table 5.9

*Miss Insania's Reflections Based on CEFR Level*

Online Reflective Writing (ORW)	ORW 1	ORW 2	ORW 3	ORW 4	ORW 5	ORW6	ORW7	ORW8
CEFR LEVEL	CEFR Level: CEF Level B1 (Elementar y) IELTS Level 4-5	CEFR Level: CEF Level B1 (Elementar y) IELTS Level 4-5	CEFR Level: CEF Level C1 (Upper Intermediat e) IELTS Level 6.5-8	CEFR Level: CEF Level B2 (Intermedi ate) IELTS Level 5-6	CEFR Level: CEF Level C1 (Upper Intermediat e) IELTS Level 6.5-8	CEFR Level: CEF Level C1 (Upper Intermed iate) IELTS Level 6.5-8	CEFR Level: CEF Level B1 (Elemen tary) IELTS Level 4- 5	CEFR Level: CEF Level C1 (Upper Interme diate) IELTS Level 6.5-8
	number of words: 215 average sentence length: 18 average word length: 4.7 word complexity : 988	number of words: 115 average sentence length: 14 average word length: 4.3 word complexity : 1128	number of words: 126 average sentence length: 14 average word length: 5 word complexity : 2002	number of words: 151 average sentence length: 17 average word length: 4.8 word complexity : 1366	number of words: 210 average sentence length: 19 average word length: 4.3 word complexity : 1415	number of words: 77 average sentence length: 15 average word length: 5.8 word complex ity: 2137	number of words: 492 average sentence length: 16 average word length: 4.4 word complex ity: 1295	number of words: 650 average sentence length: 22 average word length: 4.9 word complex ity: 1768

Table 5.9 presents Miss Insania's performance in CEFR level and number of words, average sentence length, average word length and word complexity based on her online reflective writings. The table reveals her excellent progress in vocabulary learning by using VLSs through online LMS. Interestingly, Miss Insania had proven that her CEFR level from Level B1 (elementary level) for Online Reflective Writing 1(ORW1) had improved to Level C1 (Upper-intermediate) for Online Reflective Writing 8 (ORW8). From her online reflective writings, the number of words used in her online reflective writings increased from 215 words to 650 words. Besides, she



had improved her average sentence length from 18 words per sentence to 22 words average sentence length per sentence in her online reflective writings. Lastly, Miss Syuhada's progress in vocabulary learning was clearly shown when her word complexity in online reflective writings enriched from 1488 to 2175 words.

### **5.3.6 Summary of the Chapter**

In summary, Chapter 5 discusses the findings on online connections on the use of online LMS in enhancing TESL trainee teachers' VLS. The findings were analysed based on theme from Theory of Connectivism by Siemens and Downes (2009). Besides, in this chapter, the findings depict the improvement in writing among TESL trainee teachers based on their online reflective writings which had been analysed using Text Analyzer. The result had shown the great improvement in their CEFR IELTS levels, number of words used, average sentence length, average word length, and average word complexity.

## **CHAPTER SIX**

### **PARTICIPANTS' PERCEPTIONS OF ISSUES AND CHALLENGES OF USING LMS**

#### **6.1 Introduction**

Teachers and students have access to an online classroom using learning management systems (LMS), which promotes learning procedures. The study also revealed that Learning Management Systems (LMS) supported teachers and students in the learning process in virtual classroom settings (Bradley, 2020). With intervening mechanisms that encourage online collaborative-groupings, professional training, discussions, and communication among other LMS users, a typical LMS promotes an inclusive learning environment for academic development (Dias & Dinis, 2014; Jung & Huh, 2019).

According to Nasser, Cherif, and Romanowski (2011), the use of an LMS gives online learners reliable information about their performance. In this study, LMS has a profound impact on vocabulary learning and vocabulary learning strategies. Nowadays, most of the institutions depend so much on various LMS for conducting online learning and teaching. They become part of the learning system for educational practitioners in delivery of the content subjects for their students either in the institutions or at home. As a set of tools for e-learning, delivery and management, each LMS has its own uniqueness regarding features and functions. This chapter discusses major issues, and challenges faced by TESL trainee teachers in using online LMS, Schoology. The semi-structured interview interviews and online reflective writings were used to gather data and they will address the third research question of the study.

## 6.2 Issues of Learning Management System Faced Among TESL Trainee teachers

There were few issues that were discovered in the study such as poor internet connection, insufficient knowledge and skills in using LMS, mismanagement of tasks and activities, and confusion in online LMS, *Schoology* interfaces.

Table 6.1

*Participants' Perceptions of the issues and challenges of LMS Schoology*

ISSUES	CHALLENGES
<ul style="list-style-type: none"><li>• Poor internet access</li><li>• Lack of knowledge and skills in using LMS</li><li>• Mismanagement of the tasks and activities in online LMS</li><li>• Confusion in online LMS, Schoology's Interfaces</li></ul>	<ul style="list-style-type: none"><li>• LMS's ease of use</li><li>• Difficulty levels of reading materials posted in LMS</li><li>• Incompetency in applying ICT skills in LMS</li></ul>

### 6.2.1 Poor Internet Access

Internet access is the main factor that influenced both students' and teachers when conducting online learning especially for teaching and learning processes. In ITEDC, even though all the ITEs ICT units in Malaysia had installed the internet access around the campuses but sometimes they did not cater to all the trainee teachers' needs due to the limited coverage and the number of trainee teachers on campus. Even some of them reported some problems when they had to do online learning using LMS at home due

to poor coverage because they are staying in the remote and rural area or they were very poor and could not afford to buy the online data.

Miss Asma agreed that she had the difficulties to access the internet when she wanted to use the LMS. She expressed the following:

*But sometimes it is hard to access to it as this platform requires strong internet connection.*

*RPLMS 2, Asma*

Based on the researcher's observation while conducting the study in the Language Lab on campus, she realized that the research participants had to wait for few minutes to sign in into their LMS before they started the class. Sometimes they had to use their own data, and that was very costly for them to spend their online data for two-hour class as a student. Miss Syuhada also had a similar problem with the issue highlighted as she mentioned in the statement below:

*However, as this is online based learning, we tend to face a few problems such as **internet connection**, **time constraints** and content knowledge on how to use this platform*

*RPLMS 14, Syuhada*

Apart from having the internet connection problem, she also mentioned having difficulty with time as well as knowledge and skills in using LMS. For Miss Shazwani, she had some alternatives in solving her internet access because she used her own online data. Besides, when she was around the campus, she had to find a high internet coverage area for her to use the online management system.

*I think so because we have the internet connection, I have my own data and I don't think it will become a problem except I will...I am in a rural area which have no connection so it just that uh, problem, but now I don't have that kind of problem and I can use it easily whenever I want and we have WIFI around ITE. We just need to find the suitable location, the right spot only.*

*RPINT 4, Shazwani*

The most significant barrier in using online learning management system was at the TESL trainee teachers' level when they were lack access to internet in fulfilling their learning objectives. This would make them feel so stressful especially in getting their tasks done in the time given if the internet connection is not tolerable (Chiwa, 2018).

#### **6.2.2 Lack of knowledge and skills in using LMS**

The next issue that had been discovered from the findings was research participants' had insufficient knowledge and skills in using online LMS effectively during the teaching and learning processes. Some research participants reported having problem in operating the LMS especially when they needed to use certain code that was generated for the specific course. Miss Insania stated in her online structured interview that it was troublesome for her to understand the features of LMS. Besides, she claimed that it required passwords and codes which are difficult to remember.

*It is a bit difficult to understand such as changing the profile picture which took me about 5 minutes to find where to change it. Secondly, it requires too much passwords and codes which is confusing.*

*(RPSI 8, Schoology, Insania)*

For Miss Insania, she preferred a more user-friendly features of the LMS itself to make herself more comfortable to use the platform. In addition, Mr. Miswar also pointed out

the same issue in the online structured interview on LMS, Schoology, revealing his frustration in the slog in process with the given codes since he was not good at memorising them.

*The way to enter a group/ account is troublesome because it requires a set of code which is problem for me because I'm not good at memorizing math-related stuff*

*(RPSI 10, Schoology, Miswar)*

In summary, the findings revealed that some research participants lacked ICT skills in using LMS. They felt that it was time consuming for them to spend so much time to access the platform and to familiarize with the features in LMS Schoology. Eventhough, it was made compulsory for the participants to use LMS , it is felt that the researcher had to make decision to use only one platform for research purposes. Besides, using LMS itself involving directly various strategies and different digital tools exposes students to the vocabulary learning strategies for these second language learners.

### **6.2.3 Mismanagement of the tasks and activities in online LMS**

Another issue mentioned by the participants was the mismanagement of the tasks and activities. In this study, there were three phases, and each phase had more than one task and activity. After conducting a task, the researcher would ask the research participants to do reflection. Since the study covered 15 weeks of interactions, the tasks, activities, online reflective writings, and comments were posted in the online LMS. Sometimes, the research participants' posted the tasks, activities, or the learning materials later than the submission date. So, the online LMS would be updating the

postings based on the latest date and time of the research participants' postings. Fatin mentioned her problem with LMS.

*I downloaded the application on my mobile phone, so it'll be easier for me to access the notes. However, I wish the notes were in order because it was difficult to read previous slides made by my friends, since I need to click "More" over and over. Maybe the reflection part can be sent as an assessment via Schoology*

*RPLMS 3, Fatin*

In this extract, Miss Fatin found some difficulties in retrieving the materials because she had to scroll the pages by clicking the button "More" at the bottom of the page. On the other hand, she felt better since she had downloaded the LMS application on her mobile phone. Besides, she also faced difficulties in reading the lengthy texts and getting the gists of it:

*I'm not sure about this because sometimes the notes are too lengthy for me and I need longer time to produce a graphic organiser to get the gist of the text.*

*RPLMS 3, Fatin*

For Miss Insania, she elucidated that the online LMS was a manageable and uncomplicated platform but, she discovered the weakness of scrolling the old postings because it was time-consuming and taxing.

*I don't think Schoology is that quite difficult because it is very user-friendly, but then, somehow, when we are trying to get back to the old posts, we have to scroll until the end of the page which is quite tiring.*

*RPINT 6, Insania*

Miss Insania, too, had noticed the same problem as Miss Fatin. She stated that the platform was user-friendly, but that retrieving previous online postings was exhaustive and frustrating.

In summary, knowing how to use the platform is essential in the learning process. The participants in the study reported that they required a platform that would facilitate their learning experience and they believed that by having this online LMS, they would be able to manage their notes, reading materials, presentations, audio files, and online videos in one place. However, the majority of them did not save all of the teaching and learning materials in their own folders. They simply stored everything in the online LMS, and when they wanted them immediately for revision or assignment preparation, they had to navigate back and forth to get the resources they needed and the process was time consuming and frustrating.

#### **6.2.4 Confusion to navigate online LMS, *Schoology*'s Interfaces**

Another issue mentioned by the participant was by Mr. Felix who commented about the confusion of the basic navigation interface of *Schoology*. There are four navigation keys on top of the *Schoology* Page, that are Upgrade, Courses, Groups, and Resources, and six other navigation symbols such as Search Symbol, Applications, Calendar, Messages, Notification and Profile. He commented that the navigation process was confusing

*Another aspect I would like to touch on is navigation. The navigation on Schoology is very confusing. On the top corner is organised however, I find the Courses tab is quite useless as we already have a Group tab. If the creator had in mind where Group is the sub-category to Courses, then the Group should be under Courses. For*



*example, there are 15 students in a class and they are divided into groups of 5. However, the course is the same. Then, in this case, the group should be created within the course instead of separating it.*

*RPSI 9, Felix*

With the exception of the foregoing, Mr. Felix discovered a mismatch in the LMS between the "Group" and "Courses" keys. He proposed that all of the groups be developed as part of a single course. He also mentioned Schoology's lack of interfaces and compared it to other major social media platforms.

*There are a few things that are simpler and complex at the same time with Schoology. Compared to a popular social media, Facebook, Schoology is a new platform for learning only. with the lack of a few features.*

*RPSI 9, Felix*

Mr. Felix also expressed his thoughts on Schoology, LMS as a new educational online platform for learning as compared to other social networks. Felix also commented that Schoology needed improvement in terms of user friendliness as users needed more time to familiarize with the system.

*To conclude, Schoology is still new and has room for improvement to become a perfect platform for education. But I assume there would be some copyright infringement with other famous social networks or bugs in compiling the new code for the Schoology website. Also, users may need time to get used to the system used in Schoology, and we need to bear in mind that different users may experience different difficulties and as for me. This is my opinion on Schoology.*

*RPSI 9, Felix*

As an online LMS student, the research participants generally wanted a platform that would assist them in their learning.

### **6.3 Challenges Faced by TESL Trainee teachers in Using Online Learning Management System**

Online LMS is one of the powerful tools for educational institutions to train students to be more independent learners. In this study, the use of online LMS was hoped to ease the teaching and learning process especially in exploring the VLSs used by the TESL trainee teachers in vocabulary learning through the content subject, Second Language Acquisition Course. There were three main challenges faced by the research participants in using online LMS: Time management, selection of reading materials, and incompetency in ICT skills.

#### **6.3.1 LMS's ease of use**

Handling the online learning management system needs one's systematic time management especially when involving more than one course or more than one online LMS for different courses at one time.

The findings show that one of the research participants, Mr. Felix mentioned about the practicality in using online LMS. He commented on the functions of the navigation button, "Resources" in the online LMS, Schoology. He mentioned that:

*I would like to download the entire folder instead of clicking the file in the folder, viewing it and then allowing me to download. If this folder download function is added, then it would save a great deal of time.*

The extract shows that Mr. Felix did not want to waste a lot of his time downloading each file. From my observation, Mr. Felix was one of the student representative committee members at ITEDC. He was too busy with his work and he did not use the Language Lab desktop, instead using his own tablet computer during the study. Mr. Felix was particularly worried about time management and the usability of the LMS because he was a trainee teacher. Furthermore, he also treated the online LMS, Schoology as his routine task when he joined the class. Mr. Felix mentioned:

*We only open it when we need to, not when we want to. It is sort of became a chore for me.*

It shows that he only opened the online LMS, Schoology when he needed certain learning materials and when he was asked to complete the tasks and posted online reflective writings. Through the researcher's observation, Mr. Felix wanted a more manageable online LMS that would cater to his needs in completing the course.

### **6.3.2 Difficulty Levels of Reading Materials Posted in LMS**

Choosing appropriate reading materials in supporting student's learning process is very important. As the researcher of the study, it is felt that the choice of texts used in the study should be digestible with the needs of TESL trainee teachers in understanding the content subject. The text levels of complexity and suitability become the main criteria in choosing the texts. In this study, Miss Atikah highlighted her

challenges in reading the material uploaded in online LMS by the researcher and her friends:

*Yes, it helped me a lot even though sometimes the materials are quite in details and difficult to be understood.*

*RPLMS 6, Atikah*

In addition, Mr. Helmi's statement also supported the above statement by claiming that:

*It was a very difficult article with so many jargons but my friends manage to present about it well and added by your own explanation*

*RPLMS 11, Helmi*

The results demonstrate the difficulties in controlling the degree of difficulty of the reading materials that the research participants had put in the LMS for the aim of sharing them with their peers. The majority of the research participants accessed the uploaded reading materials, either after downloading from the LMS or reading them directly through the LMS. Reading difficult texts would distract the research participants' understanding of the content, reduced their interest, and demotivated them to finish reading the texts in limited time. Some of them were struggling with understanding the difficult terms and vocabulary used in the texts using LMS.

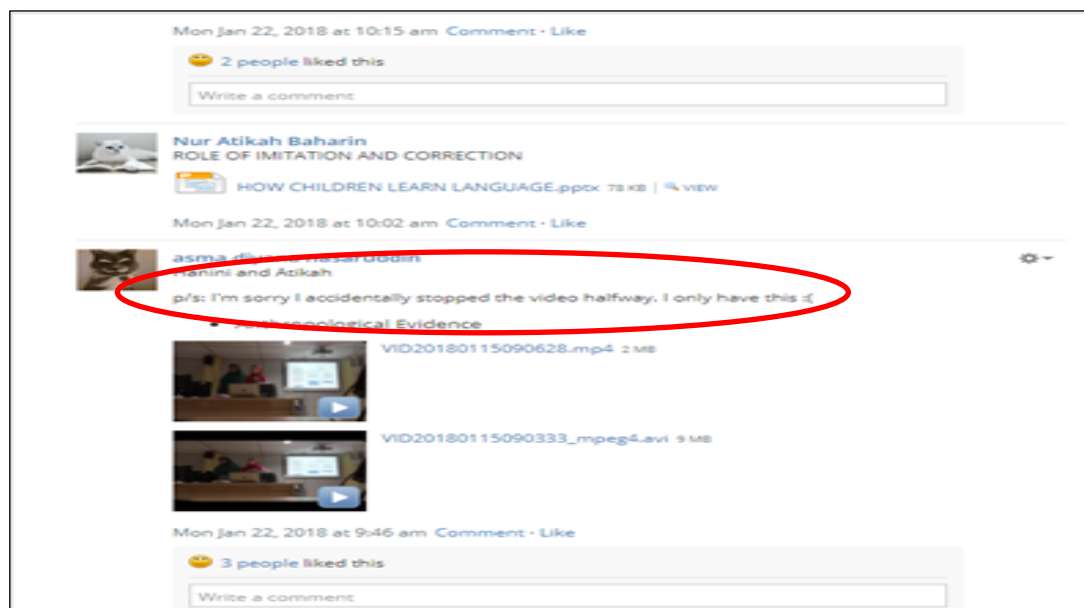
As a researcher, she needed to check the text's level of complexity before the research participants uploaded them to the online LMS. The majority of the research participants read the reading materials provided by the researcher or by their peers directly from the LMS, Schoology, without downloading or printing them because it

served as the primary platform for teaching and learning. As a result, it became a challenging task for the research participants.

### **6.3.3 Incompetency in applying ICT skills in LMS**

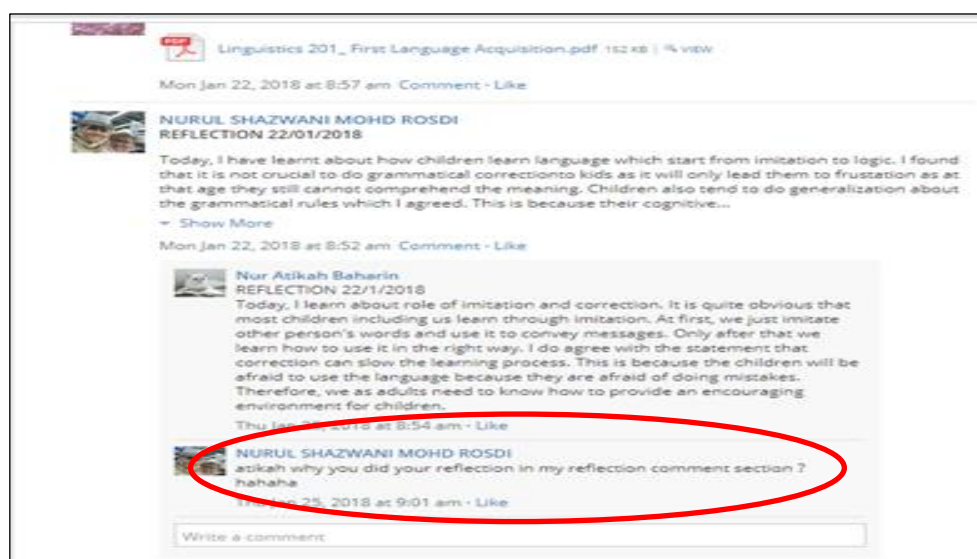
Learning management systems (LMSs), a type of software used to organise, carry out, and evaluate the entire educational process, have grown in popularity among educational institutions and students (Jamal & Shanaah, 2011). In this digital era, most of the TESL trainee teachers are exposed to various types of information and communications technology (ICT) skills, whether through formal or informal learning platforms, to understand and apply some computer programmes, and software in their teaching and learning second language especially in using LMS in teaching and learning processes.

In this study, the data provided evidence that some of the research participants faced some challenges in managing some technical skills in ICT and some trainee teachers were incompetent in using LMS such as Schoology during the study. For example, Miss Asma had problems in uploading the recorded presentations in the platform as shown in Figure 6.1 below. She said, “I accidentally stopped the video half way...” (Asma, online posting). This indicates that she experienced both ICT and Schoology incompetencies.



*Figure 6.1 Miss Asma's Posting About Problem in Uploading Videos Using LMS*

From the researcher's observation, during the presentations, few of the research participants who sat in front of the class voluntarily took turns to record their friends' presentations using their mobile phones to be uploaded in the online LMS for their revision references. It shows that they had a great commitment among each other and enjoyed doing it voluntarily. Miss Asma, who always sat in front of the class took the responsibility to record all the presentations of her friends and she took the effort to upload all the materials in the online LMS immediately after each sessions.



*Figure 6.2 Research Participant's Comment Regarding Wrong Post Section*

The above finding in Figure 6.2 shows one of the research participants discovered that one of her friends posted the reflection in the comment section. This happened at the earlier stage of the study when the research participant was not sure where to post her reflection, even though it had been reminded by the researcher right after the session.

### **6.3.4 Summary of the Chapter**

In summary, there are four issues mentioned by the participants in this study which include poor internet access, lack of knowledge and skills in using LMS, mismanagement of the tasks and activities in online LMS, and lastly, confusion in online LMS, Schoology interfaces. There are also some challenges in using online LMS which are LMS's ease of use, difficulty levels of reading materials, and incompetency in applying ICT skills in LMS.

## **CHAPTER SEVEN**

### **DISCUSSION, CONCLUSION AND RECOMMENDATIONS**

#### **7.1 Introduction**

The purpose of this qualitative case study was to explore the vocabulary learning strategies of TESL trainee teachers using an online learning management system at the ITEDC. The study was set to explore the types of VLS employed by the TESL trainee teachers, to examine the use of LMS in enhancing their VLS and to investigate issues and challenges in using LMS. This chapter also includes the discussion of the main findings related to the study participants' types of vocabulary learning strategies and beliefs about vocabulary learning. It discusses the findings in relation to the two main theories and one principle of second language acquisition namely the theory of Connectivism (Siemens & Downes, 2009), Vygotsky's Social Constructivism (1978), and Barcroft's principles of Second Language Acquisition (2004). It ends with some recommendations for future research.

#### **7.2 Types of Vocabulary Learning Strategies**

Vocabulary is the most important element in language learning, especially for second language learners. It is a vital element to all language skills including listening, speaking, reading, and writing. Successful vocabulary learning can be facilitated by having effective vocabulary learning strategies in acquiring new English words to be used in different contexts.

Vocabulary learning strategy is a tool for vocabulary learning in a second language. In this study, vocabulary learning strategies were analysed and identified based on types



of VLSs. The findings showed that the types of VLSs in this study were categorised into four: Metacognitive strategies (beliefs of VLSs and metacognitive strategies such as selective attention and self-initiation), cognitive strategies (guessing, dictionary: hardcopy and digital dictionary applications, note-taking, listening, activation), memory strategies (encoding and rehearsal), and online strategies (browsing the internet website and online LMS). The TESL trainee teachers were found to employ cognitive strategies such as guessing, using dictionary, note taking, listening, encoding and rehearsal and finally, online strategies. This is because they were selected and good students and knew the best ways to learn their vocabulary. However, they employed limited metacognitive strategies because they were not aware of the metacognitive strategies during their vocabulary learning.

These findings corroborate with Gu and Johnson (1996) who highlighted cognitive processes such as guessing strategies, expert use of dictionaries, and note-taking procedures in their VLS taxonomy. Gu and Johnson (1996) argue that guessing learners rely on prior knowledge and linguistic signals such as sentence grammatical structures, to figure out what a phrase means. In relation to the memory methods such as rehearsal and encoding, whereby the trainee teachers were also found to use them in their presentations. Apart from that word lists and repetition are examples of rehearsal approaches employed besides using some encoding tactics which included associations, imagery, visual, auditory, semantic, and contextual encoding strategies, as well as word structure. The findings in this study are also in line with past literature on the types of VLs used by ESL learners (Subon, 2013; Yu-Ling, 2015; Fan, 2003)

and lack of awareness on VLSs as mentioned by past researchers (Yulia, 2014; Adibah et al., 2014; Noorizah & Amir, 2012).

In relation to the use of metacognitive strategies, the findings indicated only two metacognitive strategies used by the TESL trainee teachers which are selective attention and self-initiation. These findings are in line with past studies which indicated that under graduate students employed limited metacognitive strategies and called for more trainings in metacognitive strategy awareness (Sadeh & Zoya, 2014).

Interestingly, the findings in this study refined some of the VLSs (Gu and Johnson, 1996) and found new strategies. Dictionary strategy was divided into two types: hardcopy dictionary and digital dictionary application strategies. These two types of dictionaries provide distinct VLSs as the participants reported that they no longer needed hardcopy dictionaries as their primary source of information because they could quickly access digital dictionaries by installing numerous applications on their mobile phones and computers. This is also in line with the fact that the participants are 'digital natives' who learn effectively using technology.

In a similar vein, another new strategy used by the trainee teachers in this study, which was in contrast to Gu & Johnson's taxonomy was online strategies. There were two types of online strategies used by the participants in this study: Browsing internet websites and using an online Learning Management System. The findings indicate that the TESL trainee teachers employed a variety of VLSs in their learning of English as a second language. Nowadays, most of the TESL trainee teachers use more online learning so some of the VLSs had been applied using the online LMS.

Nation (2013) categorised VLSs into three categories that were planning, sources and process. In planning, the second language learner has freedom in choosing the words; what to focus on, and when to focus on. For the next category which is ‘sources’, second language learner learn to find further information about the words or the ‘sources’ of the words. The last category is ‘process’, in which a second language learner establishes new knowledge of the words learnt by using them in the learning context.

In the findings for the first research question, the researcher also discovered the research participants’ beliefs about vocabulary learning which comprised of four types of beliefs: (a) Words are learned by rote learning (repetition), (b) Words are learned through contextualization, (c) Words are learned through application, and (d) Words are learned subconsciously. Most of the research participants’ beliefs contributed some input regarding their backgrounds of vocabulary learning strategies before they realised that there was a need for them to have proper strategies in acquiring good vocabulary. These beliefs were based on their past learning experiences either within their home context or the school context.

Some researchers suggested incorporating metacognitive strategy training into language classrooms, which involves beliefs about vocabulary learning, words are learned by rote learning (repetition or memorization), words are learned through contextualization, and words are learned subconsciously, in order to help students take more effective control of what they learn and to facilitate the transfer of those methods into different learning contexts (Yang & Dai, 2011; Sinhaneti & Kyaw, 2012 ; Ali & Zaki ,2019). In other words, the types of VLSs are closely related to research

participants' first experiences of vocabulary learning, especially in childhood with parents, in preschool or kindergarten, and in elementary and secondary school. They believed that all their vocabulary learning strategies were the most effective strategies to acquire a basic and good vocabulary and to understand the language indirectly. In this study, the findings are closely related to Taxonomies of VLSs by Gu and Johnson (1996), because most of the research participants had the same views and beliefs regarding how they acquired the effective VLSs at their early stages in vocabulary learning

### **7.3 Beliefs about vocabulary learning strategies**

This section discusses the attitudes held by the study's research participants toward vocabulary learning strategies. It was shown that the majority of research participants' perceptions of VLSs were strongly influenced by Gu and Johnson's (1996) taxonomy.

#### **7.3.1 Beliefs that words are learned by rote learning (repetition)**

Some research participants believed that their success in learning vocabulary was based on memorization. Repetition of words or phrases in their daily activities under the guidance of their parents helped them to acquire simple and straightforward vocabulary. Usually, some educated parents with English backgrounds applied some strategies for their children's vocabulary learning. For example, they started with a word, phrase, or short sentence based on their daily activities. They used simple picture books, cartoons, children's channels on the Internet, and subscription channels on television. Children tended to gravitate towards children's television programmes and they watched them for a few times until they can memorise words, simple and even

long dialogues of the characters. When children read the same stories repeatedly, they will have the same number of words as the target words (Horst, 2013). The research participant admitted that through the guidance of her parents and her own initiative, she learned more about the words through her own routine activities. Home education can have a great impact on children by doing various activities together with their parents. Since parents know the instructional goals of the teacher at school, they are sometimes able to provide support and resources that meet the learning goals of the school (El Nokali et al. 2010).

### **7.3.2 Beliefs that words are learned through contextualization**

Contextualization is defined as a broad set of instructional methodologies aimed at bridging the gap between the acquisition of foundational abilities and academic or occupational material by focusing teaching and learning on real applications in a context of the student's choosing (Mazzeo et al., 2003, pg. 3-4).

TESL trainee teachers expressed their beliefs by stating that learning words through contexts gave them more opportunities in acquiring vocabulary more successfully. Specifically, the results of the study included various contexts of vocabulary learning: (a) through reading and listening activities, (b) using language games, (c) through speaking and writing activities, and (d) through communication with English language teachers and native speakers.

The emphasis on reading and listening activities in different contexts in this study is consistent with what can be found in the literature on studies related to vocabulary learning through contextualization. Most young second language learners have

obstacles in acquiring and using vocabulary in their daily communication because they do not have enough vocabulary memory. They need to understand the context before they can use the vocabulary they have learned (Irwandy et al., 2018). Some children successfully learn new vocabulary through contexts rather than memorizing it without using it. As such, it is important to understand the individual's needs, language skills and interest in acquiring vocabulary.

One of the noticeable contexts in the results of this study was using language games as a vocabulary learning strategy. Literature indicates that using entertaining and attractive games can increase students' motivation to acquire new vocabulary (Hashemi, 2021). The results of the study also show that writing in communicative contexts helps to improve the vocabulary of the research participants. This study is consistent with the literature that debates teaching writing in contexts can reinforce vocabulary to be used for communicative purposes and vocabulary learning that can be taught through context without explicit instructions (Widiati & Cahyono, 2001; Coady, 2000). Prior studies have also noted the vital roles of English teachers and language practitioners in building the students' vocabulary at their very young age and using appropriate techniques (Hasram et al. 2021; Irwandy et al.2018). The study also indicates the role of native speakers in offering the real context for second language learners to listen and practice the sound of new words used by the native speakers of English (Hasram et al., 2021). Speaking like native speakers involves cognitive strategies in vocabulary learning and is an intrinsic motivation for second language learners.

### **7.3.3 Beliefs that words are learned through application**

In the study, the research participants pointed out that by applying the word learned would provide another context for learning word meanings. They placed their confidence in applying the words learned in their writing, communicating, and practicing them in their daily lives. It was supported by Brown (1983) that stated language learning needed systematic application of deliberate plans, routines or activities. So, the research participants had this belief that their vocabulary learning would be a successful learning process when it was conducted in a very systematic way through a very systematic and well-ordered strategy.

Moreover, the TESL trainee teachers at ITE had a perception that as higher education students and future teachers, they needed to equip themselves with high and standard vocabulary compared to other institution students. This perception indirectly motivates them to use the language and the words learned using various strategies in upgrading their level of fluency and proficiency. This is parallel to Nation (2001) who stressed about the ongoing contribution of vocabulary and reading among university students in learning new words from high frequency words to low-frequency words. It shows that TESL trainee teachers have the great awareness in using the vocabulary learned accurately by actively applying it in their online reflective writings (ORWs) and their teachings.

### **7.3.4 Beliefs that words are learned subconsciously**

Much of language learning according to Krashen, occurs subconsciously and effortlessly when the learner is focused on meaning (Krashen, 1981). It is also the

reason the TESL trainee teachers in this study viewed their experiences in learning the vocabulary implicitly through various medias since their early childhood. Most of them mentioned that the roles of their parents and teachers through various unplanned activities for them to learn the vocabulary subconsciously. It is supported by William (2013) stating that implicit learning occurs without the purpose to learn and without awareness of what has been acquired. The majority of the activities carried out by TESL trainee teachers during this stage of vocabulary learning focused on simple and entertaining activities that were less stressful, and they were usually carried out at home with their parents and siblings.

In a nutshell, research participants recalled their informal or indirect vocabulary learning strategies based on their past experiences. Some educated parents with English backgrounds applied some strategies in their children's vocabulary learning. In this study, the findings are closely related to Taxonomies of VLSs by Gu and Johnson (1996), because most of the research participants had the same views and beliefs regarding how they acquired the effective VLSs at their early stage in vocabulary learning. The emphasis on reading and listening activities in different contexts in this study is consistent with what can be found in the literature on vocabulary learning through contextualization. Some children successfully learn new vocabulary through contexts rather than memorizing it without using it. Therefore, it is vital for teachers and future teachers to understand the individual's needs, language skills and interest in acquiring vocabulary.



## **7.4 Online Learning Management System Enhancing Vocabulary Learning Strategies(VLSs)**

The second research question was about how an online learning management system (LMS) enhanced the VLSs of TESL trainee teachers. Vygotsky's Social Constructivism Theory (1978) and Theory of Connectivism (2009), as well as Barcroft's Principle Second Language Vocabulary Instruction (Barcroft, 2004), provided new insights on the role of online LMS in enhancing VLSs of TESL trainee teachers. The findings analysed through the "Theory of Connectivism" (Siemens & Downes, 2009) discovered the eight themes which are: 1) Diversity of opinions in learning and knowledge; 2) Connecting process in gathering information; 3) Learning involves non-human appliance; 4) Capacity to know more; 5) Nurturing and maintaining social connection; 6) Connection between fields, ideas, and concepts; 7) Currency; and 8) Involvement in decision making. These findings supported the principles in the Connectivism Theory.

### **7.4.1 Social Connections**

The findings indicated that online LMS enhanced TESL trainee teachers VLS through social connection. First, it fosters social interaction and experience among TESL teacher candidates as they collaborated to manage and operate the online LMS, making teaching and learning more relevant. They had the same experience with the online LMS from the first time they used it until they could use it without the researcher's help especially in applying various VLSs in acquiring words to be used in their academic writings. According to the researcher's observations, they assisted each other

when they had difficulty logging into the system owing to a lack of internet connection, uploading recordings, and materials.

Second, using an online learning management system (LMS) allowed TESL trainee teachers to have a more self-organised learning environment. Once all of the teaching and materials were housed on one platform, TESL trainee teachers had no trouble finding reading materials, as well as teaching and learning materials, whenever they needed them. Next, this online platform becomes one of the centres for the TESL trainee teachers' discussions. They were freely allowed to use the online LMS to discuss with their colleagues on the topics, and at the same time, they learned difficult words and phrases that they encountered from the articles that they had read.

The next step towards enhancing TESL trainee teachers' VLSs is when online LMS used as cultural tools and activities in the application of VLSs. Higher-order mental activities, such as thinking and problem solving, are aided by technical and psychological instruments. It is, because when TESL trainee teachers used the platform, they were exposed to such processes in selecting, interpreting, and creating vocabulary taught through online procedures for use in presentations, discussions, and online reflective writings. The ability of the trainee teachers to use learning management systems (LMS) in language learning can be linked to the Zone of Proximal Development (ZPD) and scaffolding. Most of them are not familiar with how to use this platform indirectly as one of the language learning platforms. Most of them thought that the LMS was just a normal platform for lecturers and students to upload and share teaching and learning materials for normal face-to-face classes. They did not realize that by posting from simple online reflective writings and online postings to

completed assignments based on the learned topic, they had acquired some excellent vocabulary after reading various VLSs, making presentations, watching videos, and having discussions about online learning

Some of the research participants needed some assistance from the researcher in using LMS suggested to them for the study. All the research participants were guided step by step on how to use the LMS effectively. Later, after a few sessions with them, it seemed that they could handle the LMS well when they were asked to write online reflective writings, make comments on their friends' online postings, upload the videos, and use the provided links to the lessons of the day. Although similar to other social media (e.g., Facebook), the features of the LMS are more user-friendly-oriented. Schoology, a platform used for academic purposes rather than social purposes. But as researchers, all research participants were encouraged to freely express their ideas and comments using the vocabulary that they had acquired, especially in the second language. The majority of them have no idea how to use this platform as a language learning platform in the indirect sense. The majority of them assumed the LMS was simply a platform for lecturers and students to post and share teaching and learning materials for traditional face-to-face lectures. They had no idea that through using various VLSs, making presentations, watching films, and publishing from simple online reflective writings and online postings to finished projects depending on the studied topic, they had acquired some fantastic vocabulary.

The results of this study show that TESL trainee teachers not only utilise the online LMS to improve their VLSs and vocabulary, but they also use it to improve their

writing abilities through online reflective writing, which was analysed using Text Analyzer.

In a nutshell, collaboration and sharing in an online learning management system are particularly important in improving vocabulary learning strategies, with the goal of making the learning process more successful while maximising one's potential with the support of others, especially in language learning. When the research participants made the LMS their primary platform for compiling all of their learning materials and memorising the language used by their peers in discussions for future use, they employed these strategies.

In summary, online learning management system (LMS) that allows the TESL trainee teachers to manage and operate the online LMS, makes teaching and learning more relevant. The ability of TESL trainee teachers to use learning management systems (LMS) in language learning can be linked to the Zone of Proximal Development (ZPD) and scaffolding. Higher-order mental activities, such as thinking and problem solving, are aided by technical and psychological instruments. When TESL trainee teachers used the platform, they were exposed to such processes in selecting, interpreting, and creating vocabulary taught through online procedures which will make them more independent learners.

#### **7.4.2 Vocabulary Acquisition and Language Learning**

The combination of vocabulary acquisition and language learning was the second focus. Both could not be separated since once a person has a high vocabulary, he or she will be able to learn the second language more quickly (Linda & Shah, 2020). For

TESL trainee teachers, the online LMS aids in the formation of a learning language environment. When the researcher and the TESL trainee teachers began uploading their online postings, reflective writings, and learning materials to the platform, it allowed the TESL trainee teachers to improve their VLSs by understanding the meaning of the words they learned and digesting the words used by them or their peers before using them in the appropriate context.

In addition, the online LMS prepares platform for guided instructions can be easily delivered to research participants for example, when assigning them to write online reflective writings. When the input in the question provides a message that is intended to be understood rather than just an example of a sentence in the language to demonstrate "how the language works," it is said to have meaning bearing. So, the TESL trainee teachers would apply VLSs in selecting appropriate word to be used in their online reflective writings.

For the next role of online LMS in this study, the TESL trainee teachers were not force to acquire the certain amount of vocabulary in the limited time. They had ample time to acquire as much vocabulary that they could during the study based on the teaching and learning materials, online postings, and online reflective writings from the researcher and their peers. They did not feel much pressure of learning the difficult words because through online LMS, they were able to reread, browse and listen again and again the materials either at their hostels, homes, or in the classes before or after the lesson. They could apply all the VLSs through online LMS.

Unless the terminology were introduced in the context of the course, some of the terms were difficult to understand. As a result, when asked to use these words throughout their presentations, some research participants adopted the memorization approach. The use of an online learning management system (LMS) in this study offers an ideal solution for the research participants in such a situation, allowing them to engage with various VLSs to improve their vocabulary learning process. Some research participants made an effort to explain in detailed the words that are seldom used in their daily lives or phrases which had chunking words based on their own understanding. According to Barcroft (2004), the learners will go from the easiest to the most complex words taught, while also increasing their confidence in acquiring new vocabulary and expressing foreign language. Dealing with challenging vocabulary and terminologies was the most difficult part of the content subject for the second language learner and sometimes it distracted the interest of the second language learner to learn more about the language.

In summary, for TESL trainee teachers, the online LMS aids in the formation of a learning language environment. The combination of vocabulary acquisition and language learning was essential in learning. Once a person acquired a high vocabulary, he or she will be able to learn the second language more quickly. Online LMS allows the student to improve their VLS by understanding the meaning of the words they learned and digesting the words used by them or their peers in the appropriate context. The LMS can be used as a trigger for the TESL trainee teachers to engage with various VLSs to improve their vocabulary learning process.

### 7.4.3 Online Connections

The first sub-theme in this part focuses on the diversity of opinion in learning and knowledge, which includes both cognitive and affective aspects. It depicts the knowledge that is disseminated through the internet and kept in a variety of digital formats (Siemens, 2008). As a result, in this study, using an online LMS to enhance TESL trainee teachers' VLSs provides a variety of perspectives and ideas on how to acquire and store vocabulary in a number of digital forms that TESL trainee teachers may quickly access during their studies. Normally, all the second language learners encounter unfamiliar words in their readings, whether they are eager or reluctant readers, and they need strategy for what to do when this happens. Second language learners can learn to utilise online dictionaries and thesauri instead of utilising print dictionaries or asking the teacher. Both monolingual (Reinking & Rickman, 1990) and bilingual (Bogdanov, 2015) students prefer to use word help more frequently than print references when they have access to it on demand, at the point of need. Many of these web-based programmes are free to use. Furthermore, an online LMS can improve the VLSs of TESL trainee teachers by linking all of the processes for acquiring information needed to make the learning process easier. Since most of the materials were uploaded in the online LMS, the research participants had to be extremely selective in connecting them using their own strategies.

Besides, online LMS is able to enhance TESL trainee teachers' VLSs by connecting all the processes in gathering information needed to ease the learning process. For the following sub-theme, learning involves a non-human appliance, which refers to the "class" or "online LMS platform" that stores the knowledge that allows students to rely on technology to access a great quantity of material. This is how technology advancement helps the educators and students to have a systematic manageable

platform for teaching and learning processes. Next, emphasising on the research participant's ability to learn more is more important than what one of the participants in the study currently knows. It now includes a variety of ways for digesting and upgrading the latest data, information, and concept. Actually, the online LMS opens up a wider range of possibilities; not only does it allow research participants to receive materials from the researcher, but it also requires them to be able to select the most acceptable and appropriate resources before uploading them to the online LMS.

To conclude, using an online LMS to enhance TESL trainee teachers' VLSs provides a variety of perspectives and ideas on how to acquire and store vocabulary in a number of digital forms. The first sub-theme of this part focuses on the diversity of opinion in learning and knowledge, which includes both cognitive and affective aspects. Online LMSs link all of the processes for acquiring information needed to make the learning process easier. Online LMS is able to enhance TESL trainee teachers' VLSs by connecting all the processes in gathering information needed to ease the learning process. For the following sub-theme, learning involves a non-human appliance, which refers to the "class" or "online LMS platform" that stores the knowledge that allows students to rely on technology to access a great quantity of material. This is how technology advancement helps the educators and students to have a systematic manageable platform for teaching and learning processes. It now includes a variety of ways for digesting and upgrading the latest data, information, and concept.



#### **7.4.4 Issues and Challenges in Using Online Learning Management System (LMS)**

There were four main issues and three challenges faced by the TESL Trainee teachers in using online LMS. The first main issue was poor internet access in the campus. One of the most significant obstacles for Malaysian students has been access to the internet (Chung et al., 2020). The study was conducted by the researcher at one of the Language Labs in the campus. Despite the fact that the lab was close to the internet server room, the internet connection was occasionally quite poor. As a result, when the TESL trainee teachers wished to perform their work in their hostels, they had to use their own online data. Because there were over 800 trainee teachers on campus, the internet access points were extremely limited. The majority of trainee teachers complained about the lack of internet access on campus.

The internet was divided into five categories: educational use, social networking, entertainment use, social communication, and online services (Chung et al., 2020). The internet, or global network, offers a wide range of applications due to its "information superhighway" capability. Approximately two-thirds of internet users used the internet for educational purposes. University students in Malaysia are inextricably linked to the internet as a result of the introduction of better learning and teaching methods based on internet-based technologies in higher education (Rahman et al., 2020). Internet connectivity is available in ITEs for not only trainee teachers, but also lecturers and administration. This has become a national and international concern, affecting not only universities but also other Malaysian educational institutions.

The second issue was insufficient knowledge and skills in using LMS among TESL trainee teachers. Online LMS use software and programmes designed expressly for student learning to connect students or learners with learning information in a standardised manner (Alenezi, 2018). Not all TESL trainee teachers were enthusiastic about adopting an online learning management system as part of their studies. Using certain coding and confusing navigation keys had made them feeling tedious in accessing the online LMS. After 15 weeks of involvement using LMS during the course, it has become a routine for them.

The interface of online LMS was not so interesting compared to other social media and one of the research participants highlighted about the interface of online LMS used in the study. It was supported by Alenezi (2018) in his study stated that LMS interfaces were inflexible and dull in comparison to other social settings like as Facebook, YouTube, and MySpace, which are engaging and exciting, according to the authors.

The mismanagement of tasks and activities in an online LMS is the next issue. This happened when research participants were given the option of choosing and selecting whatever materials related to the topic learned to enhance their comprehension of the material. There are too many learning materials available, including articles, recorded presentations, graphic organisers, online reflective essays, comments, power point slides, photos, and YouTube video links. Some research participants did not update their tasks on time or according to the date given, so when they updated whatever tasks or activities they were working on, they were mixed in with the most recent tasks or activities allocated on that day.

The last issue in the findings discovered the confusion to navigate online LMS, *Schoology's* Interfaces. Users have grown accustomed to dealing with unclear controls or User Interface faults because LMS navigation difficulties are so common. Disorganised User Interface sometimes can cause the problem in locating function within the platform and accessing the online materials. As the teacher trainer, it is important to choose the user-centred online platform to suit the needs and preference of the trainee teachers for teaching and learning purposes. Moreover, creating a value-based online platform that fosters the growth of all users and helps them achieve success through skill development is the goal of a learning management system (LMS). Besides, it is also aimed to provide a smooth online teaching and learning environment for teachers and students (Chahal & Patel, 2021).

## **7.5 Conclusion and Recommendations**

Vocabulary learning is a central component of the English language teaching and learning process because insufficient vocabulary can disrupt communication. In acquiring either the first language (L1) or the second language (L2), language learners need to be exposed to various aspects of language such as meaning, collocation, pronunciation, grammar, word families and word formation. In this research, vocabulary learning strategies is an important element of classroom learning. As such, future TESL teachers and trainee teachers in school must have an awareness to extend their vocabulary range. Many of them are not aware of the strategies that can be used to acquire vocabulary (Yulia, 2014; Adibah et al., 2014; Noorizah & Amir, 2012).

As future primary school teachers, the trainee teachers need to be exposed to the use of online LMS especially in teaching and learning process through blended learning flipped classroom. In addition, through online LMS, TESL trainee teachers were able to apply various VLSs effectively especially in vocabulary learning, since they have their own strategies which they felt comfortable with to use in different contexts and for different purposes. As the second language practitioners, TESL trainee teachers had more concern in understanding the meaning of the words that they came across either directly or indirectly and applying them in the right contexts.

Moreover, the TESL trainee teachers' beliefs on how the words were learned by them especially during their early childhood and with their parents' assistance were vital in their early stages of the second language acquisition. Second language word learning and memorisation is difficult but crucial. Of course, different TESL trainee teachers have different ideas regarding the best way to learn language. It is crucial to understand how they acquire new vocabulary and how they approach vocabulary learning (Hadi & Guo, 2020). Moreover, efficient and unsuccessful TESL trainee teachers have been employing various techniques. As a result, if they are aware of how they learn vocabulary, they will be better able to apply learning strategies, and this will also assist them choose the most successful methods for teaching vocabulary for their future teaching.

Starting with the babbling stage, one word, two words and more, and phrases, most of the TESL trainee teachers had experience of learning their second language using various kind of VLS for example through rote learning, contextualisation, application, and subconsciously. Furthermore, they had gone through numerous stages of learning

vocabulary throughout their lives. Parents played an important influence in developing their vocabulary when they were younger. Following that, children received support from teachers in primary and secondary schools through formal learning and different entertaining activities that helped them improve their vocabulary.

Aside from the three kinds of VLSs proposed by Gu and Johnson (1996), which were metacognitive strategies, cognitive strategies, and memory strategies, one of the VLSs revealed from the study was online strategies. Metacognitive Strategies were divided into two categories: first, VLS beliefs, and second, metacognitive strategies, which included selective attention and self-initiation. It is critical for TESL trainee teachers to acquire a set of VLS beliefs so that they can understand how VLSs work in various situations when learning quality vocabulary for future use.

When TESL trainee teachers were armed with a variety of VLSs, they were able to use them creatively in the tasks or activities they created for their future teaching and learning process utilising an online LMS. Actually, an online LMS is a platform for TESL trainee teachers to demonstrate their abilities and originality, particularly in the acquisition of vocabulary through the use of acceptable and appropriate VLSs. They must be prepared with all digital abilities, particularly in handling online LMS effectively in second language teaching. The majority of pupils in schools nowadays are mixed-ability students with various multiple intelligences who are exposed to digital media.

Next, the study is able to reveal on how online LMS helps the TESL trainee teachers in enhancing their vocabulary learning strategies. It is clearly depicted in the findings

when the online LMS assisted TESL trainee teachers through social connections, vocabulary acquisition and language learning, and online connections.

Furthermore, Text Analyzer serves as one of the CEFR-based assessment tools. The online reflective writings (ORWs) of all six research participants were analysed, and the scores based on CEFR and IELTS level were displayed. The number of words used, average sentence length, average word length, and word complexity were used to evaluate the research participants' growth in vocabulary knowledge. The findings show that TESL trainee teachers improved not only their vocabulary learning strategies but also their reflective writing skills.

Following that, the study revealed a few concerns and obstacles faced by TESL trainee teachers. Poor internet access on campus is a serious challenge for TESL trainee teachers, especially when it comes to operating the online LMS in the classroom or in their hostels. Strong internet connections are required for all digital and technology-related activities and tasks that must be accessed, downloaded, and posted in the online LMS platform. For students from low-income families, using their personal internet data becomes a burden. The majority of trainee teachers in ITEs rely entirely on the free internet access available on campus. As a result, the ITE administration must take steps to combat the problem.

ICT teacher trainers in ITEs should pay close attention to TESL trainee teachers, as well as other trainee teachers, who lack sufficient knowledge and skills in using online LMS, in order to pique their interest in exploring digital and technology skills, particularly in managing online LMS, in light of the recent digital educational world's

needs. Before they are sent to schools, ITEs should take responsibility for equipping all trainee teachers with all digital and technical skills.

In order to establish a structured and more systematic organisation of teaching and learning materials, good administration of activities and tasks in an online LMS is required. As a result of the difficulties the research participants had retrieving materials in a limited amount of time, the researcher identified a few flaws in managing the activities and tasks and hoped to improve them in the future by providing clear instructions before uploading teaching and learning materials to an online LMS.

Following that, misunderstanding in online LMS, Schoology interfaces became one of the challenges faced by a few research participants, despite the fact that it appeared to be basic and easy to manage from the researcher's perspective. The confusions of the navigation keys' interfaces were revealed as a result of the findings. The researcher agreed with one of the research participants' critical viewpoint, and in the future, Schoology, the designer of an online learning management system, will update and improve the interfaces.

Finally, the TESL trainee teachers experienced three major challenges in managing the online LMS. There were issues with time management, reading material complexity, and inability to apply ICT abilities. TESL trainee teachers must manage their time effectively and be more systematic as higher education students. Furthermore, they must bear a high level of accountability for the online LMS with which they are tasked, as well as be aware of any instructions issued by the trainers. It is said that practise makes perfect. As TESL trainee teachers, they must familiarise themselves with all

academic reading materials as well as high-impact publications because in the final semester of their studies, they have to produce their dissertations as their final product. As a result, they must master academic vocabulary associated with teaching and learning English as a second language.

### **7.5.1 Methodological Contributions**

The study's main methodological contribution was the combination and use of an online learning management system (LMS) in exploring VLSs among TESL trainee teachers in ITE, as well as the use of the Text Analyzer online application in assessing research participants' vocabulary knowledge, CEFR, and IELTS levels based on online reflective writings. In addition, the study included online structured interviews using an online LMS, as well as continual online observations to obtain various forms of data to assist the study. Finally, the three theories are closely linked by a methodological contribution. Social Constructivism by Vygotsky (1978); Theory of Connectivism by Vygotsky (2009); Five Principles of Effective Second Language Instruction (Barcorft, 2004), and one VLS taxonomy by Gu and Johnson (1996). The successful application of several research theories in this study contributes to the data collection for a case study involving TESL trainee teachers in one of Malaysia's ITEs.

### **7.5.2 Practical Contributions**

The deep understanding provided by the study is one of the research's practical contributions. The study shows that online LMS should be one of the educational



platforms that should be specialised by all trainee teachers in ITEs and universities, and not only for TESL trainee teachers. This is because they would use the online platforms when they are posted to school since the educational system nowadays is lead to 21st Century learning that deals with digital and technology. This indicates that, for the effective usage of online LMS, the need of knowing the interfaces of all online LMS should be emphasised.

In order to make this happen, ITEs in Malaysia, in particular, should take steps to improve internet access and provide strong internet connections to all trainee teachers on campus and in the hostels, in order to achieve the Ministry of Education's vision of quality education producing learned individuals for a prosperous nation, as well as its mission of upholding a quality education system that develops individuals to their full potential and fulfils the nation's aspirations.

Despite the fact that this study was completed earlier, it has been demonstrated that the importance of an online learning management system (LMS) in today's educational system is that it acts as the primary platform for successfully linking educators and students through virtual classrooms. It covers a wide range of facets of the learning process, including not only vocabulary acquisition but also the administration, monitoring, and reporting of online courses and training programmes within a company during the Covid-19 pandemic.

Using an online LMS to explore VLSs for effectively learning a second language is not a frustrating platform if educators, particularly second language teachers in primary and secondary schools, have the initiative and creativity to explore more online teaching and learning applications in order to design engaging lessons.

### **7.5.3 Recommendations for Future Research**

For future research studies, it is recommended that more than one LMS be used to investigate second learners' VLSs and compare the effectiveness of the different types of LMSs in vocabulary learning.

This study attempts to investigate VLSs among TESL trainee teachers using an online learning management system; therefore, it would be extremely interesting to expand the study by suggesting the use of an online learning management system in vocabulary learning among university students. For example, the research could focus on boosting multiliteracies among university students through the use of an online learning management system (LMS). Future research also need to focus on metacognitive strategy training as they were not aware of their own metacognitive strategies which could make them more self- directed learners.

Finally, a study of online LMS among in-service teachers in primary or secondary schools in their teaching and learning processes could be another example of further research. The study could focus on in-service teachers' ICT skills in operating online learning management systems (LMSs) at home or in the classroom.

## **7.6 Limitations**

This study has various limitations, despite the fact that it has some significant findings. To begin, the engagement and awareness of the research participants in applying proper grammatical structures in their online reflective writings. Some participants in the study just posted their online learning reflective writings to complete the assignments. As a result, the researcher had to rephrase them in order to obtain useful data. Second, the case study only included TESL trainee teachers from one ITE, therefore it did not reflect the broader situation in other ITEs across the country. Third, because this study was conducted during the research participants' study period, the researcher had to deal with a lot of challenges in conducting face-to-face interviews.

## **7.7 Conclusion**

To conclude, an online learning management system can help TESL trainee teachers improve their vocabulary learning strategies. During their early stages of language learning, the majority of them acquired vocabulary through various VLSs, either consciously or unconsciously. Despite the fact that the participants in this study were not aware that the study would focus on their VLSs and use an online LMS to control the data's authenticity and validity.

## REFERENCE

- Abas, Z. W., Peng, C. L., & Mansor, N. (2009). A study on learner readiness for mobile learning at Open University Malaysia.
- Abuarqoub, I. A. S. (2019). Language barriers to effective communication. In *Utopia y Praxis Latinoamericana* (Vol. 24, Issue Extra6, pp. 64–77).
- Adelman, C., Kemmis, S. and Jenkins, D. (1980). Rethinking case study: Notes from the Second Cambridge Conference. In Cohen, L., Manion, L. & Morrison, K. (2011). *Research methods in education* (7<sup>th</sup>.ed.). London: Routledge.
- Ahmad, A.M., Rafizah, M. R., Mohamad, F. Y., Azaharee, A., & Abdul, R. M. (2009). Vocabulary learning strategies of adult ESL learners. *The English Teacher*. Vol. 38, 133-145.
- Akbari, O. (2008). Teaching vocabulary items through contextualization and picture of elementary Iranian EFL students. *Asian EFL Journal*. 10(3) (3).
- Akkoyunlu, B., & Soylu, M. Y. (2008). A study of student's perceptions in a blended learning environment based on different learning styles. *Educational Technology & Society*, 11 (1), 183-193.
- Al- Maqtri, M., & Thabet, A. (2013). The qualities of the good English teacher as perceived by Saudi and Yemeni college students of English. *Greener Journal of Educational Research*, 3(2), 72-79.
- Alderson, J.C. (2000). *Assessing reading*. Cambridge: Cambridge University Press.
- Alenezi, A. (2018). *Barriers to Participation in Learning Management Systems in. 2018*.
- Ali, L., & Zaki, S. (2019). Exploring Vocabulary Learning Strategies Across ESL/EFL Contexts: A Juggling between Experiential and Traditional Modes of Learning. *Journal of Education and Educational Development*, 6(2), 201–218. <https://doi.org/10.22555/joeed.v6i2.2756>
- Alizadeh, I. (2019). Using an LMS in teaching English: A qualitative content analysis of medical sciences students' evaluations and suggestions. *Qualitative Report*, 24(11), 2851–2873. <https://doi.org/10.46743/2160-3715/2019.3613>
- Allen, I. E., Seaman, J., & Garrett, R. (2007). Blending in: The extent and promise of blended education in the United States. *The Sloan Consortium*, 1–29. <https://doi.org/10.1007/s00170-005-0274-8>
- Allen, L. (1996). The evaluation of a learner's beliefs about language learning. *Carleton Papers in Applied Language Studies*. 13, 67-80.

- Allen, M. (2017). The sage encyclopedia of communication research methods (Vols. 1-4). Thousand Oaks, CA: SAGE Publications, Inc. doi: 10.4135/9781483381411
- Almunawaroh, N. F., & Tamansiswa, U. (2018). Teaching Vocabulary Through Context Clues, (April).
- Ambient Insight Research. (2009). "The U.S. Market for Self-paced eLearning Products and Services: 2010-2015 Forecast and Analysis" in 2011 Outlook for Online Learning and Anderson, T.H. (1979). Study skills and learning strategies. In H.F. O'Neil & C.D. Spielberg (Eds.), Cognitive and affective learning strategies. (pp. 77-97). New York, NY: Academic Press.
- Arbaugh, J.B. (2000). Virtual Classroom Versus Physical Classroom: An exploratory study.
- Ariffin, A. (2021). Effects of Student Collaboration on ESL Learners' Vocabulary Development. *Asian Journal of University Education*, 17(1), 177–191. <https://doi.org/10.24191/ajue.v17i1.12627>
- Ariza, E. N., & Hancock, S. (2003). Second Language Acquisition Theories as a Framework for Creating Distance Learning Courses. *The International Review of Research in Open and Distributed Learning*, 4(2). <https://doi.org/10.19173/irrodl.v4i2.142>
- Asgari, A & Bin Mustapha, G. (2011). The Type of Vocabulary Learning Strategies Used by ESL Students in University Putra Malaysia. *English Language Teaching*. 4(2), 84-90
- August, D. (2002, March 8). Literacy for English language learners: Four key issues. Power Point presented at the videoconference on literacy for English language learners.
- August, D., & Hakuta, K. (Eds.). (1998). *Educating language-minority children*. Washington, DC: National Academy Press. (ERIC Document Reproduction Service No. ED420737)
- Bachman, L. F., & Palmer, A.S. (1996). *Language testing in practice*. Oxford: Oxford University Press.
- Bancha, W., & Tongtep, N. (2021). Enhancing vocabulary memorization and retention through LMS and MultiEx game platforms among thai tertiary students. *International Journal of Learning, Teaching and Educational Research*, 20(10), 173–192. <https://doi.org/10.26803/ijlter.20.10.10>

- Bandura, A. (2001). Social cognitive theory: An argentic perspective. *Annual review of psychology* (Vol. 55, pp. 1-26). Palo Alto, CA: Annual reviews, Inc.
- Bankowski, E. (2010). Developing Skills for Effective Academic Presentations in EAP. *International Journal of Teaching and Learning in Higher Education*, 22(2), 187–196. <http://www.isetl.org/ijtlhe/>
- Barbara, M., Yukie, T., Robert, M., & Marianne, B. (2013). A meta-analysis of the empirical literature. *Teachers College Record*. 115(3), 1-47
- Barbara, M., Yukie, T., Robert, M., Marianne, B., & Karla, J. (2010). Evaluation of Evidence Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies. *U.S. Department of Education*, 14.
- Barcroft, J. (2004). Second language acquisition: A lexical input processing Approach, *Foreign Language Annals* Vol. 37, No.2.
- Barcroft, Joe. (2015). Vocabulary in Language Teaching. 10.4324/9781315679549.
- Barrett, N. E., & Liu, G. (2019). Factors that influence the development and performance of academic oral presentations using a blended learning environment. *Journal of Computer Assisted Learning*, 35(6), 708-720. <https://doi.org/10.1111/jcal.12376>
- Bastanfar, A., & Branch, K. (2014). Vocabulary Learning Strategies and ELT Materials; A Study of the Extent to Which VLS Research Informs Local Course books in Iran. May. <https://doi.org/10.5539/ies.v3n3p158>
- Bates, T. (2011). 2@11 Outlook for Online Learning and Distance Education. *Contact North*. Retrieved from <http://search.contactnorth.ca/en/data/files/download/Jan2011/2011%20Outlook.pdf>
- Bear, D. R., & Helman, L. (2004). Word study for vocabulary development in the early stages of literacy learning: Ecological perspectives and learning English. In J. F. Baumann & E. J. Kame'enui (Eds.), *Vocabulary instruction: Research to practice* (pp. 13–27). New York: Guilford Press.
- Bochkarev, V. V., Shevlyakova, A. V., & Solovyev, V. D. (2015). The average word length dynamics as an indicator of cultural changes in society. *Social Evolution and History*, 14(2), 153–175.
- Bogdanov, S. (2015). *Critical review of Yoshii, M. (2006). L1 and L2 Glosses: Their effects on incidental vocabulary learning. January 2013.*

- Bonner, A. & T. G. (2002). Insider-outsider perspectives of participant observation. *Nurse Researcher*, 9(4) (August)
- Boogard, P., & Laufer, B. (Eds).2004. Vocabulary in a second language: Selection, acquisition and testing. Amsterdam: John Benjamin.
- Bradley, V. M. (2020). Learning Management System (LMS) Use with Online Instruction. *International Journal of Technology in Education*, 4(1), 68. <https://doi.org/10.46328/ijte.36>
- Bransford, J.D., Stein, B.S., Shelton, T.S., & Owings, R.A. (1981). Cognition and adaptation: The importance of learning to learn. In J. Harvey (Ed.), *Cognition, social behavior, and the environment* (pp.93-110). Hillsdale, NJ: Erlbaum.
- Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health*, 11(4), 589–597. <https://doi.org/10.1080/2159676X.2019.1628806>
- Braun, V., & Clarke, V. (2006) Using thematic analysis in psychology, *Qualitative Research in Psychology*, 3:2, 77-101, DOI: 10.1191/1478088706qp063oa
- Brown, A. L., Bransford, J.D., Ferrara, R.A., & Campione, J.C. (1983). Learning, remembering, and understanding. In P. H. Mussen (Ed.), *Handbook of child psychology: Vol. 3, Cognitive Development* (pp.77-166). New York, NY: Wiley.
- Bruning, R.H., Schraw, G. J., & Norby, M. M. (2011). *Cognitive psychology and instruction* (5<sup>th</sup> Ed.). Boston, MA: Pearson.
- Cassidy, J., & Cassidy, D. (December 2003/January 2004). What's hot, what's not hot for 2004? *Reading Today*.
- Cameron, L. (2001). Teaching Languages to Young Learners. Cambridge: Cambridge University Press. <http://dx.doi.org/10.1017/CBO9780511733109>
- Certini, G., Leonard, S., Brawn, J. D., Robinson, S. K., Iii, F. R. T., Wilkie, M. L., Norman, M. S. (2014). Purposive sampling. *Oikos*, 2(6), 10–344. <http://doi.org/10.1177/2345678906292430>
- Chahal, K., & Patel, M. (2021). Features of Learning Management Systems (LMS) for improving teaching and learning. November. <https://www.researchgate.net/publication/356578898>
- Chall, J.S. (1983). Literacy, trends, and explanation. *Educational researcher*. Vol. 12, No. 9 (Nov.1983). pp.3-8. Sage Publication.

- Chirwa, M. (2018). Access and use of internet in teaching and learning at two selected teachers' colleges in Tanzania. In *International Journal of Education and Development using Information and Communication Technology (IJEDICT)* (Vol. 14, Issue 2).
- Chou, I.-C. (2018). Exploring Taiwanese Students' Perceptions of Active Explicit Vocabulary Instruction: A Case Study in an English Medium Course. *International Journal of Education and Literacy Studies*, 6(1), 17. <https://doi.org/10.7575/aiac.ijels.v.6n.1p.17>
- Chung, E., Subramaniam, G., & Dass, L. C. (2020). *Online Learning Readiness Among University Students in. 19.*
- Coady, J. (1997). L2 vocabulary acquisition through extensive reading. In J. Coady & T. Huckin (Eds), *Second language vocabulary acquisition: A rationale for pedagogy* (pp.225-237). Cambridge: Cambridge University Press.
- Coady, J., & Huckin, T. (Eds.). (1997). *Second language vocabulary acquisition: A rationale for pedagogy*. New York; Cambridge University Press.
- Cobb, T. & Horst, M. (2001). Growing academic vocabulary with collaborative online database. In B. Morisson, D. Gadner, K. Koebke, & M. Spratt (Eds.), *LT Perspective on IT & Multimedia* (pp. 189-226). Hong Kong: Polytechnic University Press.
- Cohen, A. (1998). *Strategies in learning and using second language*. Harlow: Longman
- Cohen, A. D. (2012). Strategies: The interface of styles, strategies, and motivation on tasks. In S. Mercer, S. Ryan, & M. Williams (Eds.), *Psychology for language learning: Insights from research, theory and practice* (pp. 136-150). Basingstoke, England: Palgrave Macmillan.
- Colley, A. M., & Beech, J.R. (1989). *Acquisition and performance of cognitive skills*. Chichester, UK: John Wiley & Sons.
- Colorado, C. (2007). *Vocabulary development*. Learning Store. Org.
- Connelly, L. M. (2016). *Trustworthiness in Qualitative Research*. 25(6), 2016.
- Coxhead. A. (2006). *Essentials of Teaching Academic Vocabulary*. United States of America. Thomson HeinleCreswell, J. (2014). *Research.Design.Qualitative.Quantitative.Mixed.Methods.Approaches.4th.Edition.*



- Creswell, J. (2009). *Research design. Qualitative, quantitative, and mixed method approaches (2nd Ed.)*. Sage Publication Inc. USA.
- Creswell, J. W. (2007). *Qualitative enquiry & research design, choosing among five approaches*. Sage Publications, Inc. (Vol. 2).  
<http://doi.org/10.1016/j.aenj.2008.02.005>
- Crowe, S., Creswell, K., Robertson, a, Huby, G., Avery, a, & Sheikh, a. (2011). The case study approach. *BMC.Med Res.Methodol.*, 11(1), 100–.  
<http://doi.org/10.1186/1471-2288-11-100>
- Clark, M. (2013). The Use of Technology to Support Vocabulary Development of English Language Learners How has open access to Fisher Digital Publications benefited you ? The Use of Technology to Support Vocabulary Development of English Language. Fisher Digital Publications.
- Derry, S.J., & Murphy, D.A. (1986). Designing systems that train learning ability: From theory to practice. *Review of Educational Research*, 56, 1-39. Doi: 10.3102/00346543056001001
- Dewey, J. (1910). *How we think*. Florence, KY: Wadsworth.
- Dhewi, Y. K. (2014). Vocabulary learning strategies used by 8<sup>th</sup> Graders in SMPN 1 Banyubiru. Program Studi Pendidikan Bahasa Inggris FBS-UKSW
- Dhewi, Y. K. (2014). Vocabulary learning strategies used by 8<sup>th</sup> Graders in SMPN 1 Banyubiru. Program Studi Pendidikan Bahasa Inggris FBS-UKSW
- Di Domenico, M., & Phillips, N. (2009). Participant observation. In *BMC Health Services Research* (Vol. 9, p. 110). <http://doi.org/10.1186/1472-6963-9-110>
- Diamond, L., & Gutlohn, L. (2006). Teaching vocabulary. Retrieved from Distance Education, [www.contactnorth.ca](http://www.contactnorth.ca).
- Dias, S.B., & Diniz, J.A. (2014). Towards an Enhanced Learning Management System for Blended Learning in Higher Education Incorporating Distinct Learners' Profiles. *J. Educ. Technol. Soc.*, 17, 307-319.
- Dóczy, B. (2011). Comparing the vocabulary learning strategies of high school and university students: A pilot study. *WoPaLP*, 5, 138-158.
- Dornyei, Z., & Clement, R. (2001). Motivational characteristics of learning different target languages: Results of a nationwide survey. In Z. Dornyei & R. Schmidt (Eds.), *Motivation and second language acquisition* (Technical Report #23, pp. 399-432). Honolulu: University of Hawai'i, Second Language Teaching and Curriculum Center

- Dolan, P., Leat, D., Mazzoli Smith, L., Mitra, S., Todd, L., & Wall, K. (2013). Self-Organised Learning Environments (SOLEs) in an English School : an example of transformative pedagogy? *Online Educational Research Journal*., 3(11), 1–19.
- Driscoll, P.M. (2000). *Psychology of learning for Instruction*. Allyn & Bacon: Massachusetts.
- Duke, B., Harper, G., & Johnston, M. (2013). Connectivism as a Digital Age Learning Theory. *The International HETL Review, Special Issue*, (1966), 4–13.
- Dutton, W. H., Cheong, P. H. & Park, N. (2003). The social shaping of a virtual learning environment: The case of a university- wide course management system. *The Electronic journal of e-Learning*, 2(1). Retrieved from <http://www.ejel.org/volume-2/vol 2-issue1-art3-dutton-cheong-park.pdf>
- Dutton, W. H., Cheong, P. H., & Park, N. (2004). The Social Shaping of a Virtual Learning Environment : The Case of a University-wide Course Management System. *Electronic Journal Le-Learning*, 2(1), 69–80.
- Echevarria, J. (1996). The effects of instructional conversations on the language and concept development of Latino students with learning disabilities. *Bilingual research Journal*, 20(2), 339-363
- Edwards, R., & Holland, J. (2013). *What is Qualitative Interviewing? "What is?" Research Methods Series*.
- Ehri, Linnea, C. (2014). Orthographic mapping in the acquisition of sight word reading, spelling memory, vocabulary learning. *Scientific Studies of Reading*, 18(1), 5-21.
- Ekiaka Nzai, V. & Reyna, C. (2014). Teaching English vocabulary to elementary Mexican American students in South Texas: Some responsive modern instructional strategies. *Journal of Latinos and Education*, 13(1), 44-53.
- El Nokali, N. E., Bachman, H. J., & Votruba-Drzal, E. (2010). Parent involvement and children's academic and social development in elementary school. *Child Development*, 81(3), 988–1005. <https://doi.org/10.1111/j.1467-8624.2010.01447.x>
- Elgort, I. & Warren, P. (2014). L2 Vocabulary learning from reading: explicit and tacit lexical knowledge and the role of learner and item variables. *Language Learning*, 64(2), 365-414.
- Elzubier, E. (2016). Vocabulary Learning Strategies Used BY Sudanese EFL Learners at University level. *Research Journal of English Language and Literature (RJELAL)*, 4(4), 512-524.

- Emerita, B., (2006). A blended learning pedagogical model for teaching and learning EFL successful through an online. *Calico Journal*. 23(3). Chile.
- Emrah Baki, B. Z. K. (2010). A comparison of undergraduate students' English vocabulary learning: Using mobile phones and flash cards. *Turkish Online Journal of Educational Technology-TOJET*, Vol. 9(3), 1-7
- Fisher, D., & Frey, N. (2014). Content area vocabulary learning. *Reading Teacher*, 67(8), 594-599.
- Ferit, K., Jaroslaw, K., & Maria, C.S. (2010). Comparative usefulness of online and traditional vocabulary learning. *TOJET: The Turkish Online Journal of Educational Technology*. 9(2).
- Finn, A., & Bucci, M. (2004). A case study approach to blended learning. Retrieved from [http://www.centra.com/download/whitepaper/Case Study Blended Learning.pdf](http://www.centra.com/download/whitepaper/Case%20Study%20Blended%20Learning.pdf)
- Folse, K. S. (2004). *Vocabulary Myths: Applying second research to classroom teaching*. MI: University of Michigan Press
- Fan, Y.M. (2003). Frequency of use, perceived usefulness, and actual usefulness of second language vocabulary strategies: a study of Hong Kong learners. *The Modern Language Journal*, 87(2), 222-241.
- Freeman, M.A. & Capper, J. M. (1999). Exploiting the web for education: An anonymous asynchronous role simulation. *Australian Journal of Educational Technology*, 15 (1), 95-116.
- Franklin, U. M. (1999). *The real world of technology*. House of Anansi.
- Gibbs, G.R. (2007). Analyzing qualitative data. In J.W. Creswell (2nd Ed.). *Research design. Qualitative, quantitative, and mixed method approaches*. Sage Publication Inc. USA
- Graves, M., F., Bauman, James, F., Blachowicz, Camille, L. Manyak, P., Bates, A., & Cieply, C. (2014). Words, words everywhere, but which ones do we teach. *Reading Teacher*, 67(5), 333-346.
- Guest G, Bunce A, Johnson L. How Many Interviews Are Enough?: An Experiment with Data Saturation and Variability. *Field Methods*. 2006;18(1):59-82. doi:10.1177/1525822X05279903
- Gabriela et al. (2020). The Contribution of Connectivism in Learning by Competencies to Improve Meaningful Learning. *International Research Journal of Management, IT & Social Sciences*, 7(6), 1-8. <https://doi.org/10.21744/irjmis.v7n6.1002>

- Grabe, W. and Stoller, F.L. (2018). Teaching Vocabulary for Reading Success. In The TESOL Encyclopedia of English Language Teaching (eds J.I. Lontas, T. International Association and M. DelliCarpini).  
<https://doi.org/10.1002/9781118784235.eelt0773>
- Gu, P. Y. (2010). Learning Strategies for Vocabulary Development. *Reflections on English Language Teaching*, 9(2), 105-118.
- George, M. C. (2006). Emerging technologies going to the mall: Mobile assisted language learning. *Language Learning & Technology*. Vol.10 (1), 9-16
- Gonzales, N., Moll, L.C., & Amanti, C. (2005). *Fund of knowledge: Theorizing practices in households and classrooms*. Mahwah, NJ: Erlbaum.
- Gersten, R. & Baker, S. (2003). English-language learners with learning disabilities. In H. Swanson, K. Harris, & S. Graham (Ed.), *Handbook of learning disabilities*. (pp.94-109). New York, NY: The Guilford Press.
- Giridharan, Beena and Conlan, Chris. (2003). L2 vocabulary acquisition: Investigating the key to lexical comprehension, learning for an unknown future. Proceedings of the HERDSA 2003 Conference, 6-9 July. University of Canterbury, Christchurch: HERDSA
- Gibbons, P., & Cummins, J. (2002). *Professional development for teachers and administrators working with English language learners*. [Teacher training Kit]. Videotapes of 2002 NABE Conference. NABE Star Series
- Graves, M., & Watts-Taffe, S. (2002). The place of word conscious in a research-based vocabulary program. In A. Farstrup & J. Samuels (Eds.), *What research has to say about reading instruction (3rd Ed.)*, 140-165. Newark, DE; International Reading Association.
- Gu, P. Y. & Johnson, R. K. (1996). Vocabulary learning strategies and language learning outcomes. *Language Learning*, 46(4), 643-679.
- Garner, R. (1988). Verbal –report data on cognitive and metacognitive strategies. In C.E. Weinstein, E.T. Goetz & P.A. Alexander (Eds.), *Learning and study strategies: Issues in assessment, instruction, and evaluation* (pp.63-76). New York, NY: Academic Press.
- Gairns, R., & Redman, S. (1986). *Working with words*. Cambridge. Cambridge University Press.
- Gagne, R.M. (1985). *The conditions of learning and theory of instruction* (Vol. 4). Tokyo, Japan: Holt-Sauders.
- Gu, P. Y. (2003b). Vocabulary learning in a second language: Person, task, context and strategies. *Teaching English as a second Language Electronic Journal*, 7.

*Guru Bahasa Inggeris Mangsa Tugas, Kursus.* (2013, February 27). *Berita Harian*

Hadi, H. ur R., & Guo, X. (2020). A survey of beliefs and vocabulary learning strategies adopted by EFL learners at Shaikh Zayed University. *Cogent Education*, 7(1). <https://doi.org/10.1080/2331186X.2020.1829803>

Hair, J. F., Black, W.C., Babin, B. J., Anderson, K.E., & Tatham, R.L. (2006). *Multivariate data analysis (6th Ed.)*. Upper saddle River, NJ: Pearson Prentice Hall.

Halilah, A., Mutalib, A., Kadir, A., & Robani, R. (2014). Vocabulary learning strategies among Malaysian TEVT students in. *Procedia - Social and Behavioral Sciences*, 123, 361–368. <http://doi.org/10.1016/j.sbspro.2014.01.1434>

Halliday, M. A. K., & Hasan, R. (1989). *Language, context, and text: Aspects of language in a socio-semiotic perspective*. Oxford, England: Oxford University Press.

Haniff, M., & Tahir, M. (2017). *Research and Trends in the Studies of Explicit Vocabulary Instructions and Vocabulary Acquisition*. 3(May), 1–7.

Harmon, J.M., Wood, K.D., & Kiser, K. (2009). Promoting vocabulary learning with the interactive word wall. *Middle School Journal*, 40(3), 58-63.

Harris, R. (2007). Qualitative Analysis. *Encyclopedia of Geographical Information Science*.

Hasan, N. (2014). Teaching {Vocabulary} through {Collaboration}: {Students} as {Independent} {Readers}. *Journal of Literature, Languages and Linguistics*, 3(0), 58–65. <http://www.iiste.org/Journals/index.php/JLLL/article/view/10061>

Hashemi, A. (2021). The effects of using games on teaching vocabulary in reading comprehension : a case of gifted students. 9(June), 151–160.

Hasram, S., Kaur, B., & Singh, A. (2021). Vocabulary Learning Strategies Of Good Language Learners From An International School X(II). <https://doi.org/10.31364/SCIRJ/v9.i02.2021.P0221843>

Hathorn, L. G., & Ingram, A. L. (2002). Online collaboration: Making it work. *Educational Technology*, 42(1), 33-40.

Heer, R. (n.d.). *A Model of Learning Objectives based on A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives*.

- Hill C. A. Dean E. & Murphy J. (2013). Social media sociality and survey research. John Wiley & Sons. Retrieved September 6 2022 from <http://site.ebrary.com/id/10774370>.
- Hitchcock, G., & Hughes, D. (1995). *Research and the Teacher*. *Journal of Chemical Information and Modeling* (Vol. 53).  
<http://doi.org/10.1017/CBO9781107415324.004>
- Hobbs, D. (2005). Understanding learning management systems. *Training and Development in Australia*, 14-16
- Holmes, K. & Thompson, J. (2014). Service Learning: Flooding Students with vocabulary through read alouds. *Journal of Educational Strategies, Issues and Ideas*, 87(1), 39-43.
- Horst, J. S. (2013). Context and repetition in word learning. *Frontiers in Psychology*, 4(APR), 1–11. <https://doi.org/10.3389/fpsyg.2013.00149>
- Hsiao, T., & Oxford, R. (2002). Comparing theories of language learning strategies: A confirmatory factor analysis. *Modern Language Journal*, 86(3), 368–383.
- Hulme, R. C., & Rodd, J. M. (2021). Learning new word meanings from story reading: The benefit of immediate testing. *PeerJ*, 9, 1–40.  
<https://doi.org/10.7717/peerj.11693>
- Hulstijn, J. H. (2013). Incidental learning in second language acquisition. In C. A. Chapelle (Ed.), *The encyclopedia of applied linguistics* (Vol. 5, pp. 2632-2640). Chichester: Wiley-Blackwell.  
<https://doi.org/10.1002/9781405198431.wbeal0530>
- Hurst, B., Wallace, R., & Nixon, S. B. (2013). The impact of social interaction on student learning. *Reading Horizons*, 52(4), 375–398.
- Institut Pendidikan Guru Malaysia (2014). *Buku Panduan Program Persediaan Ijazah Sarjana Muda Perguruan Dengan Kepujian*. Cyberjaya.
- Information, L., & Lincs, C. S. (n.d.). Integrating Digital Literacy Into English Language Instruction : Issue Brief This Brief Introduction : Literacy in the Modern World Context : Adult English Language Learners and Digital Literacy, 1–9.
- Irwindy, Quaidy, G. M., & Albert. (2018). Teaching Vocabulary in Contextualization for Young Learners. *Teaching Vocabulary in Contextualization for Young Learners*, 41–44.  
<http://ejournal.unp.ac.id/index.php/selt/article/viewFile/100142/100058>

- Istifci, I. (2018). Exploring the Perceptions of Pre-service English Teachers on Vocabulary Learning Strategies in a Foreign Language Teaching Context. 7(December), 12–32.
- Jaikrishnan, S., & Ismail, H. H. (2021). A Review on Vocabulary Learning Strategies Used in Learning English as A Second Language. *International Journal of Academic Research in Business and Social Sciences*, 11(9), 297–309. <https://doi.org/10.6007/ijarbss/v11-i9/10512>
- Jamal, H., & Shanaah, A. (2011). The Role of Learning Management Systems in Educational Environments : An Exploratory Case Study, Master dissertation, school of Computer Science, Physics and Mathematics, Linnaeus University, Växjö campus, Sweden. 57.
- Jamil, H., Razak, N. A., Raju, R., & Mohamed, A. R. (2011). Teacher Professional Development in Malaysia: Issues and Challenges. CICE 叢書 4 Africa-Asia University Dialogue for Educational Development Report of the International Experience Sharing Seminar (2): Actual Status and Issues of Teacher Professional Development, 200, 85–102. [http://home.hiroshima-u.ac.jp/cice/publications/sosho4\\_2-08.pdf](http://home.hiroshima-u.ac.jp/cice/publications/sosho4_2-08.pdf)
- Johnson S. D., Aragon, S.R. Shaik, N. & Palma-Rivas, N. (2000). Comparative analysis of learner satisfaction and learning outcomes in online and face-to-face learning environments. *Journal of Interactive Learning Research*, 11(1) 29-49. *Journal of Management Education*, 24 (2), 213-233.
- Jonassen, D. H., & Kwon, H. I. (2001). Communication patterns in computer mediated versus face-to-face group problem solving. *Educational Technology Research & Development*, 49(1), 35-51. Doi: 10.1007/BF02504505
- Jones & Barlett Learning. (n.d). Chapter 2: Research and Ethics. Retrieved from [http://www.samples.jbpub.com/9780763777326/Dantzker3e\\_77326\\_CH02.pdf](http://www.samples.jbpub.com/9780763777326/Dantzker3e_77326_CH02.pdf)
- Jung, S., & Huh, J.-H. (2019). An Efficient LMS Platform and Its Test Bed. *Electronics*, 8(2), 154. MDPI AG. Retrieved from <http://dx.doi.org/10.3390/electronics8020154>
- Kabilan, M. K., Ahmad, N., & Abidin, M. J. Z. (2010). Facebook: An online environment for learning of English in institutions of higher education? The Internet and higher education, 13(4), 179-187.
- Kabilan, M.K., Ahmad, N. & Abidin, M.J.Z. (2010). Facebook: An online environment for learning of English in institutions of higher education? Internet and Higher Education, 13, 179-187.

- Kagan, S. (1995). We can talk: Cooperative learning in the elementary ESL classroom. *Elementary Education Newsletter: The Official Publication of ESOL in Elementary Education Interest Section teachers of English to Speakers of other languages*, 17(2), 3-4.
- Kamil, M., & Hiebert, E. (2005). Teaching and learning vocabulary: Perspectives and persistent issues. In E. H. Hiebert and M.L. Kamil (Eds.), *Teaching and learning vocabulary: Bringing research to practice* (pp.1-23). Mahwah, NJ: Lawrence Erlbaum.
- Kaplan, R. (1966). Cultural thought patterns in inter-cultural education. *Language learning Journal*, 16(1), 1-20
- Karakaş, A., & Sarıçoban, A. (2012). The impact of watching subtitled animated cartoons on incidental vocabulary learning of ELT students. *Teaching English with Technology*, 12(4), 3–15.  
<http://www.ceeol.com/aspx/getdocument.aspx?logid=5&id=4a9c2dbb96664307baaca7c311afa1a5>
- Kathryn, E. & Eric T. M., (2014). Why I should conduct interview. TIDSR: Tools kits for the impact of digitized scholarly resources.  
<http://microsites.oii.ox.ac.uk/tidsr/kb/32/why-should-i-conduct-interviews>.
- Kellner, D. (2002). New media and new literacies: Reconstructing education for the new millennium. *The handbook of new media*, 90-104.
- Kesler, T. (2016). Teaching Tips Teaching Tips Teaching Tips Teaching Tips Teaching Tips Teaching Shared Reading to Build Vocabulary and Comprehension, (December 2010). <https://doi.org/10.2307/40962077>
- Khan, A., Egbue, O., Palkie, B., & Madden, J. (2017). Active learning: Engaging students to maximize learning in an online course. *Electronic Journal of E-Learning*, 15(2), 107–115.
- Kirby, J.R. (1984). *Cognitive strategies and educational performance*. London, UK: Academic Press.
- Kirby, J.R. (1988). Style, strategy, and skill in reading. In R. R. Schmeck (Eds.), *Learning Strategies and learning styles* (pp.229-274). New York, NY: Plenum Press.
- Kohlbacher, Florian. The Use of Qualitative Content Analysis in Case Study Research. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, [S.l.], v. 7, n. 1, jan. 2006. ISSN 1438-5627. Available at: <<http://www.qualitative-research.net/index.php/fqs/article/view/75/153>>. Date accessed: 06 dec. 2017. doi:<http://dx.doi.org/10.17169/fqs-7.1.75>



- Kop, R., & Hill, A. (2008). Connectivism : Learning theory of the future or vestige of the past ? *International Review of Research in Open and Distance Learning*, 9(3).
- Koszalka, T. A., & Ganesan, R. (2004). Designing online course: taxonomy to guide strategic use of features available in course management systems (CMS) in distance education. *Distance Education*, 25 (2), 243-256
- Kovalainen, A. (2008). Qualitative Methods in Business Research, 194–210. <http://doi.org/10.4135/9780857028044>
- Krashen, S.D. (1981) *Second Language Acquisition and Second Language Learning*. Pergamon Press Inc., Oxford.
- Kudo, Y. (1999). L2 vocabulary learning strategies (NFLFC Network #14) [PDF document]. Honolulu: University of Hawaii, Second Language teaching & Curriculum Center.
- Language Learning Strategies (LLSs) with Focus on Strategy Inventory for Language Learning (SILL) of Rebecca L. Oxford. *Journal of Language Teaching and Research*, 3(3), 500-507.
- Laufer, B. (1998). The development of passive and active vocabulary in a second language: Same or different? *Applied Linguistics*, 19, 255-271.
- Lavadenz, M. (1996). Authentic assessment: Towards empowerment of language minority students. *New Schools, New Communities: Voices for Educational change*, 12(5), 31-35
- Leacox, L. & Jackson, Carla, W. (2014). Spanish vocabulary-bridging technology-enhanced instruction for young English language learners' word learning. *Journal of Early Childhood Literacy*, 14(2), 175-197.
- Lee, P. (2014). Are Mobile Devices More Useful than Conventional Means as Tools for Learning Vocabulary? 2014 IEEE 8th International Symposium on Embedded Multicore/Manycore SoCs, 109-115.
- Li, J. (2010). The evolution of vocabulary learning strategies in a computer-mediated reading environment. *CALICO Journal*, 27(1), 118–146. <https://doi.org/10.11139/cj.27.1.118-146>
- Limberg, L., Alexandersson, M. (2012). Changing condition for Information use and learning in Swedish schools: A synthesis of Research. *HUMAN IT* 11.2 (2012):131-154. University of Boras.
- Linda, A., & Shah, P. M. (2020). Vocabulary Acquisition Style in the ESL Classroom: A Survey on the Use of Vocabulary Learning Strategies by the Primary 3

Learners. *Creative Education*, 11(10), 1973–1987.  
<https://doi.org/10.4236/ce.2020.1110144>

Liu, Pei-Lin. (2014). Using eye tracking to understand the responses of learners to vocabulary learning strategy instruction and use. *Computer Assisted Language Learning*, 27(4), 330-343.

Liz, P. (2006). From bricks to clicks: blurring classroom/cyber lines. *The School Administrator*, 63(7). Retrieved from  
<http://www.aasa.org/SchoolAdministratorArticle.aspx?id=7930>.

Liz, P. (2010). Blended Teaching & Learning. *The School Administrator*, 67(4)

López, J. (2016). Influence of vocabulary acquisition in the development of oral expression in English language. Didactic guide. Reading, Physical Education and Sports. Digital Journal, October 2016, 1.

Maasum, T. N. R. T. M., & Maarof, N. (2012). Empowering ESL Readers with Metacognitive Reading Strategies. *Procedia - Social and Behavioral Sciences*, 69(Icepsy), 1250–1258. <https://doi.org/10.1016/j.sbspro.2012.12.058>

Mackay, S., & Gary J. S. (2006). Blended Learning, Classroom and E-Learning. *Business Review*, Cambridge, 5:1

Magaly, L. (2010). From theory to practice for teachers of English learners. *The Catesol Journal*. 22(1), 18-47

Maki, R.H., Maki, W.S., Patterson, M., & Whittaker, P.D. (2000). Evaluation of a web-based.

Manzo, K. K. (2004). New NAEP reading framework would signal trend line's end. *Education Week*. 23(44). August 11, 6.

Markley, T. (2004). Defining the effective teacher; Current arguments in education. *Essays in Education*, 11(3), 1-14.

Martin, S. (1996). *Sociocultural factors affecting school culture for African American students: A case study*. Paper presented at the meeting of National Association for Multicultural education, St. Paul, MN. (ERIC Document Reproduction Service No. ED404380)

Martinez, Rebecca S., Harris, B., & McClain, Maryellen B. (2014). Practices that promote English reading for English learners. *Journal of Educational & Psychological Consultation*, 24(2), 128-148.

- Mashhadi, F., & Jamalifar, G. (2015). Second Language Vocabulary Learning Through Visual and Textual Representation. *Procedia - Social and Behavioral Sciences*, 192(April 2020), 298–307. <https://doi.org/10.1016/j.sbspro.2015.06.043>
- Mayer, R. E., & Johnson, C. (2008). Revising the redundancy principle in multimedia learning. *Journal of Educational Psychology*, 100, 380-386. Cognitive Theory of Multimedia Learning 28.
- Mayer, R.E., & Moreno, R. (1998). A split-attention effect in multimedia learning: Evidence for dual processing systems in working memory. *Journal of Educational Psychology*, 90, 312-320.
- Mayer, R.E., Steinhoff, K., Bower, G., & Mars, R. (1995). A generative theory of textbook design: Using annotated illustrations to foster meaningful learning of science text. *Educational Technology Research & Development*, 43, 31-43.
- McDonough, S. H. (1999). Learner strategies. *Language Teaching*, 32(1), 1–18.
- McCarthy, M. (1990). *Vocabulary*. Oxford University Press.
- Mehrpour, S. (2011). The Relationship between Depth and Breadth of Vocabulary Knowledge and Reading Comprehension among Iranian EFL Learners By *Journal of English Language Teaching and Learning*, 53(222), 97–126.
- Merriam, Sharan B. Merriam, Sharan B. (2009) *Qualitative research :a guide to design and implementation* San Francisco, Calif. : Jossey-Bass
- Methods, D. C., & Evaluation, P. (2008). Data Collection Methods for Program Evaluation: Observation. *Evaluation Brief*, (16), 1. Retrieved from <http://www.cdc.gov/healthyyouth/evaluation/pdf/brief16.pdf>
- Ministry of Education Malaysia (2015). *Malaysia education Blueprint 2015-2025 (Higher Education)*. Putrajaya. Malaysia.
- Ministry of Education Malaysia. (2011). *Malaysia Education Blueprint 2013-2025 (Preschool to post-secondary education)*. Putrajaya. Malaysia.
- Minter, E. (2003). Pros & Cons of Interviewing, 1–2. Retrieved from <http://www.uwex.edu/ces/tobaccoeval/pdf/ProConInt.pdf>
- Misbah, N. H., Mohamad, M., Yunus, M. M., & Ya'acob, A. (2017). Identifying the Factors Contributing to Students' Difficulties in the English Language Learning. *Creative Education*, 08(13), 1999–2008. <https://doi.org/10.4236/ce.2017.813136>

- Miyazoe, T. (2008). LMS-based EFL blended learning: blackboard vs. Moodle in K. Bradford Watts, T. Muller, & M. Swanson (Eds.), *JALT2007 Conference Proceedings*. Tokyo: JALT.
- Mizumoto, A. (2010). Exploring the art of vocabulary learning strategies: A closer look at Japanese EFL university students. Tokyo: Kinseido
- Mohammad Ta'amneh. (2014). Investigating vocabulary learning strategies used by pre-service teachers at Taibah University in learning English vocabulary Items. *International Interdisciplinary Journal of Education –March 2014*, 3(3)
- Moll, L. C. (1992). Funds of knowledge for teaching: Using a qualitative approach to connect homes and classrooms. *Theory into Practice*, 31(2), 132-141
- Morgan, D. (1998). Practical strategies for combining qualitative and quantitative methods: Applications to health research. *Qualitative Health Research* 8:362–76.
- Nasser, R., Cherif, M., & Romanowski, M. (2011). Factors that impact student usage of the learning management system in qatari schools. *International Review of Research in Open and Distance Learning*, 12(6), 39–62. <https://doi.org/10.19173/irrodl.v12i6.985>
- Nation, I. S. (2000). What Is In A Word? Vocabulary Development in Classroom in a Multilingual N.McWilliam. *Studies in Second Language Acquisition*, 22 (1): 126-127.
- Nation, I. S.P. (2001). *Learning Vocabulary in Another Language*. Cambridge: Cambridge University Press.
- Nation, P. (1990). *Teaching and learning vocabulary*. New York: Newbury House Harper Row.
- Nation, P. (2005). Teaching vocabulary. *Asian EFL Journal*. September, 7 (3), Article 4.
- National Institute for Literacy. (2001). "Put Reading First." Government Report.
- NCPI - Student Assessment Toolkit. (2003). *Stanford Institute for Higher Education Research*. Retrieved from [http://web.stanford.edu/group/ncpi/unspecified/student\\_assess\\_toolkit/conceptualModels.html](http://web.stanford.edu/group/ncpi/unspecified/student_assess_toolkit/conceptualModels.html)
- Neo, T. K., Neo, M., & Kwok, W. J. (2009). Engaging students in a multimedia cooperative learning environment: A Malaysian experience. In Same places, different spaces. Proceedings escalate Auckland 2009. <http://www.ascilite.org.au/conferences/auckland09/procs/neo.pdf>

- Neuhauser, C. (2002). Learning Style and Effectiveness of Online and Face-to-Face Instruction, *the American Journal of Distance Education*, 16(2). Retrieved from [http://www.eric.ed.gov/ERICWebPortal/search/detailmini.jsp?\\_nfpb=true&\\_&ERICExtSearch\\_SearchValue\\_0=EJ656148&ERICExtSearch\\_SearchType\\_0=no&accno=EJ656148](http://www.eric.ed.gov/ERICWebPortal/search/detailmini.jsp?_nfpb=true&_&ERICExtSearch_SearchValue_0=EJ656148&ERICExtSearch_SearchType_0=no&accno=EJ656148).
- Nieto, S. (1996). Affirming diversity: *The sociopolitical context of multicultural education* (2<sup>nd</sup> Ed.). White Plains, NY: Longman.
- Nijhawan, L., Janodia, M., Muddukrishna, B., Bhat, K., Bairy, K., Udupa, N., & Musmade, P. (2013). Informed consent: Issues and challenges. In *Journal of Advanced Pharmaceutical Technology and Research* (Vol. 4, Issue 3, pp. 134–140). <https://doi.org/10.4103/2231-4040.116779>
- Nisbet, J. & Watt. (1984). Case Study. In Cohen, L., Manion, L. & Morrison, K. (2011). *Research methods in education* (7th.ed.). London: Routledge.
- Nisbet, J. D., & Shucksmith, J. (1986). *Learning strategies*. Routledge education books. Boston, MA: Routledge & K. Paul.
- Noor, M. N and Amir, Z., (2009). Exploring the Vocabulary Learning Strategies of EFL learners. Retrieved Dec 3, 2015, exploring the Vocabulary Learning Strategies of EFL learners.
- Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic Analysis : Striving to Meet the Trustworthiness Criteria, 16, 1–13. <https://doi.org/10.1177/1609406917733847>
- O' Neil, H.F. (1978). *Learning strategies*. New York, NY: Academic Press.
- O'Malley, M., & O' Malley, M. J. (1996). *Authentic assessment for English language learners: Practical approaches for teachers*. New York: Addison-Wesley.
- O'Neil, H. F. & Spielberger, C.D. (Eds. (1979). *Cognitive and effective learning strategies*. New York, NY: Academic Press.
- Olsen, W. (2004). Triangulation in Social Research: Qualitative and Quantitative Methods Can Really Be Mixed. *Developments in Sociology*, 1–30. <http://doi.org/10.1002/jhbs.20022>
- O'Malley. , Chamot, A., Stewner-Manzanares., Kupper. Rocco P. Russo. (1985, Oct 27). Learning Strategies Used by Beginning And Intermediate ESL Students. *A Journal of research in language studies*. (35): 21- 46.

- Othman Lebar. (2017). Penyelidikan Kualitatif. Pengenalan Kepada Teori dan Metode. Edisi Kedua. Tanjung Malim, Perak: Universiti Pendidikan Sultan Idris
- Oxford, R. (2001). Language learning styles and strategies. *Teaching English as a Second or Foreign Language*, 41(January 2001), 359–366.
- Oxford, R. (2003). Language learning styles and strategies: an overview, *Learning Styles & Strategies/Oxford, GALA*
- Oxford, R. (2003). Toward A More Systematic Model of L2 Learner Autonomy. In Palfreyman, P., and Smith, R. (Eds.), *Learner Autonomy Across Cultures: Language Education Perspectives* (pp. 75-91). Great Britain: Palgrave Macmillan.
- Oxford, R. L., and Crookall, D. (1989). Research on Language Learning Strategies (pp.37).
- Oxford, R., & Burry-Stock, J. A. (1995). Assessing the use of language learning strategies worldwide with the ESL/EFL version of the strategy inventory for language learning (SILL).
- Oxford, R., & Crookall, D. (1989). Research on language learning strategies: Methods, findings, and instructional issues. *Modern Language Journal*, 73(4), 404– 419
- Patton, M. Q. (1980). *Evaluation methods*. Beverly Hills. London. Sage Publications
- Patton, M. Q. (1980). Qualitative Interviewing. *Qualitative Evaluation Methods*.
- Patton, M. Q. (2002). Qualitative research and evaluation methods. *Qualitative Inquiry*, 3rd, 598. <http://doi.org/10.2307/330063>
- Phillippi, J., & Lauderdale, J. (2018). A Guide to Field Notes for Qualitative Research: Context and Conversation. *Qualitative Health Research*, 28(3), 381–388. <https://doi.org/10.1177/1049732317697102>
- Pressley, M., & Levin, J.R. (1983a). *Cognitive strategy research: Educational applications*. New York, NY: Springer Verlag.
- Qian, D. (2002). Investigating the relationship between vocabulary knowledge and academic reading performance: An assessment perspective. *Language Learning*, 52, 513-536.
- Rahim, H.A.(2020). *Garis Panduan Pelaksanaan Penetapan Tahap Penguasaan Bahasa Inggeris Berdasarkan Piawaian Common European Framework of Reference For Languages Dalam Kalangan Pegawai Perkhidmatan Pendidikan Opsyen Pendidikan/Jabatan Pendidikan Negeri/Pejabat*

*Pendidikan Daerah Bawah Kementerian Pendidikan Malaysia.*(KPM.100.-  
1/3/3 JLD.2(50). Putrajaya. Ministry of Education

Rahma Al-Mahrooqi, Denman, C., Jamila Al-Siyabi, & Faisal Al-Maamari. (2015).  
Characteristics of a good EFL teacher. Sage Open.1-55. Doi:  
10.1177/2158244

Rahman, M. M., Arif, M. T., Luke, F., Letchumi, S., Nabila, F., Zien Ling, C. W.,  
Vui, E. S. C., & Baharin, N. (2020). Factors affecting internet use among  
university students in Sarawak, Malaysia: an empirical study. *International  
Journal Of Community Medicine And Public Health*, 7(3), 848.  
<https://doi.org/10.18203/2394-6040.ijcmph20200933>

Read, J. (2000). Assessing vocabulary. Cambridge: Cambridge University Press.

Rebuschat, P., & Williams, J. N. (2013). Implicit Learning in Second Language  
Acquisition, (1967). <https://doi.org/10.1002/9781405198431.wbeal0529>

*Recruit only qualified English Teachers.* (2013, September 12). The Star. p. 2

Reinking, D., & Rickman, S. S. (1990). The effects of computer-mediated texts on  
the vocabulary learning and comprehension of intermediate-grade readers.  
*Journal of Literacy Research*, 22(4), 395–411.  
<https://doi.org/10.1080/10862969009547720>

Research on the Effectiveness of Online Learning: A Compilation of Research on  
Online Learning. (2011).The Future State of Universities.

Rickard, W. (2010) The Efficacy (and Inevitability) of Online Learning in  
HigherEducation. Pearson. Retrieved from  
[www.pearsonlearningsolutions.com/onlinelearning/downloads/Online%20Le  
arning%20Whitepaper.pdf](http://www.pearsonlearningsolutions.com/onlinelearning/downloads/Online%20Learning%20Whitepaper.pdf).

Ried, J.M. (ed.) (2009). *Learning Styles in ESL/EFL Classroom*. Boston, MA: Heinle  
& Heinle.

Roschelle, J., & Teasley, S. D. (1995). The construction of shared knowledge in  
collaborative problem solving. In C. O' Malley (Ed.), *Computer supported  
collaborative learning* (pp. 69-97). Berlin: Springer-Verlag.

S. Zarrin and Z. Khan, "A study of vocabulary learning strategies among  
undergraduate learners of A.M.U.," US-China Foreign Language, vol. 12, no.  
1, pp. 75-82, January 2014.

Saarijärvi, M., & Bratt, E. L. (2021). When face-to-face interviews are not possible:  
Tips and tricks for video, telephone, online chat, and email interviews in

- qualitative research. *European Journal of Cardiovascular Nursing*, 20(4), 392–396. <https://doi.org/10.1093/eurjcn/zvab038>
- Salkind, N.J. (2009). *Exploring Research*. Person International Edition. System, 23(1), 1–23.
- Saunders, B., Sim, J., Kingstone, T., Baker, S., Waterfield, J., Bartlam, B., Burroughs, H., & Jinks, C. (2018). Saturation in qualitative research: exploring its conceptualization and operationalization. *Quality and Quantity*, 52(4), 1893–1907. <https://doi.org/10.1007/s11135-017-0574-8>
- Schmitt, N. (2000). *Vocabulary in language teaching*. Cambridge: Cambridge University Press.
- Schmitt, N., & McCarthy, M. (Eds.). (1997). *Vocabulary: Description, acquisition and pedagogy*. Cambridge: Cambridge University Press.
- Schmitt, R. (1995). Consciousness and foreign language learning: A tutorial on the role of attention and awareness in learning. In R. Schmitt (Ed). *Attention and awareness in foreign language learning* (pp.1-63) Honolulu: University of Hawaii at Manoa.
- Schultz, M. and A. Fisher. (1988). *Interacting in the Language Classroom. Games for All Reasons*. Massachusetts: Addison-Wesley Publishing Company.
- Şener, S. (2015). Vocabulary Learning Strategy Preferences and Vocabulary Size of Pre-service English Teachers. *Educational Research Association The International Journal of Educational Researchers*, 6(3), 15–33. <http://www.eab.org.tr/http://ijer.eab.org.tr>
- Senge, P. M. (1990). *The fifth discipline. The art and practice of the learning organization*, London: Random House.
- Seray Tanyer & Yusuf Ozturk. (2014). Pre-service English Teachers' Vocabulary Learning Strategy Use and Vocabulary Size: A Cross-sectional Evaluation. *Journal of Language Teaching and Research*, 5 (1), 37-45
- Seyed, H. F. (2012). *The Exploring Nature of Methodology in the Current Studies of English Language*
- Shanahan, T. (2013). A Beginner's Guide to Text Complexity. *Sheena Hervey Generation Ready*, 1–12.
- Shih, R.-C. (2011). Can Web 2.0 technology assist college students in learning English writing? Integrating Facebook and peer assessment with blended learning. In J. Waycott & J. Sheard (Eds.), *Assessing students' Web 2.0 activities in higher education*. Australasian Journal of Educational



- Technology, 27(Special issue, 5), 829-845. Retrieved from <http://www.ascilite.org.au/ajet/ajet27/shih.html>
- Short, D. (1994). Expanding middle school horizons Integrating language, culture, and social studies. *TESOL Quarterly*, 28(3), 581-608.
- Siddiqua, A., Oljira, D., Dastjerdi, H. V., Ingleses, E., Ramadani, F., Olsson, H., Assessment, A. N., The, O. F., Of, P., Teaching, V., Wulandari, A. Y. U., Of, F., Training, T., Nation, P., Elsheikh, O., & Elmahdi, H. (2010). A Study On 678'(176 Difficulties In Learning Vocabulary Rohmatillah Institut Agama Islam Negeri (IAIN) Raden Intan Lampung. 7(c), 89–94.
- Siemens, G. (2004). *Connectivism: A learning theory for the digital age*. Retrieved from <http://www.elearnspace.org/Articles/connectivism.html>
- Siemens, G. (2005). Connectivism: A learning theory for the digital age. *International Journal of Instructional Technology and Distance Learning*, 2(1). Retrieved from <http://www.itdl.org/>
- Singh, H. (2003). Building effective blended learning programs. *Educational Technology*, 43, 51-54.
- Singh, H., & Reed, C. (2001). A white paper: Achieving success with blended learning, retrieved January 13, 2008 from <http://www.centra.com/download/whitepapers/blendedlearning.pdf>.
- Sinhaneti, K., & Kyaw, E. K. (2012). A Study of the Role of Rote Learning in Vocabulary Learning Strategies of Burmese Students. *US-China Education Review A*, 12, 1548–6613.
- Smith, M.K. (2002) 'Jerome S. Bruner and the process of education', the encyclopedia of informal education
- Stacey, E. (2005). A constructivist framework for online collaborative learning: Adult learning and collaborative learning theory. In T. S. Roberts (Ed.), *Computer-172 supported collaborative learning in higher education* (pp. 140-161). Hershey, PA: Idea Group Publishing.
- Stacey, E., & Gerbic, P. (2009). Introduction to blended learning practices. *Effective Blended Learning Practices: Evidence-Based Perspectives in ICT-Facilitated Education*, 1–19. <https://doi.org/10.4018/978-1-60566-296-1.ch001>
- Stake, R.E. (1995). *The Art of the Case Study Research*. In Cohen, L., Manion, L. & Morrison, K. (2011). *Research methods in education* (7th.Ed.). London: Routledge.
- Sternberg, R. J. (1987). Most vocabulary is learned from context. In M. G. Mc Keown & M. E. Curtis (Eds.). *The nature of vocabulary acquisition* (pp. 89–106). Hillsdale, NJ: Erlbaum.

- Stockwell, G. (2010). Using mobile phones for vocabulary activities: Examining the effect of the platform. *Language Learning and Technology*, 14(2), 95–110.
- Subon, F. (2013). Vocabulary learning strategies employed by form 6 students. *International Journal of Scientific and Research Publications*, 3(6), 1-32
- Syrja, R. C. (2011). *How to Reach and Teach English Language Learners: Practical Strategies to Ensure Success* (Vol. 4). John Wiley & Sons.
- Takac, V. P. (2012). From Individual Differences To Common Patterns In The Use Of Vocabulary Learning Strategies. *The European Journal of Applied Linguistics and TEFL*, 1(1), 81+.  
<https://link.gale.com/apps/doc/A530476321/AONE?u=anon~3c7fabaa&sid=googleScholar&xid=5528eedc>
- Teachers College Record Volume 115 Number 3, 2013, p.1-4  
<http://www.tcrecord.org/library> ID Number: 16882, Date Accessed: 12/18/2014 9:16:05 AM. (Barbara Means)
- Thirumalai, M.S. (2002). Language in India. *Strength for today and bright hope for tomorrow* .2(8).
- Thorne, K. (2003). *Blended Learning: How to integrate online and traditional learning*, London: Kogan Page.
- Trakakis, A. (2011). “ENSPIRAL- Enhanced solution for project and interactive research-based applied learning. *IQ2*, March 2011.
- Trujillo Becerra, C. L., Alvarez Ayure, C. P., Zamudio Ordoñez, M. N., & Morales Bohórquez, G. (2015). Facilitating vocabulary learning through metacognitive strategy training and learning journals Promoción del aprendizaje de vocabulario a través del entrenamiento en estrategias metacognitivas y diarios de aprendizaje. *Colombian Applied Linguistics Journal*, 17(2), 246–259.
- Tse-Kian, K. (2003). Using multimedia in a constructivist learning environment in the Malaysian classroom. *Australasian Journal of Educational Technology*, 19(3), 293-310.
- Types of Data Collection and Research Protocols Data collection •. (n.d), 1–3.  
 Retrieved from  
<https://www.pdx.edu/studentaffairs/sites/www.pdx.edu.studentaffairs/files/qualprotocols.pdf>
- Ünal, K., & Yelken, T. Y. (2020). The Effects of Pre-service English Language Teachers’ Making Vocabulary Learning Materials in Web-Supported Situated

- Learning Environment on Their Vocabulary Learning. *English Language Teaching*, 13(4), 52. <https://doi.org/10.5539/elt.v13n4p52>.
- Valerie, J. J. (1999). A journal about journal writing as a qualitative research technique: History, issues, and online reflective writings. *Qualitative Inquiry*, 5(4), 505-524. Sage Publications, Inc.
- Van Lier, L. (1996). *Interaction in the language curriculum: Awareness, autonomy and authenticity*. London and New York: Longman
- Van, T.E. &Hundley, V. (2002). *The importance of pilot studies*. *Nurs Stand*, 16 (40):33-6.
- Vasileiou, K., Barnett, J., Thorpe, S., & Young, T. (2018). Characterising and justifying sample size sufficiency in interview-based studies: Systematic analysis of qualitative health research over a 15-year period. *BMC Medical Research Methodology*, 18(1), 1–18. <https://doi.org/10.1186/s12874-018-0594-7>
- Vygotsky, L. S. (1978). *Thought and language*. Cambridge MA: MIT Press.
- Wak, S. (2014). *Penundaan Pelaksanaan Ujian APTIS*. (KP(IPG)8282/600/25(35). Cyberjaya, Malaysia: Institute of Teacher Education Malaysia.
- Wenden, A. (1987a). Conceptual background and utility In: Wenden, A. & Rubin, J. (Eds.) *Learner Strategies in Language Learning*. Hemel Hempstead: Prentice Hall International.
- West, R.E., Waddoups, G., & Graham, C. R. (2007). Understanding the experiences of instructors as they adopt a course management system. *Educational Technology Research & development*, 55(1)1-25. Doi: 10.1007/s11423-006-9018-1
- Widiati, U., & Cahyono, B. Y. (2001). The teaching of EFL writing in the Indonesian context:the state of the Art. *Jurnal Ilmu Pendidikan*, 13(3), 139–150.
- Windschitl, M. (2002). Framing constructivism in practice as the negotiation of dilemmas: An analysis of the conceptual, pedagogical, cultural, and political challenges facing teachers. *Review of Educational Research*, 72, 131-175
- Woolfolk Hoy, A. (2013). *Education Psychology* (12<sup>th</sup> Ed.). Toronto, CA: Pearson.
- Xue, S.G. & Qing, M. (2011). *Vocabulary learning and teaching beliefs of pre-service and in-service teachers in Hong Kong and mainland China*. China.
- Yaacob, A., Shapii, A., Saad Alobaisy, A., Al-Rahmi, W. M., Al-Dheleai, Y. M., Yahaya, N., & Alamri, M. M. (2019). Vocabulary Learning Strategies

Through Secondary Students at Saudi School in Malaysia. *SAGE Open*, 9(1).  
<https://doi.org/10.1177/2158244019835935>

Yang, W., & Dai, W. (2011). Rote Memorization of Vocabulary and Vocabulary Development. *English Language Teaching*, 4(4), 61–64.  
<https://doi.org/10.5539/elt.v4n4p61>

Yazdi, M., & Kafipour, R. (2014). A qualitative study of vocabulary learning strategies applied by Iranian undergraduate EFL learners in real learning setting. *English Language Teaching*, 7(7), 1–7. <http://doi.org/10.5539/elt.v7n7p>

Yin, R. K. (2003). *Case Study Research; Design and Methods* (2nd Ed.) Thousand Oaks, CA: Sage.

Yin, R. K. (2009). *Case Study Research: Design and Methods. Essential guide to qualitative methods in organizational research* (Vol. 5).  
<http://doi.org/10.1097/FCH.0b013e31822dda9e>

Yin, R. K. (2009). *Case Study Research; Design and Methods* (4<sup>th</sup> Ed.) Thousand Oaks, CA: Sage.

Young-Davy, B. (2014). Explicit Vocabulary Instruction. *ORTESOL Journal*, 31, 26–32. <https://www.semanticscholar.org/paper/Explicit-Vocabulary-Instruction.-Young-Davy/614f289>

Zhou, Y., & Wei, M. (2018). Strategies in technology-enhanced language learning. *Studies in Second Language Learning and Teaching*, 8(2 Special Issue), 471–495. <https://doi.org/10.14746/ssllt.2018.8.2.13>

ZorAini, W. A., Chng, L.P. & Norziati, M. (2009). A study on learner readiness for mobile learning at Open University Malaysia. Malaysia.

## APPENDICES



# Appendix A

## Vocabulary Learning Questionnaire Used in Constructing Interview's Questions

(Revision of "Vocabulary Learning Questionnaire Version 3," Gu & Johnson, 1996, and revised by Mizumoto, 2008)

<b>A</b>	<b>Beliefs about vocabulary learning(Domain 1)</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1.	Once English is equivalents of all *Malay Language words have been remembered, English is learn					
2.	The best way to remember words is to memorize word lists or dictionaries					
3.	Remembering the meanings of a words is an end in itself					
4.	It is only necessary to remember one dictionary definition					
5.	The meanings of a considerable amount of words can be picked up through reading					
6.	One can expand his vocabulary simply through reading a lot.					
7.	Guessing words in context is one of the best ways to learn vocabulary					
8.	One should pay attention to set phrases and collocations that go with a word					
9.	Words studied should be put to use before they are finally learned					
10.	Using the language(listening, speaking, reading, and writing) is more important than memorizing words.					
11.	Words are learned after you use them.					
<b>B.</b>	<b>Metacognitive regulation(Domain 2)</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1.	I know which words are important for me to learn					
2.	I have a sense of which word I can guess and which word I can't					
3.	When I meet a new word or phrase, I have a clear sense of whether I need to remember					
4.	I look up words that I'm interested in.					
5.	I make a note of words that seem important to me					

6.	Besides textbooks, I look for other readings that fall under my interest.					
7.	I use various means to make clear vocabulary items that I am not quite clear of.					
8.	I wouldn't learn what my English teacher doesn't tell us to learn.					
9.	I only focus on things that are directly related to examinations.					
10.	I wouldn't care much about vocabulary items that my teacher does not explain in class.					
<b>C.</b>	<b>Guessing Strategies</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1.	I use alternative cues and try again if I fail to guess the meaning of a word					
2.	I make use of my common sense and knowledge of the world when guessing the meaning of a word					
3.	I check my guessed meaning against the wider context to see if it fits in.					
4.	I make use of my knowledge of the topic when guessing the meaning of a word.					
5.	I make use of the grammatical structure of a sentence when guessing of a new word.					
6.	I make use of the part of speech of a new word when guessing its meaning.					
7.	I analyze the word structure (prefix, root, and suffix) when guessing the meaning of a word.					
<b>D.</b>	<b>Dictionary Strategies</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1.	When I see an unfamiliar word again and again, I look it up.					
2.	When I want to confirm my guess about a word, I look it up.					
3.	When not knowing a word prevents me from understanding a whole sentence or even a whole paragraph, I look it up.					
4.	I look up words that are crucial to the understanding of the sentence or paragraph in which it appears.					
5.	I pay attention to the examples of use when I look up a word in a dictionary					
6.	I look for the phrases or set expressions that go with the word I look up.					
7.	When looking up a word in the dictionary, I read sentences illustrating various meanings of the word.					

8.	If the new word is inflected, I remove the inflections to recover the form to look up.(e.g. for created, look for 'create')					
9.	If the new word I try to look up seems to have a prefix or suffix, I will try the entry for the stem.					

10.	If the unknown appears to be an irregularly inflected form or a spelling variant, I will scan nearby entries.					
11.	If there are multiple senses or homographic entries, I use various information (e.g. part of speech, pronunciation, style, collocation, meaning, etc.) to reduce them by elimination.					
12.	I try to integrate dictionary definitions into the context where the unknown was met and arrive at a contextual meaning by adjusting for complementation and collocation, part of speech, and breadth of meaning.					

<b>E.</b>	<b>Note-Taking Strategies</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1.	I make a note of the meaning of a new word when I think the word I'm looking up is commonly used					
2.	I make a note when I think the word I'm looking up is relevant to my personal interest.					
3.	I put synonyms and antonyms together in my notebook.					
4.	I write down the English synonym(s) or explanations of the word I look up.					
5.	I write down both the *Malay language equivalent and the English synonyms of the word I look up.					
6.	I make a note when I see a useful expression or phrase.					
7.	I take down the collocations of the word I look up.					
8.	I take down grammatical information about a word when I look it up.					
9.	I note down examples showing the usages of the word I look up.					
<b>F.</b>	<b>Memory Strategies: Rehearsal</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1.	I make vocabulary lists of new words that I meet					
2.	I write the new words on one side of a card and their explanations on the other side.					



3.	I keep the vocabulary lists of new words that I make.					
4.	I go through my vocabulary list several times until I am sure that I do not have any words on that list that I still don't understand.					
5.	I make vocabulary cards and take them with me wherever I go.					
6.	I make regular and structured reviews of new words I have memorized					
7.	When I try to remember a word, I repeat it aloud to myself.					

8.	Repeating the sound of a new word to myself would be enough for me to remember the word.					
9.	When I try to remember a word, I write it repeatedly.					
10.	I memorize the spelling of a word letter by letter.					
11.	I write the new words and their *Malay Language equivalents repeatedly in order to remember them.					

<b>G.</b>	<b>Memory Strategies: Encoding</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1.	I remember a group of new words that share a similar part in spelling( e.g. require/acquire, deserve/reserve)					
2.	I remember together words that sound similar.					
3.	I remember together words that are spelled similarly.					
4.	I associate a group of words that share a similar part in spelling with a known word that looks or sounds similar to the shared part.					
5.	When I meet a new word, I search in my memory and see if I have any synonyms and antonyms in my vocabulary stock.					
6.	I attach physical sensations to certain words (e.g. stinking) when I try to remember them.					
7.	I act it out a word in order to remember it better.					
8.	I create a mental image of the new word to help me remember it.					
9.	I visualize the new word to help me remember it.					
10.	I analyze words in term of prefixes, stems, and suffixes.					

11.	I deliberately study word-formation rules in order to remember more words.					
12.	I memorize the commonly used stems and prefixes.					
13.	When I try to remember a word, I remember the sentence in which the word is used.					
14.	I remember the new word together with the context where the new word occurs.					
15.	I learn words better when I put them in contexts(e.g. phrases, sentences, etc.)					
<b>H.</b>	<b>Activation Strategies</b>					
1.	I make up my own sentences using the words I must learned					
2.	I try to use the newly learned words as much as possible in speech and writing					
3.	I try to use newly learned words in the real situations.					
4.	I try to use newly learned words in imaginary situations in my mind.					



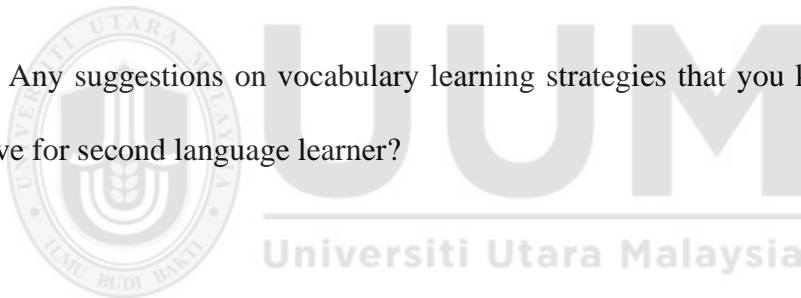
**UUM**  
Universiti Utara Malaysia

## **Appendix B**

### **Interviews questions for preliminary data**

Sample of Interview Questions for getting the preliminary data.

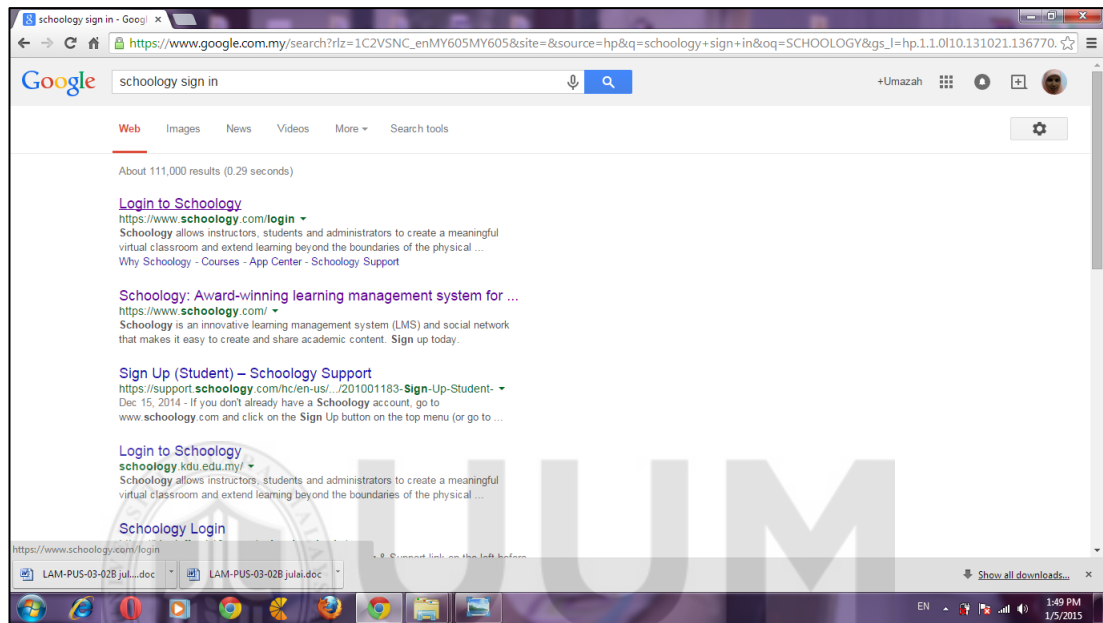
1. Tell me how do you acquire your vocabulary?
2. Do you have any strategies to retrieve the vocabulary?
3. How does your vocabulary that you have learned help you in your studies?
4. How far do you think vocabulary assists you in your teaching in future?
5. Any suggestions on vocabulary learning strategies that you know which are effective for second language learner?



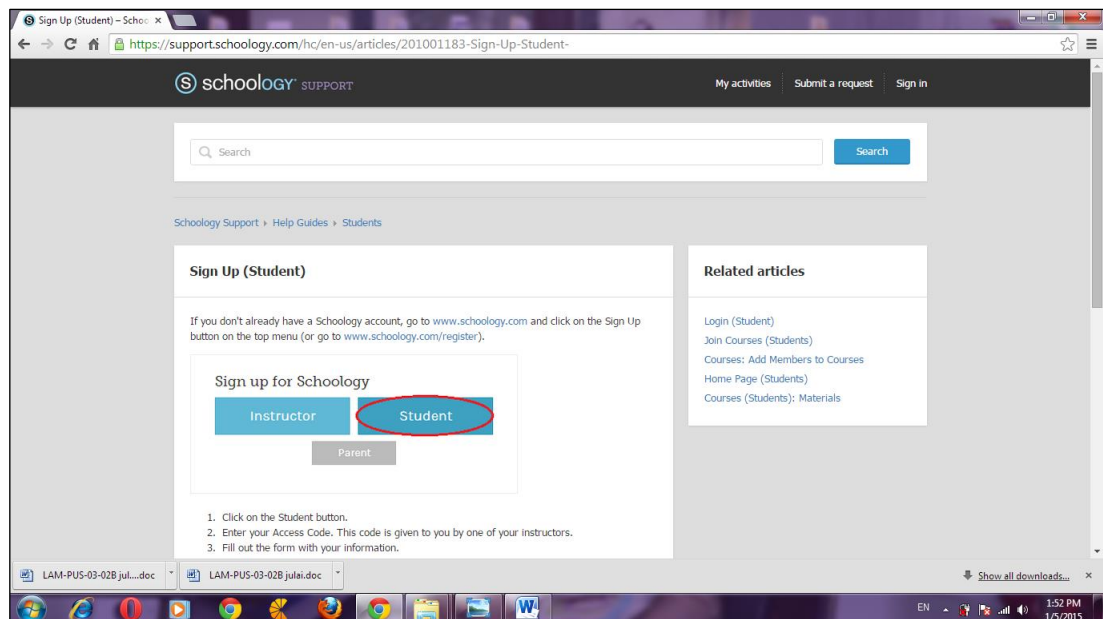
## Appendix C

### Sample of *Schoology* Module

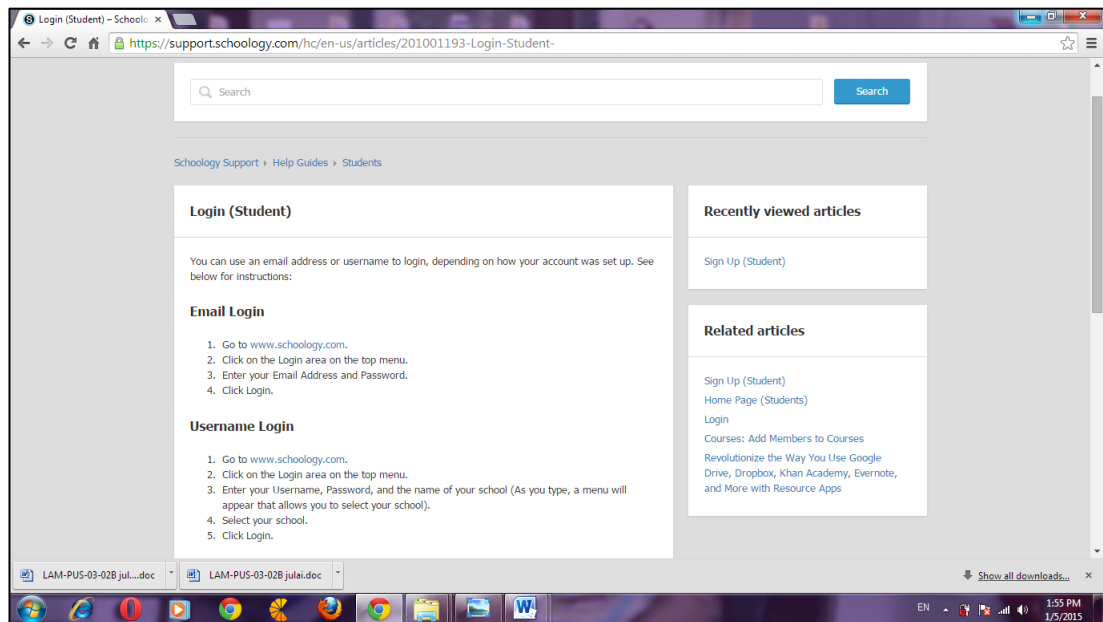
#### STEP 1: LOGIN TO *SCHOOLGY*



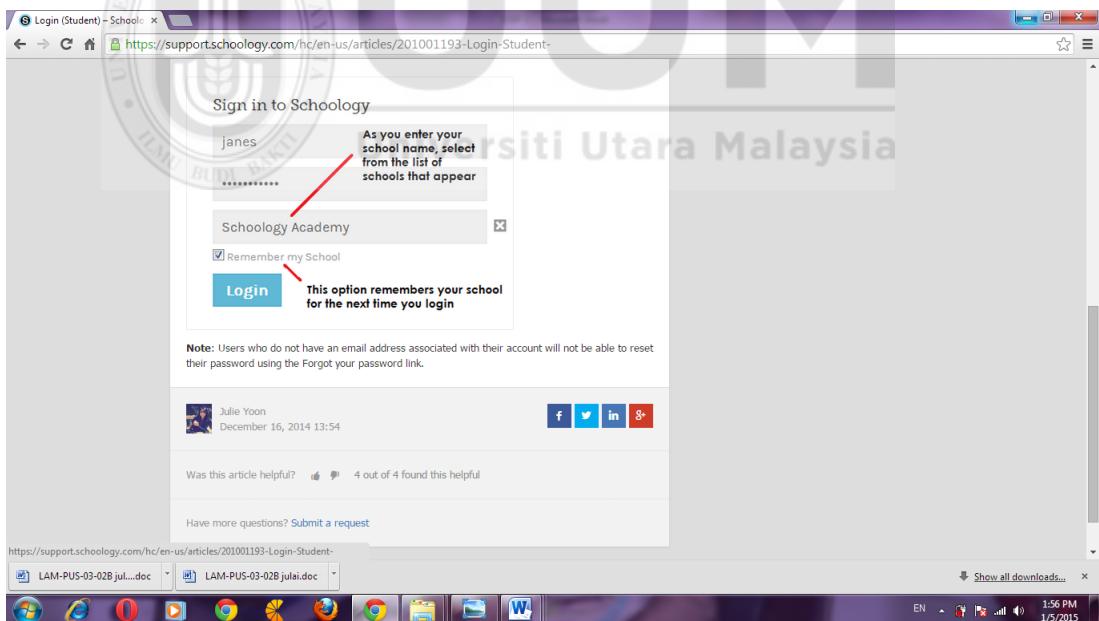
#### STEP 2: SIGN UP (STUDENT)



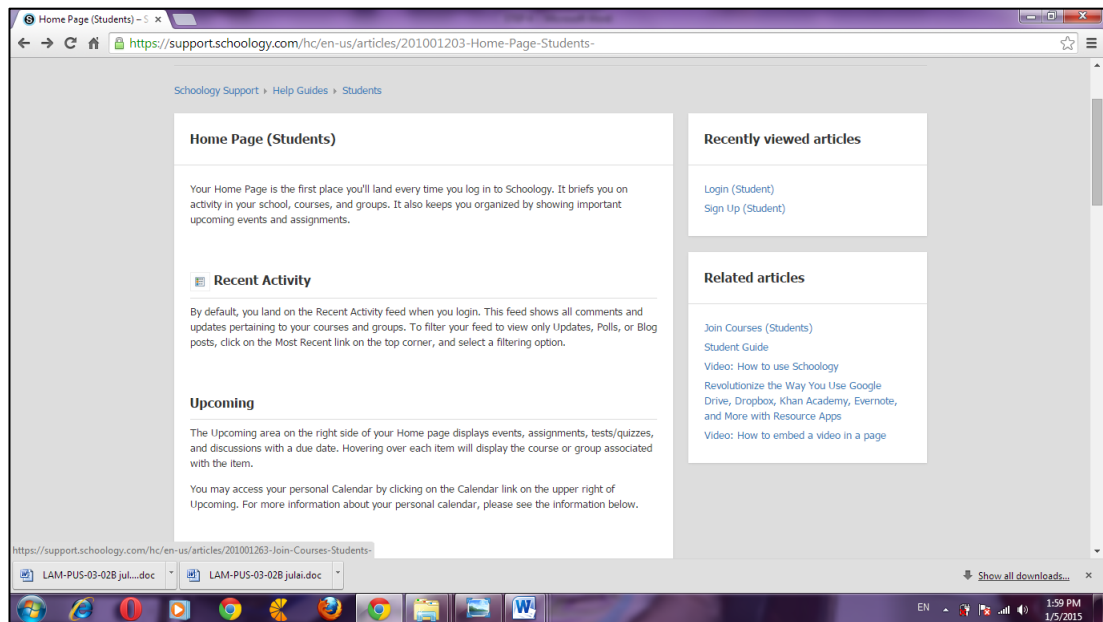
### STEP 3: LOGIN FOR STUDENT



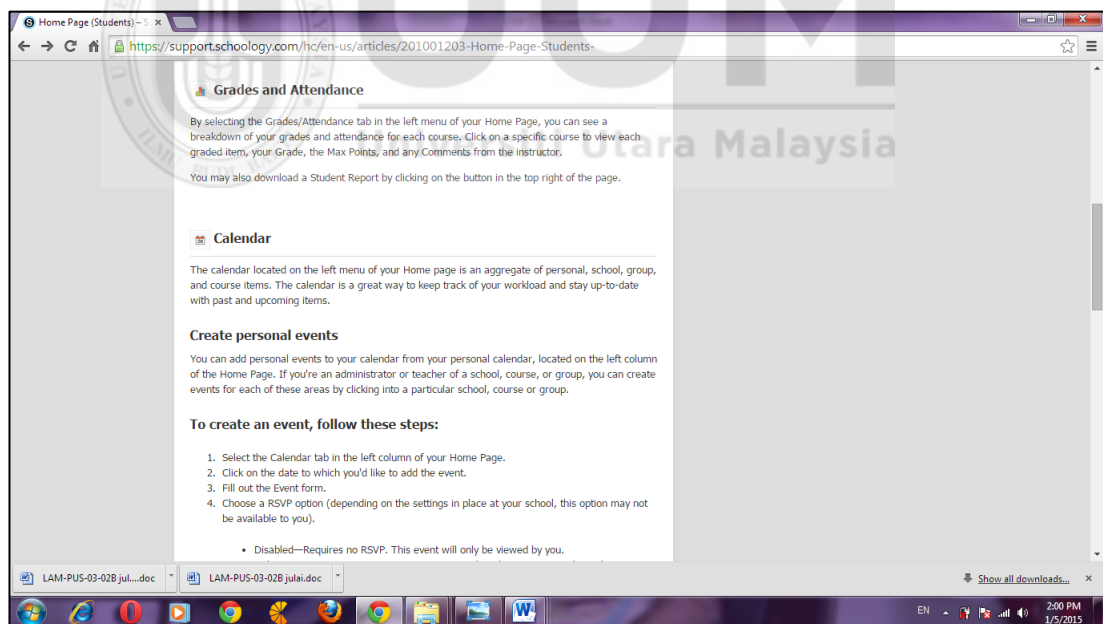
### STEP 4: SIGN IN TO *SCHOOLGY*



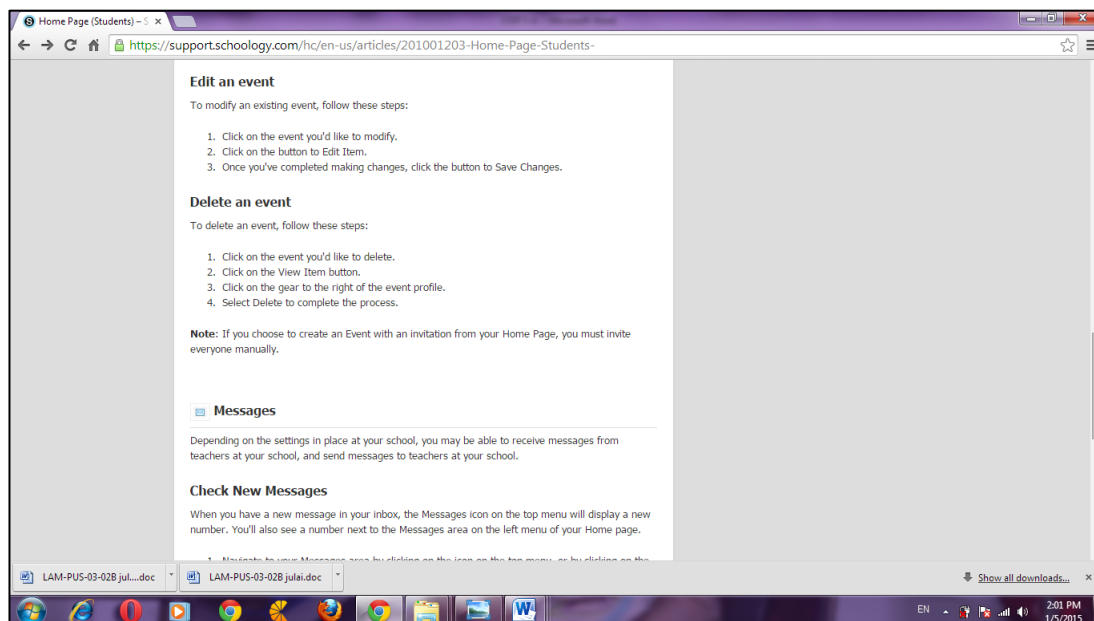
## STEP 5A: HOME PAGE STUDENT



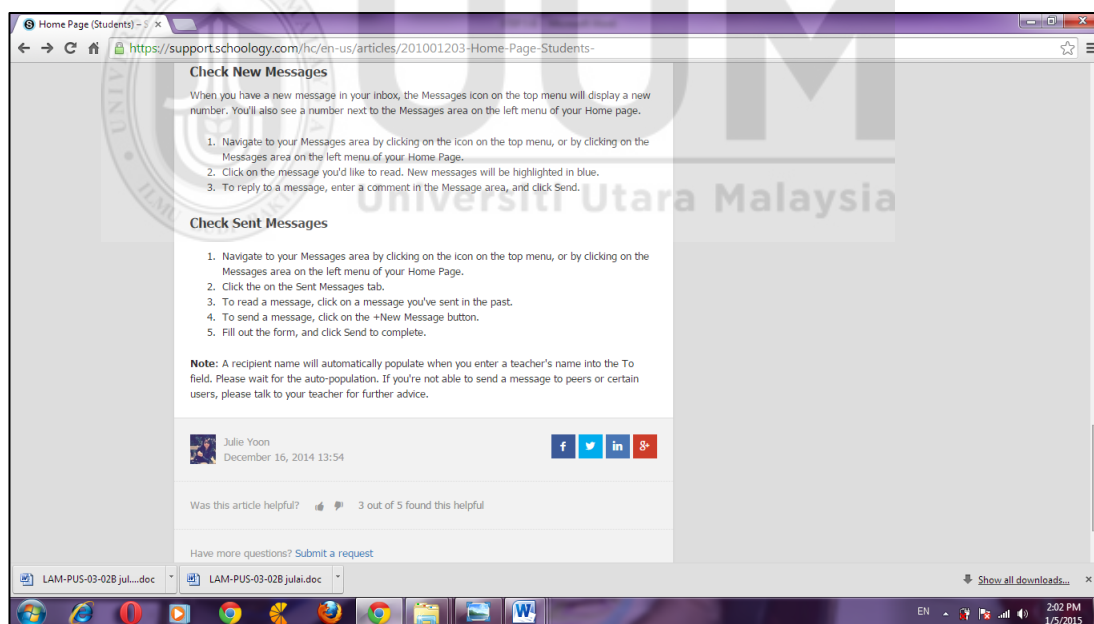
## STEP 5B: HOME PAGE STUDENT



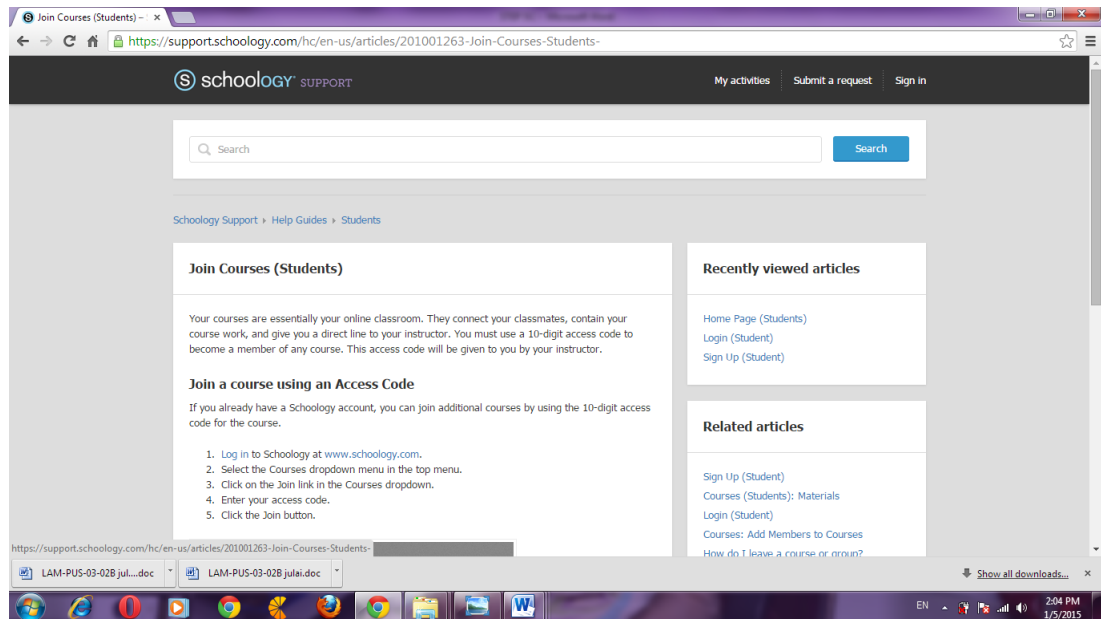
## STEP 5C: HOME PAGE STUDENT



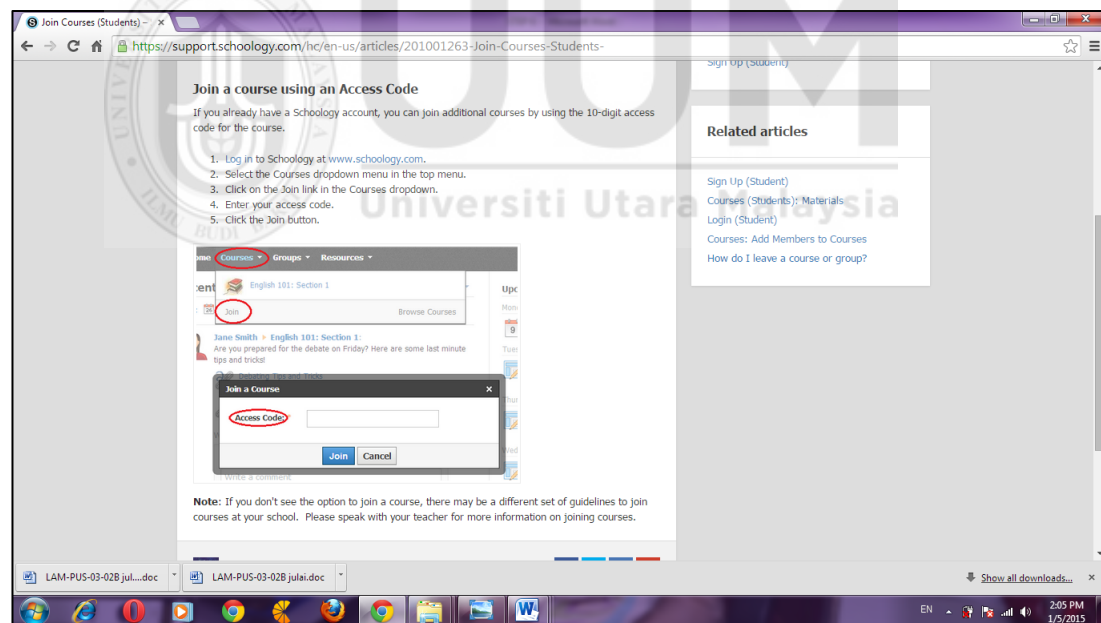
## STEP 5D: HOME PAGE STUDENT



## STEP 6A: JOIN COURSES

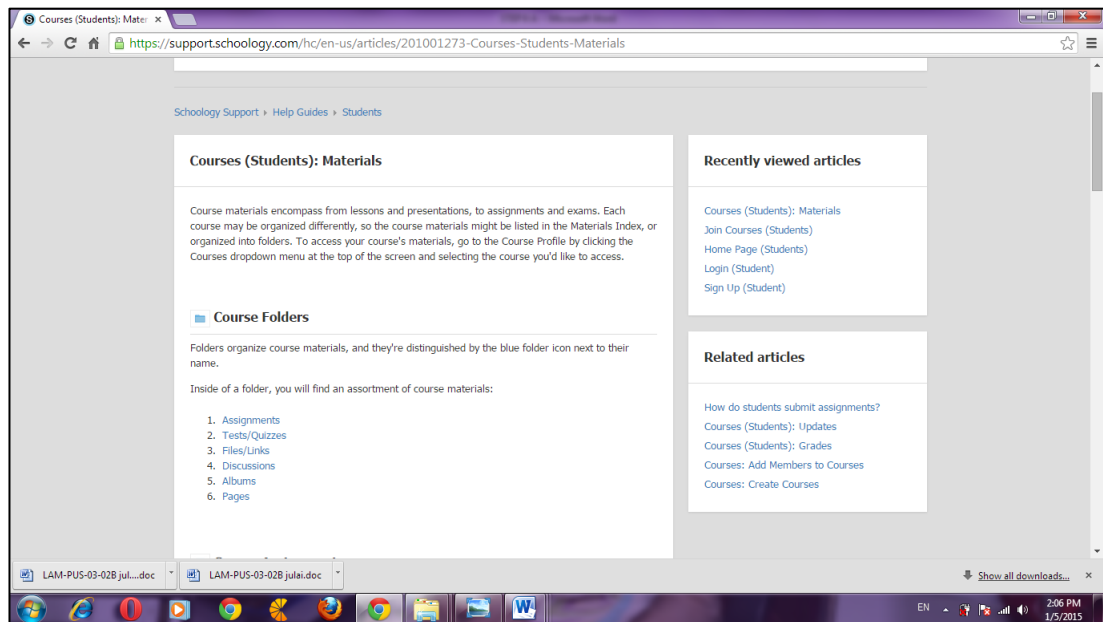


## STEP 6B: JOIN COURSES

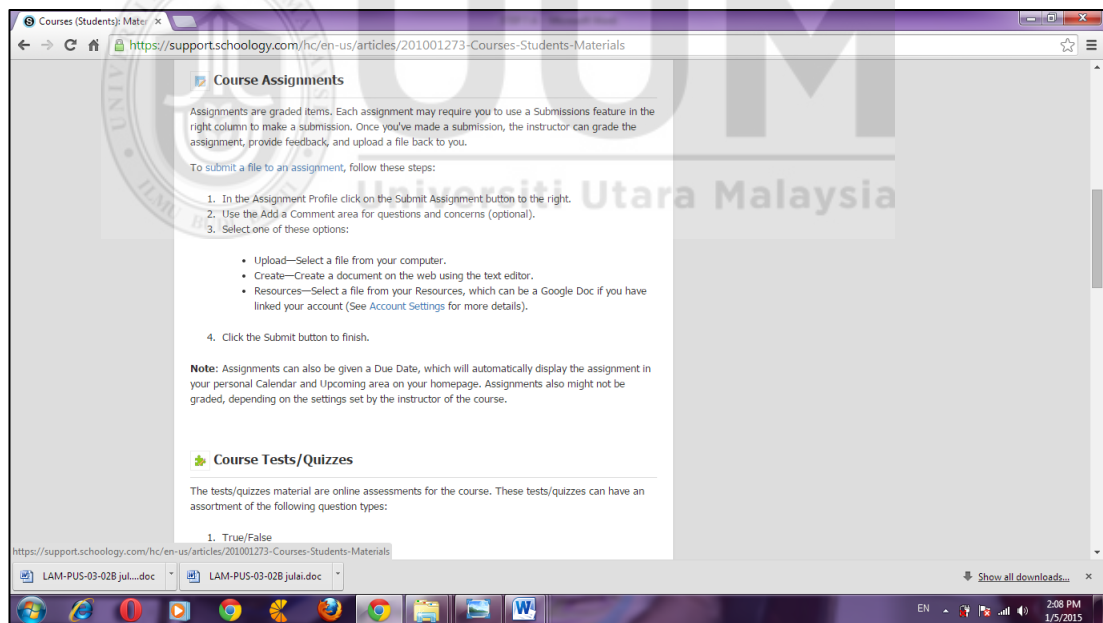




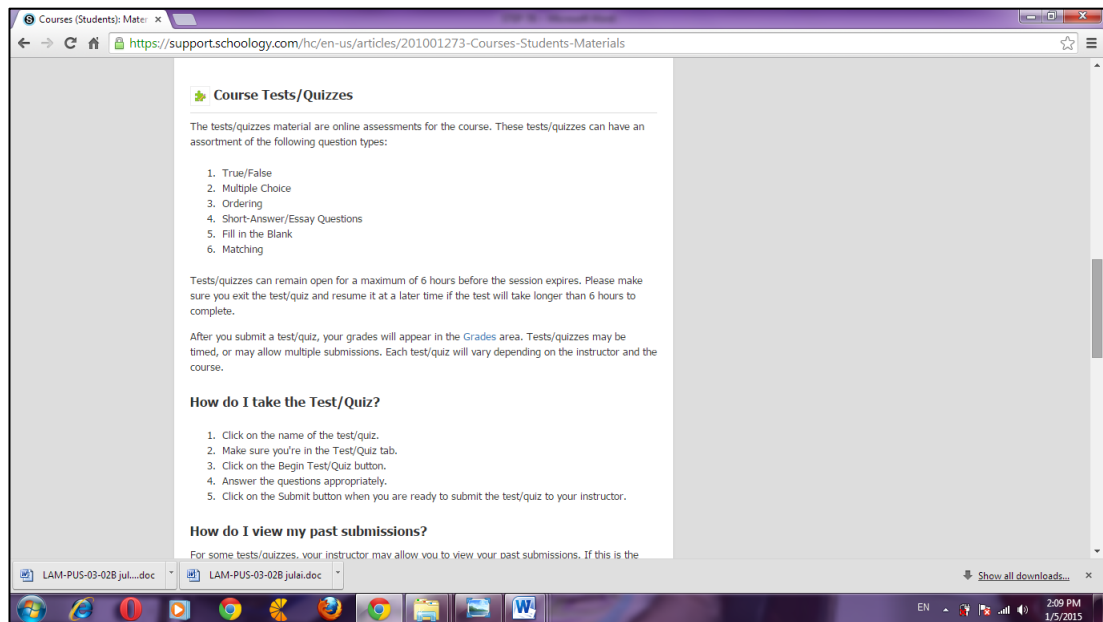
## STEP 7: COURSES /MATERIALS



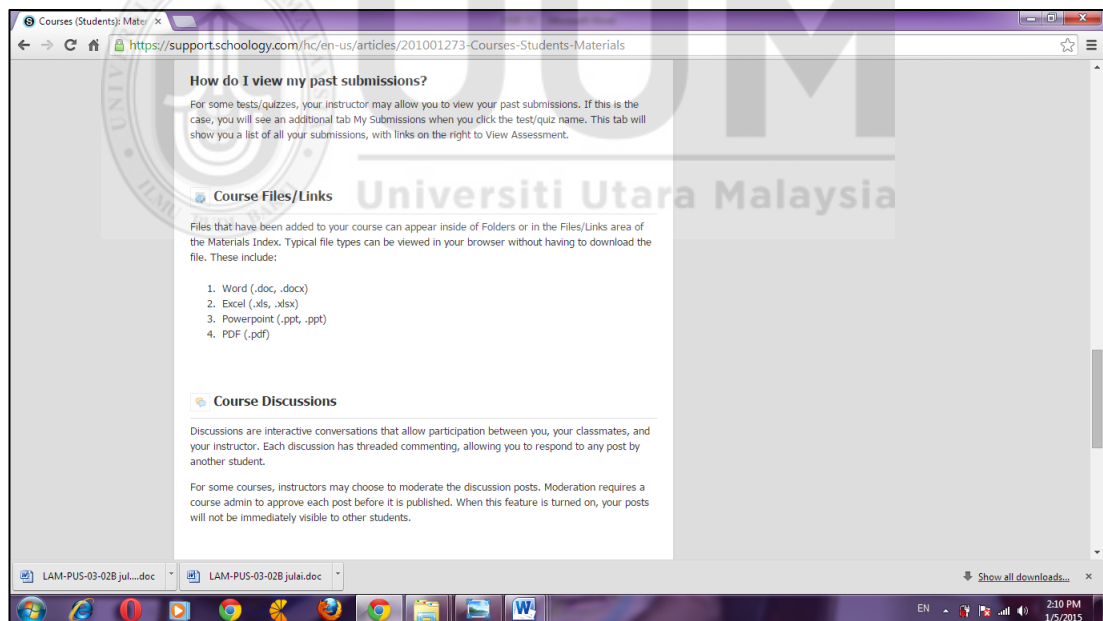
## STEP 7B: COURSES/ MATERIALS



## STEP 7C: COURSES/MATERIALS



## STEP 7D: COURSES/MATERIALS



## **Appendix D**

### **Sample of Consent Form**

I \_\_\_\_\_ agree to participate in Madam  
Umazah Omar's PhD thesis research.

I understand the purpose and the nature of the study. I have read the information sheet about the research and the researcher has explained to me.

I understand my participation is voluntary. I am aware that I can withdraw from the study at any time of the study. I allow my interviews to be tape- recorded. I understand the researcher will delete the tapes once the transcripts are completed.

I understand that the researcher will disguise my identity using the nickname.

I understand that extracts from my interview may be quoted in the thesis and any subsequent publications.

Signature :

Name :

Date :

## **Appendix E**

### **Interview Questions**

#### **Phase 1**

The purpose of Interview 1:

- Participant demographic Information
- Types of VLS

---

#### **Instrument 1: Interview 1 Online Structured**

---

6. How do I acquire my vocabulary in my second language?
  7. Do I have any strategies to retrieve the vocabulary?
  8. How does the vocabulary that I have learned, help me in my studies?
  9. How far do I think vocabulary assists me in my teaching in the future?
  10. Any suggestions on vocabulary learning strategies that you know are effective for a second language learner?
- 

#### **Phase 2**

The purpose of Interview 2:

- Types of VLS
- Online LMS

---

#### **Interview 2: Online Structured**

---

1. Did this platform give any impact on your acquisition of the content of the subject? If yes, how?
  2. How, did the activities conducted in the classroom contribute to your understanding of the content subject?
  3. How did the notes help you in improving your understanding of the content of the subject?
  4. Did the presentations of the topics done by your friends give you an idea about the topics? If yes, How?
  5. Did the contents of the subject learned helped you in applying them in your teaching in the future? If yes, how will it help you as a future teacher?
  6. Do you think this platform helps you a lot in sharing, collaborating and discussing the content subject? How?
- 

### **Phase 3**

The purpose of Interview 3:

Semi-structured interview on VLSS, LMS, issues and problems using LMS

<b>Face to face Interview Questions</b>
---

1. In your L2 vocabulary learning process, do you prefer to use learning strategies to learn new words or just memorizing new words without any learning strategies? Why?
2. How important do you think of L2 vocabulary learning strategies in the learning process?
3. Who is helping you in learning L2 vocabulary at home? Any technology used?
4. What do you think about *Schoology*, a learning management system, as one of your vocabulary learning strategies in learning L2?
5. Do you face any problems or difficulties in using *Schoology* in learning and acquiring the vocabulary?



**UUM**  
Universiti Utara Malaysia

## Appendix F

### Alignment of the Research

The alignment of the research objectives(RO), research questions(RQ) and research contributions(RC)

Research Objectives	Research Question	Research Contribution
1.To examine the types of vocabulary learning strategies used by the TESL trainee teachers	What are the types of the vocabulary learning strategies used by the TESL trainee teachers in the Institute of Teacher Education (ITE)?	The result of the study would add to body of knowledge in the field of innovative and creative vocabulary learning using <i>Schoology</i> concept. This study would also create the awareness for the teacher trainers to give wide exposure to use technology in collaborating and sharing the learning materials intensively and culturally.
2. To explore the effectiveness of <i>Schoology</i> learning management system to improve vocabulary learning strategies among the TESL trainee teachers.	2.How does the online learning management system help the TESL trainee teachers in enhancing their vocabulary learning strategies?	The study contributes to ongoing learning and teaching process which can be implemented not only by the English Language teacher trainers but also other courses offered by the institute.
3. To investigate the issues or challenges faced by the TESL trainee teachers in using the <i>Schoology</i> learning management system.	3. What are the issues and challenges faced by the TESL trainee teachers in using the <i>Schoology</i> learning management system?	The study aims to expose the importance of using learning management system widely in the institute and instill the trainee teachers' interest in using technology not only in the institute but also practicing them in schools in future.

## Appendix G

### Sample of Field Notes

Taking Field Notes – Example Observation Protocol (Creswell, 2007)

<b>LENGTH OF THE ACTIVITY:</b>	
<b>No. of observation</b>	1
<b>Date</b>	1 Jan 2018
<b>Time</b>	8.00-10.00 am
<b>Platform</b>	Schoology
<b>Interaction</b>	1
<b>DESCRIPTIVE NOTES</b>	<b>REFLECTIVE NOTES</b>
<ol style="list-style-type: none"> <li>1. Start 1<sup>st</sup> interaction for PISMP TESL Semester 6 for Semester Jan May 2018. This is my 2<sup>nd</sup> time teaching the class and most of the students knew me well.</li> <li>2. Informing them that I will conduct my research on online learning using Schoology. That was their first time using the platform. I guide them on how to use the access code and get them to join the class that I had created. I named the class as PISMP TESL SEMESTER 6 JAN MAY 2018. Most of the students were able to join the class using the access code given.</li> </ol>	<p>Everyone seemed to be ready for the class and it showed that I was able to have good commitment with them especially in teaching them for this semester and in conducting the research too.</p> <p>By telling them about the difficulties of learning the course, I hope that they will pay attention in the class. This is because in previous semester, few students scored low mark in their final examination</p> <p>Most of the students were fast learners and they were able to join the platform using the access code even three students had some email problems and they had to create new email.</p>



<p>3. Most of them knew that I am doing my PhD study and it seemed that they agreed that they were going to give full cooperation in the study.</p> <p>4. I started the 1<sup>st</sup> interaction with the introduction of the topic and the summary of the course in detailed and Introduction to Second Language Acquisition</p> <p>5. They were informed that the course was very complex because they have to learn about theories and second language acquisition. I told them that they needed to memory some of the terms and words used in the context of second language acquisition</p> <p>6. Moreover, today was their first class for this semester.</p> <p>7. I assigned a task to obtain their first reflection of their second language acquisition.</p> <p><i>Task 1: My first reflection on my second language acquisition</i></p> <p>8. We ended the class at 10.00 am and I asked the students to send their reflections before the next interaction.</p>	<p>Most of the students responded the task well and they started to write their reflection freely using their own template. Some wrote using Word template and uploaded from their own file. Some typed their reflection directly in the Schoology.</p> <p>Few students commented their friends' reflections. It shows that they started reading other's reflection in getting ideas and ways how their friends had written the reflections.</p> <p>Some students spent the given hour after the lecture to write the reflections and submitted through Schoology. Some submitted after the class. I gave them freedom to write the reflection according their interest and did not force them to write and submit urgently.</p> <p>I want them to refresh their mind and recall carefully on how they acquired their second language.</p> <p>Once I got the postings, I copied and saved them in different folder.</p>
---	---

## Appendix H

### Samples of Member Checking Form

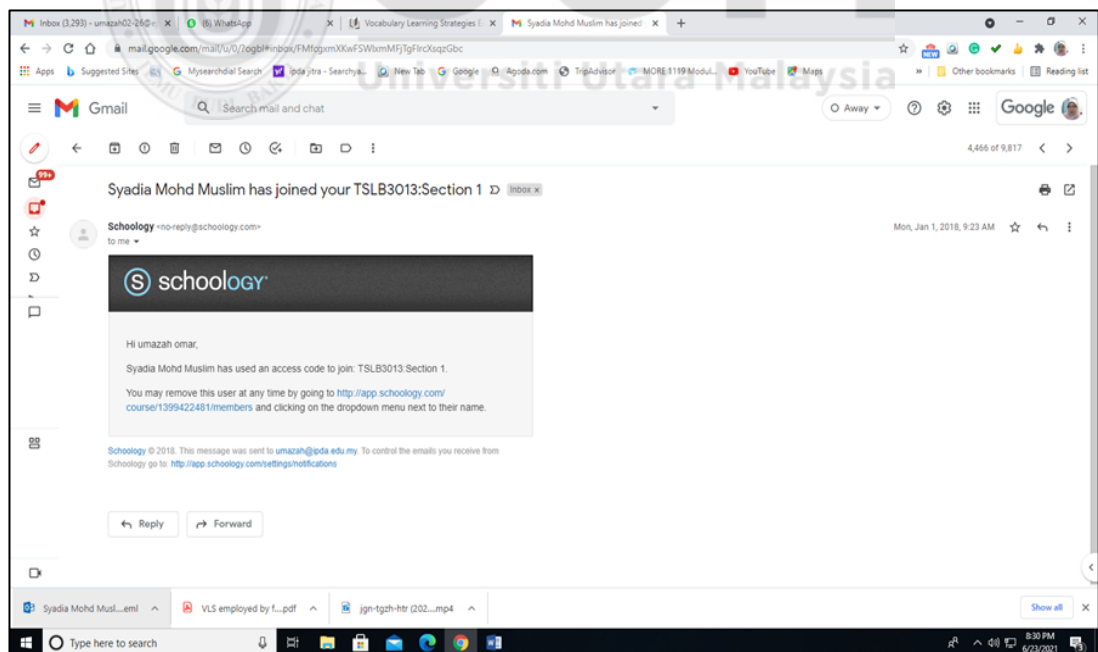
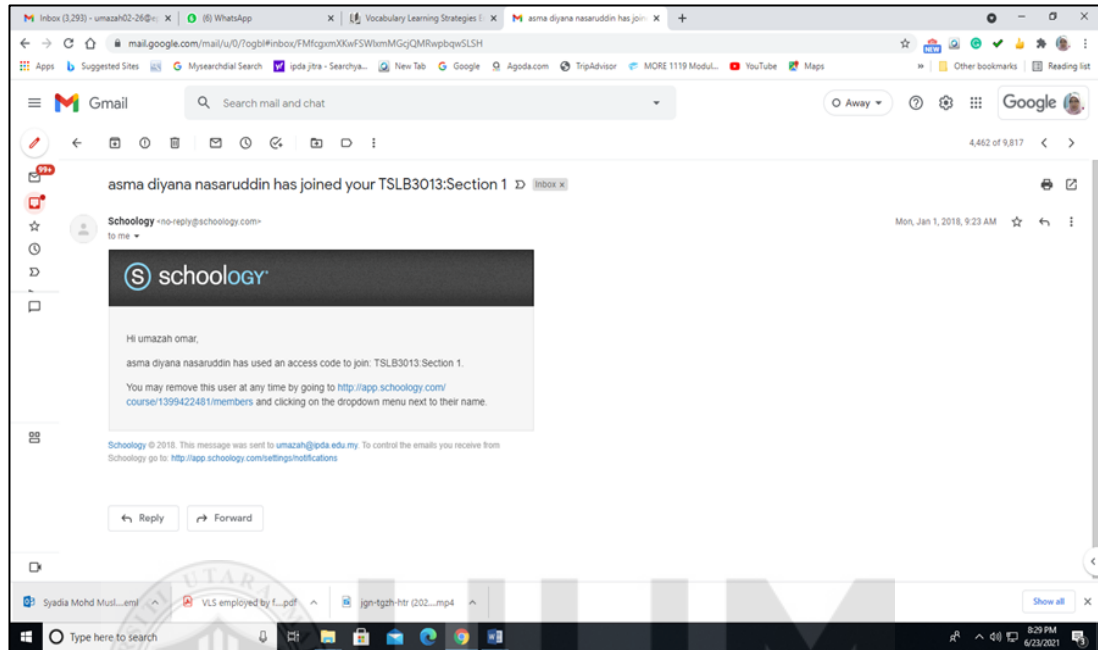
MEMBER CHECKING FORM		
METHOD OF MEMBER CHECKING:		
Returning transcribed verbatim transcripts( Carlson,2010; Forbat & Henderson, 2005)		
Name of research participant:	Nurul Shazwani bt. Mohd Rosdi	
Data	Agree or disagree with the verbatim transcriptions /any addition data	Comment
1. Interview verbatim transcripts	Agree	Personally, learning English should be fun and enjoyable and to do that, a learner must know his or her learning style to learn effectively.
2. Reflection 1	Agree	Practicing in a real conversation should help a learner to improvise the language skill.
3. Reflection 2	Agree	Imitation is one of the best way for a beginner to learn a language.
4. Reflection 3	Agree	A teacher should know age matters when learning a language.
5. Reflection 4	Agree	Childhood is a critical period for people to learn a language or more than one language.
6. Reflection 5	Agree	Memory plays an important part in acquiring language.
7. Reflection 6	Agree	Most learners face problems in acquiring languages because of lack of vocabulary.
8. Reflection 7	Agree	Finding "gap" in acquiring language need the help of a teacher. learner can also discover it themselves.
9. Reflection 8	Agree	Teacher needs to understand a student's needs to create suitable lesson plan and provide the best environment.
Overall comment about the data: I agree with all the data as the CEFR level shown reflect the language skill of mine.		
Name: <i>Nurul Shazwani Binti Mohd Rosdi</i>		Date:

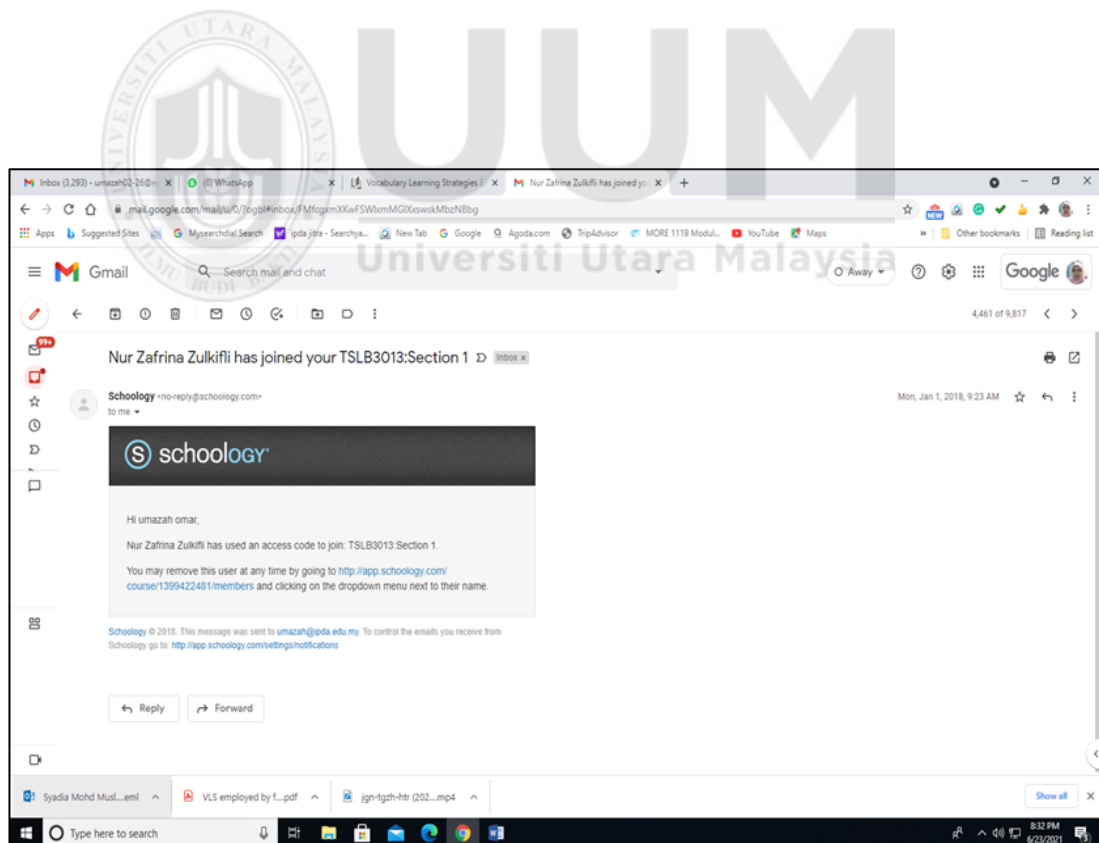
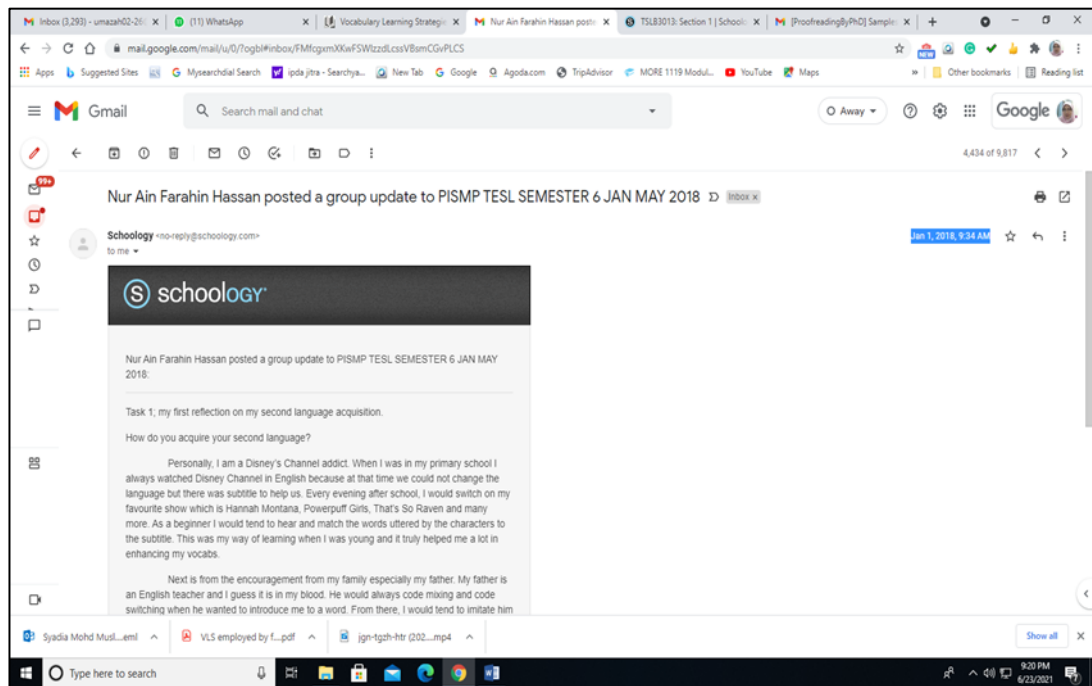
MEMBER CHECKING FORM		
METHOD OF MEMBER CHECKING:		
Returning transcribed verbatim transcripts( Carlson,2010; Forbat & Henderson, 2005)		
Name of research participant:	Syadia bt. Mohd Muslim	
Data	Agree or disagree with the verbatim transcriptions /any addition data	Comment
1. Interview verbatim transcripts	AGREE	TRANSCRIPTION WAS DONE NICELY.
2. Reflection 1	AGREE	Language is important to me since I really like them. There were many reasons why I started learning them.
3. Reflection 2	AGREE	How we acquire the language did affect on how we teach our pupils.
4. Reflection 3	AGREE	There are a lot of theories that supports on how pupils acquire the language. So choose wisely on the one that is suitable to our kids.
5. Reflection 4	AGREE	We do need to consider our pupils' level for us to help them to acquire the language.
6. Reflection 5	AGREE	—
7. Reflection 6	AGREE	Choosing our materials are as important as what we teach our kids to produce.
8. Reflection 7	AGREE	There are many methods that are useful for kids to have fun when learning the language.
9. Reflection 8	AGREE	Reflecting ourselves is important so we will know what to improve in our upcoming future.
Overall comment about the data:		
All the data was compiled in an easy way for me to check. The transcription of the interview was also done in a very precise way.		

MEMBER CHECKING FORM		
METHOD OF MEMBER CHECKING:		
Returning transcribed verbatim transcripts( Carlson,2010; Forbat & Henderson, 2005)		
Name of research participant:	Nur Ain Farahin bt. Hassan	
Data	Agree or disagree with the verbatim transcriptions /any addition data	Comment
1. Interview verbatim transcripts	agree	The content of the interview is exactly what I had told my interviewer. It is what based on my experience throughout my life in acquiring the language. Different people have different strategies, and those are mine strategies. What is best for me.
2. Reflection 1	agree	My reflection was based on the activity for that day. It was what I had in my mind.
3. Reflection 2	agree	I can clearly see that my reflection writing progress from the first one. Perhaps, I have so much in that want to talk about the class.
4. Reflection 3	agree	This reflection tallied with my interview which I talked about how I acquire my second language.
5. Reflection 4	agree	Based on this reflection what I can conclude is that I was trying to explain that with practices we can develop our language acquisition.
6. Reflection 5	agree	By looking at the reflection I can clearly noticed my reflection writing getting more complex and the used of words that I had never used before.
7. Reflection 6	agree	Again I can see that the progression of the writing and the used of language.
8. Reflection 7	agree	It is fine. I guess I was not serious enough in writing this reflection.
9. Reflection 8	agree	This reflection's result I guess it all because of the quotation that I had quoted.
Overall comment about the data: A great presentation of data. Clear presentation of data and it is easy to understand		
Name: NUR AIN FARAHIN BINTI HASSAN		Date:

# Appendix I

## Samples of Research Participants' Online Postings in Schoology





## **Appendix J**

### **Samples of Online Reflection Writings and CEFR Text Analyzer Analysis**

#### **AIN FARAHIN HASSAN: REFLECTION 1**

Task 1: my first reflection on my second language acquisition.

Mon Jan 1, 2018 at 9:34 am

How do you acquire your second language?

Personally, I am a Disney's Channel addict. When I was in my primary school I always watched Disney Channel in English because at that time we could not change the language but there was subtitle to help us. Every evening after school, I would switch on my favourite show which is Hannah Montana, Power puff Girls, That's So Raven and many more. As a beginner I would tend to hear and match the words uttered by the characters to the subtitle. This was my way of learning when I was young and it truly helped me a lot in enhancing my vocabs.

Next is from the encouragement from my family especially my father. My father is an English teacher and I guess it is in my blood. He would always code mixing and code switching when he wanted to introduce me to a word. From there, I would tend to imitate him and used it in my every day speech. Besides that, he also bought me English books for example Rapunzel and many more. He would read it to me during my bedtime and I would always ask him silly questions because I was a curious type of person.

In conclusion, that is how I managed to develop my English Language. It is definitely one of my favourite subjects in school.

Learning Manag x PISMP TESL SEL x Schoology x Sign Up to Crea x Text Analyzer - F x Portal Rasmi SPA x Where PD Com x Login x DATA PENGANT x + -

Not secure | roadtogrammar.com/textanalysis/

Apps Suggested Sites Mysearchdial Search lpa jtra - Searchya... New Tab Google Agoda.com TripAdvisor MORE 1119 Modul... Other bookmarks

# TEXT ANALYZER

BY ROADTOGRAMMAR.COM

Ad covered content Not interested in this ad Seen this ad multiple times Ad was inappropriate

A2	B1	B2	C1	C2
CEFR Level: CEF Level B2 (Intermediate) IELTS Level 5-6				

**Suggested vocabulary:**

addict  
disney  
subtitle  
raven  
beginner  
tend  
enhancing  
vocabs

number of words: 220  
average sentence length: 14  
average word length: 4.2  
word complexity: 1514

DEFINITIONS  
NEW TEXT  
WORD STATS

Type here to search

3:17 PM 12/10/2019

## Complexity (A = simple, E = complex)

A =



B =



C =



D =



E =



Personally,

I

am

a

Disney's

Channel

addict.

When

I

was

in

my



primary

school

I

always

watched

Disney

Channel

in

English

because

at

that

time

we

could

not

change

the

language

but

there

was

subtitle

to

help

us.

Every

evening

after

school,

I

would



switch

on

my

favourite

show

which

is

Hannah

Montana,

Powerpuff

Girls,

That's

So

Raven

and

many

more.

As

a

beginner

I

would

tend

to

hear

and

match

the

words

uttered

by

the



characters

to

the

subtitle.

This

was

my

way

of

learning

when

I

was

young

and

it

truly

helped

me

a

lot

in

enhancing

my

vocabs.

/

/

Next

is

from

the

encouragement

from  
my  
family  
especially  
my  
father.  
My  
father  
is  
an

English

teacher

and

I

guess

it

is

in

my

blood.

He

would

always

code

mixing

and

code

switching

when

he

wanted

to



introduce

me

to

a

word.

From

there,

I

would

tend

to

imitate

him

and

used

it

in

my

every

day

speech.

Besides

that,

he

also

bought

me

English

books

for

example

Rapunzel



and  
many  
more.  
He  
would  
read  
it  
to  
me  
during  
my  
bedtime

and  
I  
would  
always  
ask  
him

silly  
questions

because  
I  
was  
a

curious  
type  
of  
person.

/

/

In  
conclusion,

that  
is  
how  
I  
managed  
to  
develop  
my  
English  
Language.

It  
is  
definitely  
one  
of  
my  
favourite  
subjects  
in  
school.

/

## Appendix K

### Samples of Transcriptions of Research Participants' Interviews

<b>No. of interview : 1 (Semi-structured)</b>	<b>Venue : MBMMBI Room ITEKDA</b>
<b>Focus : Types of Vocabulary Learning Strategies</b>	<b>Date : 30.04.2018</b>
<b>Research Participant: Asma</b>	<b>Time : 2.35pm</b>

R : Okay, introduce yourself.

RP 2: My name is Asma Diyana and I'm from the TESL class from ITE Kampus Darul Aman.

R: Okay. So, actually, why do you have an interest in learning TESL, in joining the TESL programme?

RP 2: Uh, during my childhood time, I was exposed to learning the English language from my parents and my siblings. So, from there, I built the interest and motivation to learn English.

R: Okay. So, in your L2 vocabulary learning process, do you prefer to use some strategies to learn new words, or do you just memorize new words without any learning strategy?

RP 2: As for me, I read a lot of books and I watch a lot of movies. So, from the books and the movies, I can, like, encounter certain words and from there I, like, recognize and find the meaning of the vocabulary in the dictionary and that's how I memorize the words or vocabulary.



R: Okay. So, just now you mentioned reading books. What kind of books that you love to read?

RP 2: Uh, I love fictional books, especially, uh, young adults' kind of novels like John Green's.

R: Okay. What about watching a movie?

RP 2: Watching a movie? Uh, I love watching all kinds of movies, uh, especially the fantasy ones like Harry Potter and Percy Jackson.

R: Okay. Um, how do you think that by doing this, by having these kinds of strategies in your learning process? How do you feel this is important?

RP 2: Uh, I think, uh, because, I don't have a specific time to find or to expose myself to such vocabulary, so when I indirectly read books or watch movies, I will get some of the vocabularies that I encounter in the movies or books, so I will, like, uh, subconsciously learn and that is, uh, better than just reading and memorizing.

R: Okay, before this you mentioned about your parents exposed you to this language. How do your parents help you in learning L2 vocabulary at home, specifically, and any technology used besides TV?

RP 2: My parents bought me a lot of children's books and they used to read me some of the books. So, I was like, I had, I developed my interest through reading such books, the children's books and so on. And also I had access to a computer, so I had internet access. So, I can find videos on Youtube to further enhance my vocabulary.

R: Okay. Do you think that any platform, Learning Management System that we have here in ITE helps you in improving your vocab learning strategies?

RP 2: Uh, Learning Management System, I think we have *Schoology* and Edmodo where we can, like, share materials and discuss things in that platform. It is

easier and it also enhances one's vocabulary because you have to find the apt vocabulary to use to communicate in LMS

R: Okay. Do you face any problem in using the Learning Management System (LMS) that you have mentioned just now?

RP 2: Um, the problem is that I think the platform is very good and very useful for students. However, as it requires a strong internet connection, it is still a problem among students.

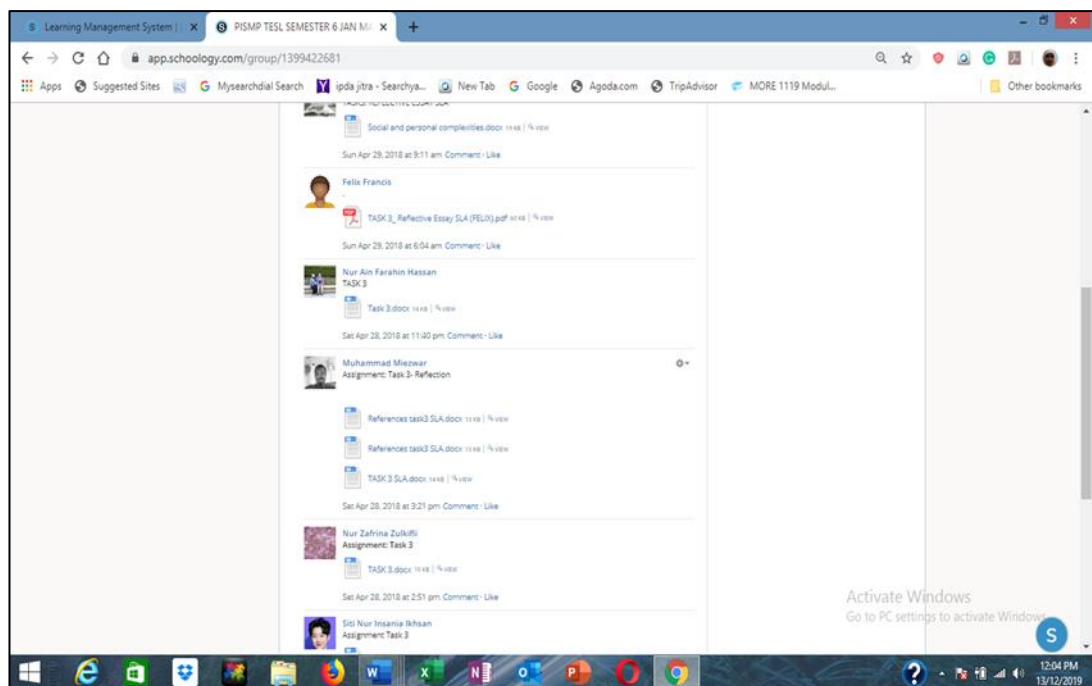
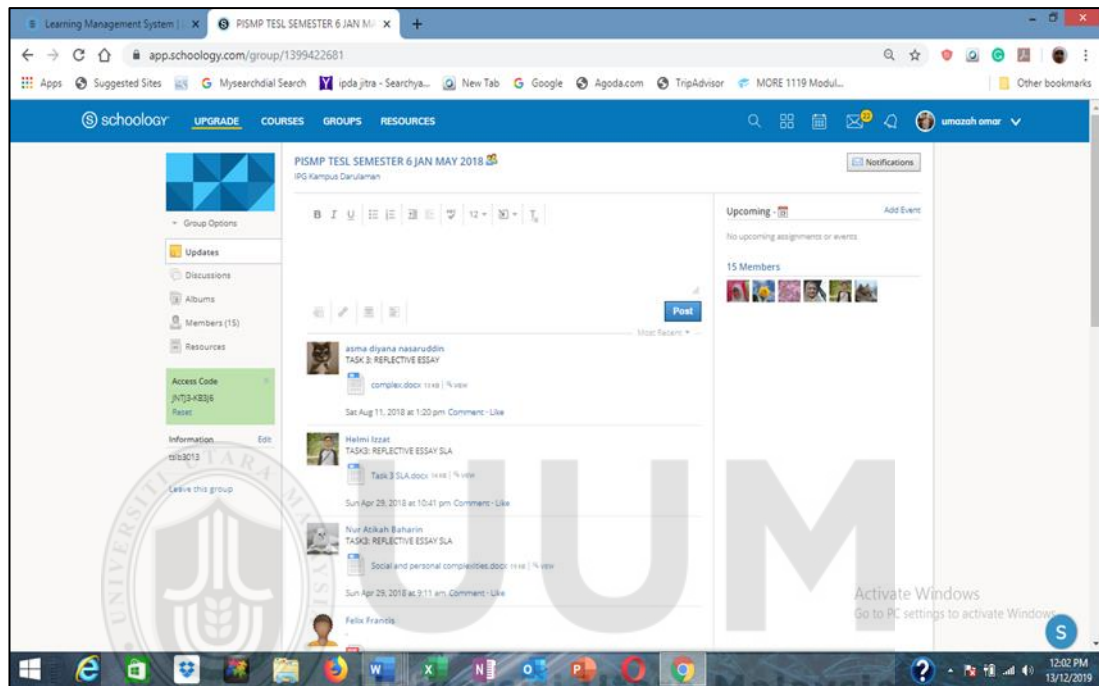
R: Okay. So, thank you very much for your responses. Okay, thank you.  
Assalamualaikum.

RP 2: Waalaikumussalam.



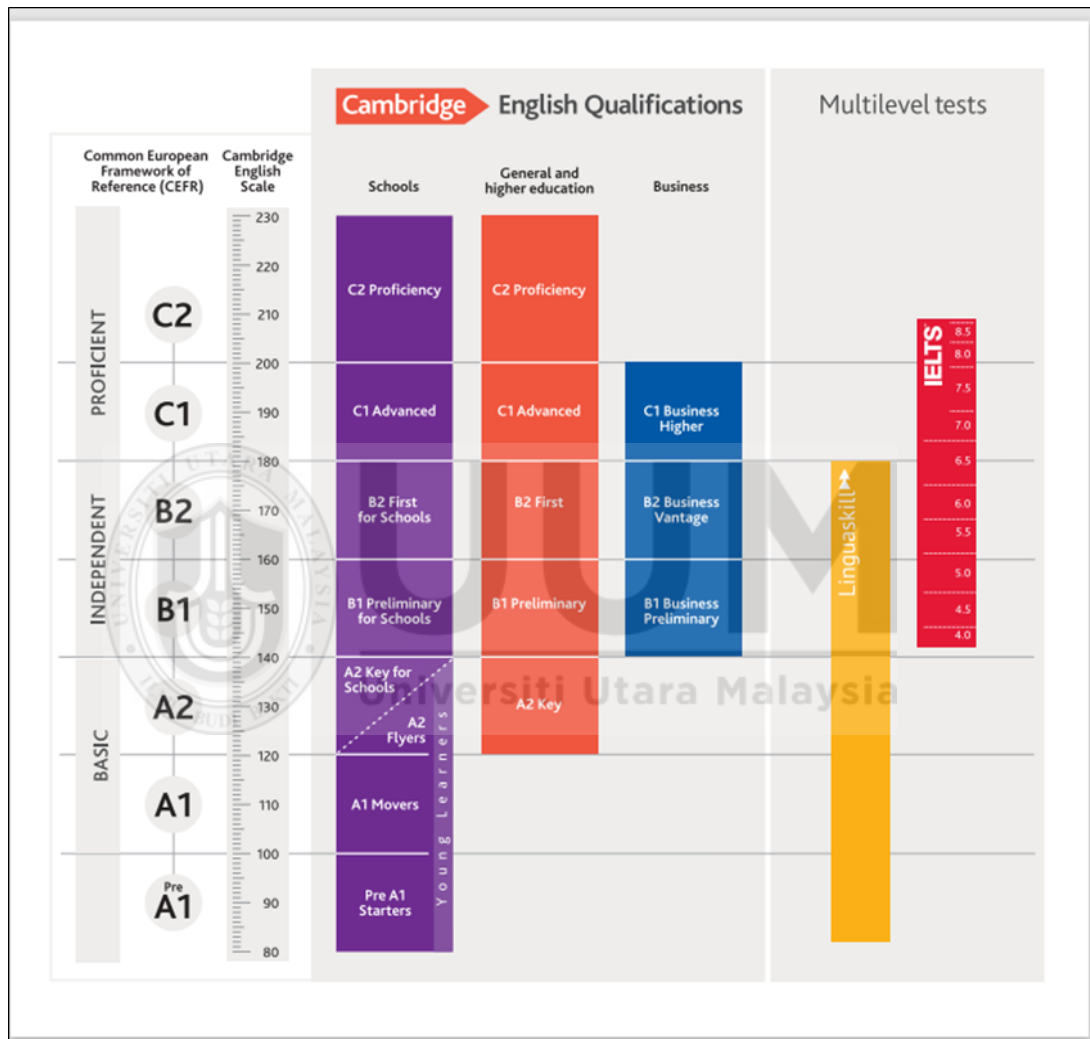
## Appendix L

### Samples of Online Learning Management Schoology



## Appendix M

### CEFR Bands



## **Appendix N**

### **Samples of Research Participants' Online Reflective Writings and CEFR Analysis 1**

#### **1. Miss Ain ORW 5**

Reflection 5/3/18

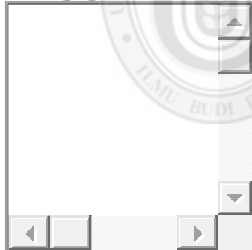
Today's lesson was quite productive. I was entertained by my friend's presentation. they all did very well in presenting the hypothesis. Personally I think all the presentations went smoothly and I managed to understand all the presentations well. And yes both input and output hypotheses needed one another to enable the process of acquiring to occur.

**CEFR Level: CEF Level C1**

(Upper Intermediate)

IELTS Level 6.5-8

#### **Suggested vocabulary:**



number of words: 56

average sentence length: 11

average word length: 5.2

word complexity: 2238

#### **2. Miss Syuhada ORW 8**

**TASK 3: Based on the Group Oral Presentation, write a reflective essay by examining the various social and personal complexities of language learning among young learners in the primary ESL classroom.**

Complexity of language learning is a matter that teachers need to reflect upon teaching in primary ESL classroom. However, Complexity has turned out to be very difficult to define. The dozens of definitions that have been offered all fall short in one respect or another, classifying something as complex which we intuitively would see as simple, or denying an obviously complex phenomenon the label of complexity. Moreover, these definitions are either only applicable to a very restricted domain, such as computer algorithms or genomes, or so vague as to be almost meaningless. Edmonds (1996) in a research conducted by Heylighen in 1999, gives a good review of the different definitions and their shortcomings, concluding that complexity necessarily depends on the language that is used to model the system. In the context of an organization, complexity is associated with interrelationships of the individuals, their effect on the organization and the organization's interrelationships with its external environment which also can be considered as personal and social complexity.

As stated by Pierce (1995) cited in Davis and Sumara (2014), learners' motivation, their cognitive and social make-up, and the host of personality factors and learning styles identified by social psychologists such as extrovert or introvert, field-dependent or independent and visually or acoustically inclined are the important factors that influence personal complexity of language learning. He stated that complexity in language learning will happen if the pupils are not 'invested' properly into learning. 'Investment' here means the desire to learn and use the target language. The notion of investment conceives of the language learner as a person who is having a complex social history and multiple desires. This can be seen in the aspect of personalities and learning style mentioned earlier.

As supported by Nelson (2011), he stated that schools are no exception. In a typical classroom, social complexity can take place when students adapt to each other and their teachers through reciprocal interactions. Students use their prior experience to anticipate teacher requirements, adapting when their expectations do not fit the requirements. Likewise, teachers adjust class tasks and activities according to previous and

present experiences with their students. In this situation, when teacher takes action in conducting group work activities, through these interactions and adaptations, a class behavior emerges out of the individual behaviors of the teacher and students, with the former differing from the latter. Although the teacher plays a strong role in influencing student behavior, that influence has limits as we see anomalies, such as lessons that have been successful in the past failing on other occasions.

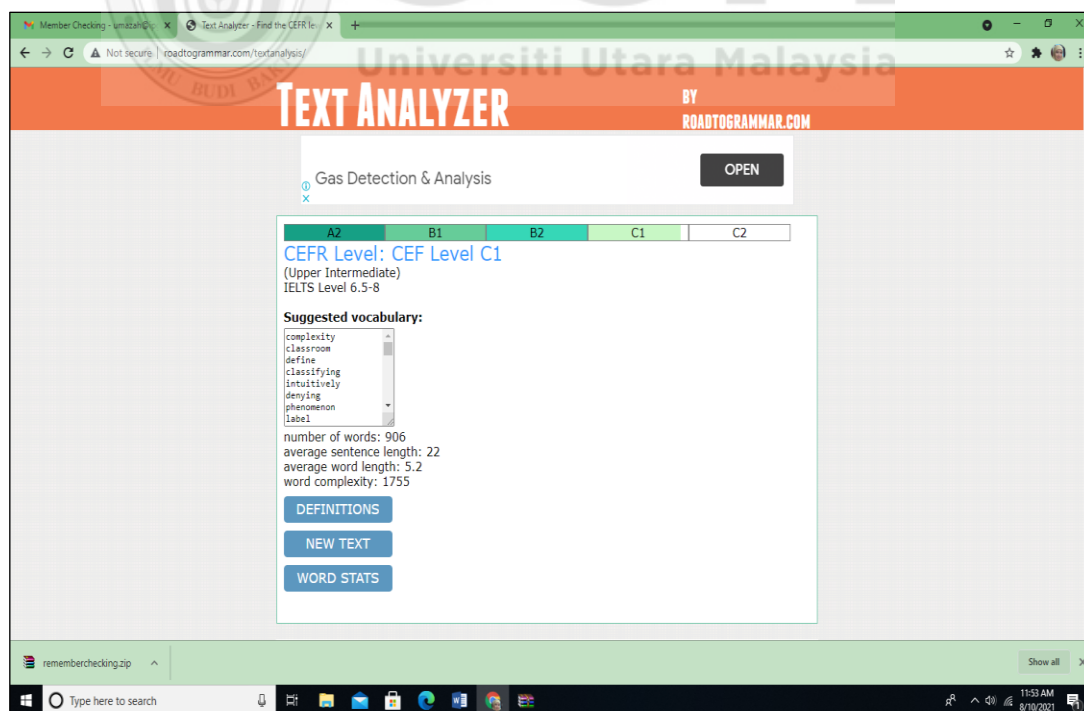
The topic that I had presented was the Monitor Hypothesis. It was listed by Krashen (1985) as one of his input hypotheses. As a second language teacher it will always be a challenge to strike a balance between encouraging accuracy and fluency in your students. This balance will depend on numerous variables including the language level of the students, the context of language use and the personal goals of each student. This balance is also known as communicative competency. The Monitor allows a language user to alter the form of an utterance either prior to production by consciously applying learned rules or after production via self-correction. In other words, the learned system monitors the output of the acquired system.

For example, students are apprehensive to produce spoken language. Language teachers and students alike know that producing oral language can be a challenge but that it is a necessary part of learning a language. In we take a look based on personal complexity, some of the students or the teacher may feel worried about the level of their language due to their low confidence level or anxiety. This often prevents them from speaking or taking in the language at all. In addition, many of them tend to monitor their use of the language too much, focusing more on accuracy than fluency which in turn prevents them from using the language in a communicative manner. On the other hand, if we take a look based on social complexity, the Monitor Hypothesis can take place in group work activity. If the teacher groups her or his students with different level of ability, the good one will help the weaker students in the same group to monitor themselves to use correct grammatical rules based on what have been taught subconsciously. They would not realise that they are monitoring each other but if they are socializing or grouped with

different cognitive level, it will be easier for them to monitor the input they have to produce the correct output during the process.

In conclusion, I do agree and believe that complexity is one of the issue that teacher needs to be focusing on in teaching of English, especially in ESL classrooms. This is because it can determine whether our teaching and learning process is successful or not. If the pupils just lost the content of his previous knowledge whenever we added new information to him, in what way the pupils will be able to learn and acquire the knowledge well in the classroom. Therefore, one of the initiatives that teacher can use in order to reduce negative personal complexity issues in classroom and create a healthy social complexity environment. The teacher can practice the Monitor Hypothesis in the teaching and learning process. This is because the hypothesis can be used as a monitor to the students in using the input given to produce a correct output especially in spoken language as mentioned above.

(912 words)





number of words: 906

average sentence length: 22

average word length: 5.2

word complexity: 1755



## **Appendix O**

### **Samples of research participants' online reflective writings and CEFR analysis 2**

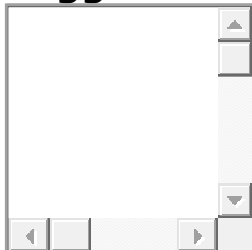
**Miss Syadia ORW5**

**Reflection 21/2/2018**

For the last class, I was paired up with Shazwani to present on the overcoming contamination from rehearsal. I would say that the text was actually quite difficult for me to understand but towards the end I finally got a clearer picture on what we were going to present about. I personally think that this topic was quite interesting as we got to know more about the terms used in the topic especially the memory such as the working memory, the short term memory, long term memory. The other interesting thing was the relationship between all the terms from one topic to the other topic. For example, the term decay theory was not only applicable in the first sub topic, but it also relates to the other sub topic so if we do not really understand it at first, we might face some problems in understanding the other sub topic. I hope that my presentation for that day would help others in understanding the first subtopic regarding the distinction of short and long term memory and also overcoming contamination from rehearsal as we already tried our best to make sure that our presentation is understandable.

**CEFR Level: CEF Level B2**  
(Intermediate)  
IELTS Level 5-6

**Suggested vocabulary:**

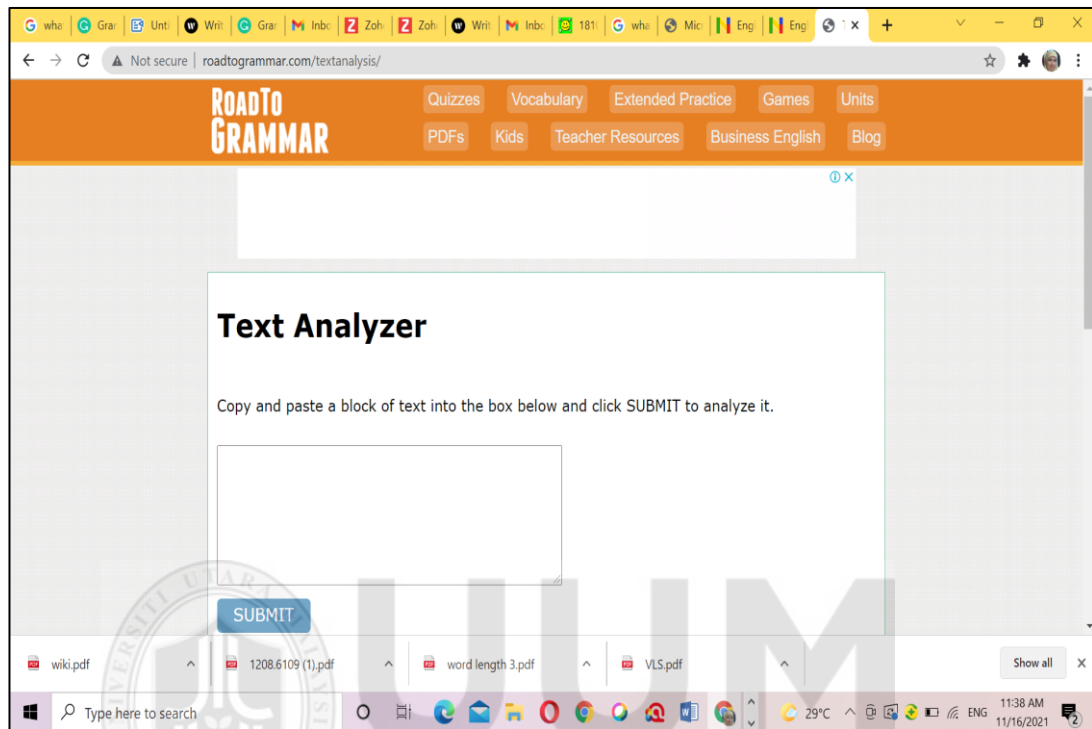


number of words: 195

average sentence length: 33

average word length: 4.6

word complexity: 1237



## **Appendix P**

### **Samples of research participants' online reflective writings and CEFR**

**Miss Syuhada ORW 4**

**Reflection 24/1/2018**

#### **The Critical Period Hypothesis (CPH)**

Today, I learnt about the Critical Period Hypothesis (CPH) and interactionist/developmental perspectives. Before I conclude what I understood from today's learning, I would like to give the definition about the topic that I have learnt.

#### **CPH**

**Definition:** The critical period hypothesis is the subject of a long-standing debate in [linguistics](#) and [language acquisition](#) over the extent to which the ability to acquire [language](#) is biologically linked to age. The hypothesis claims that there is an ideal time window to acquire language in a linguistically rich environment, after which further language acquisition becomes much more difficult and effortful.

The critical period hypothesis states that the first few years of life is the crucial time in which an individual can acquire a [first language](#) if presented with adequate stimuli. If language input does not occur until after this time, the individual will never achieve a full command of language—especially [grammatical systems](#).

The evidence for such a period is limited, and support stems largely from theoretical arguments and analogies to other [critical periods](#) in biology such as [visual development](#), but nonetheless is widely accepted. The nature of such a critical period, however, has been one of the most fiercely debated issues in [psycholinguistics](#) and [cognitive science](#) in general for decades. Some writers have suggested a "sensitive" or "optimal" period rather than a critical one; others dispute the causes (physical maturation, cognitive factors). The duration of the period also varies greatly in different accounts.

In [second-language acquisition](#), the strongest empirical evidence for the critical period hypothesis is in the study of [accent](#), where most older learners do not reach a native-like level. However, under certain conditions, native-like accent has been observed, suggesting that accent is affected by [multiple factors](#), such as [identity](#) and [motivation](#), rather than a critical period biological constraint.

### **Interactionist/developmental perspectives**

**Definition:** Interactionists argue that language development is both biological and social. Interactionists argue that language learning is influenced by the desire of children to communicate with others. The Interactionists argue that "children are born with a powerful brain that matures slowly and predisposes them to acquire new understandings that they are motivated to share with others" (Bates,1993; Tomasello,1995, as cited in Shaffer, et al., 2002, p.362).

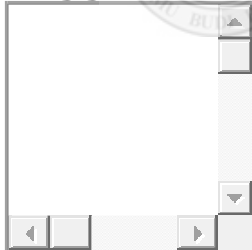
The main theorist associated with interactionist theory is Lev Vygotsky. Interactionists focus on Vygotsky's model of collaborative learning (Shaffer, et al.,2002). Collaborative learning is the idea that conversations with older people can help children both cognitively and linguistically (Shaffer, et. Al, 2002).

**CEFR Level: CEF Level C2**

(Advanced)

IELTS Level 8+

### **Suggested vocabulary:**








number of words: 407

average sentence length: 16

average word length: 5.7

word complexity: 2538

Complexity (A = simple, E = complex)

A =   
 B =   
 C =   
 D =   
 E = 

The Critical Period Hypothesis (CPH) / Today, I learnt about the Critical Period Hypothesis (CPH) and interactionist/ developmental perspectives. Before I conclude what I understood from today's learning, I would like to give the definition about the topic that I have learnt. / CPH / Definition: The critical period hypothesis is the subject of a long-standing debate in linguistics and language acquisition over the extent to which the ability to acquire language is biologically linked to age. The hypothesis claims that there is an ideal time window to acquire language in a linguistically rich environment, after which further language acquisition becomes much more difficult and effortful. / The critical period hypothesis states that the first few years of life is the crucial time in which an individual can acquire a first language if presented with adequate stimuli. If language input does not occur until after this time, the individual will never achieve a full command of language—especially grammatical systems. / The evidence for such a period is limited, and support stems largely from theoretical arguments and analogies to other critical periods in biology such as visual development, but accepted. The nature of such a critical period, however, has been one

of the most fiercely debated issues in psycholinguistics and cognitive science in general for decades. Some writers have suggested a "sensitive" or "optimal" period rather than a critical one) others dispute the causes (physical maturation, cognitive factors). The duration of the period also varies greatly in different accounts. / In second-language acquisition, the strongest empirical evidence for the critical period hypothesis is in the study of accent, where most older learners do not reach a native-like level. However, under certain conditions, native-like accent has been observed, suggesting that accent is affected by multiple factors, such as identity and motivation, rather than a critical period biological constraint. / / Interactionist/developmental perspectives / Definition: Interactionists argue that language development is both biological and social. Interactionists argue that language learning is influenced by the desire of children to communicate with others. The Interactionists argue that "children are born with a powerful brain that matures slowly and predisposes them to acquire new understandings that they are motivated to share with others" (Bates, 1993; Tomasello, 1995, as cited in Shaffer, et al., 2002, p.362). / The main theorist associated with interactionist theory is Lev Vygotsky. Interactionists focus on Vygotsky's model of collaborative learning (Shaffer, et al., 2002). Collaborative learning is the idea that conversations with older people can help children both cognitively and linguistically (Shaffer, et al., 2002). /

## Appendix Q

### Samples of Tasks and Activities of Second Language Acquisition Course

**WEEKLY LESSON PLAN**

Program: PISMP
Intake: Jun 2015
Semester : 2 Tahun: 3

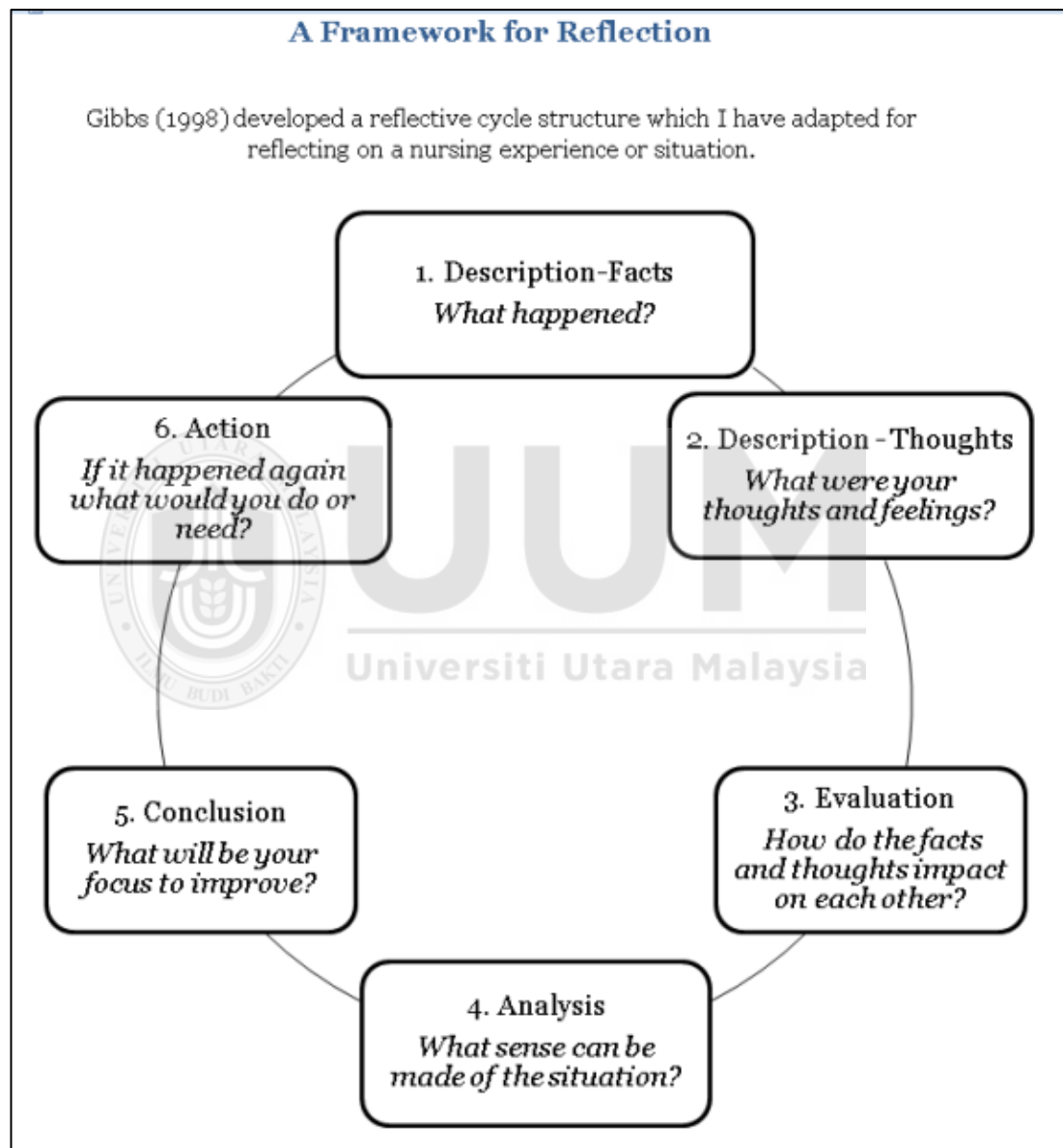
Course Course: TSLB 3013
Course : Second Language Acquisition
Credit: 3

Week/Date/Time	Content of the course	Course Learning Outcomes	Activities/Strategies	Face to face Interaction			Reflections
				Lecture	Tutorial	Practical	
<b>M1</b> <b>1 -4 Jan 2018</b>  01.01.18 8-9 am	1. Introduction to Second Language Acquisition <ul style="list-style-type: none"> <li>Historical view of Second Language Acquisition</li> </ul>	Elaborate the historical view of the second language acquisition	Tutorial : Brainstorming activity and discussion and online tasks Students are required to reflect their second language acquisition and post it using Schoology		1		
03.01.18 10-12 pm	<ul style="list-style-type: none"> <li>Nativism and Environmentalism theory                             <ul style="list-style-type: none"> <li>Review of Skinner and Chomsky</li> <li>Nature vs nurture</li> </ul> </li> <li>Role of first language in second language acquisition</li> </ul>	Discuss the two theories related to second language acquisition Discussion on Skinner and Chomsky theories and the issues the roles of the first language in second language acquisition	Discussion : Preparing Graphic Organizer based on the topics that the students had learned and post it using Schoology	2			

WEEKLY LESSON PLAN							
Program: <u>PISMP</u>		Intake: <u>Jun 2015</u>		Semester : <u>2</u> Tahun: <u>3</u>			
Course Course: <u>TSLB</u>		Course : <u>Second Language Acquisition</u>		Credit: <u>3</u>			
<u>3013</u>							
Week/Date/Time	Content of the course	Course Learning Outcomes	Activities/Strategies	Face to face Interaction			Reflections
				Kuliah	Tutorial	Amali	
M2 7-11 Jan 2018  08.01.18 8-9am	2. Age and Acquisition <ul style="list-style-type: none"><li>Child-directed speech</li></ul>	Explain and discuss the definition of child-directed speech process and how it influences the children first language acquisition	Tutorial : Brainstorming activity and discussion and online tasks  Students are required to read the texts given and discuss the content of the text and share it using Schoology		1		
03.01.18 10-12 pm	2. Age and Acquisition <ul style="list-style-type: none"><li>Role of imitation and correction</li></ul>	Identify the roles of imitation and correction in children first language acquisition	Discussion and presentation based on the topic discussed	2			

## Appendix R

### A Framework for Reflection





### Rubric for Student Reflections

	Above Expectations	Meets Expectations	Approaching Expectations	Below Expectations
	4	3	2	1
<b>Reflective Thinking</b>	The reflection explains the student's own thinking and learning processes, as well as implications for future learning.	The reflection explains the student's thinking about his/her own learning processes.	The reflection attempts to demonstrate thinking about learning but is vague and/or unclear about the personal learning process..	The reflection does not address the student's thinking and/or learning.
<b>Analysis</b>	The reflection is an in-depth analysis of the learning experience, the value of the derived learning to self or others, and the enhancement of the student's appreciation for the discipline.	The reflection is an analysis of the learning experience and the value of the derived learning to self or others.	The reflection attempts to analyze the learning experience but the value of the learning to the student or others is vague and/or unclear.	The reflection does not move beyond a description of the learning experience.
<b>Making Connections</b>	The reflection articulates multiple connections between this learning experience and content from other courses, past learning, life experiences and/or future goals.	The reflection articulates connections between this learning experience and content from other courses, past learning experiences, and/or future goals.	The reflection attempts to articulate connections between this learning experience and content from other courses, past learning experiences, or personal goals, but the connection is vague and/or unclear.	The reflection does not articulate any connection to other learning or experiences.

## Appendix S

### Summary of the Course

#### SUMMARY OF INFORMATION ON EACH COURSE

1. Name of Course/Module	<b>Second Language Acquisition</b> <i>Pemeroleshan Bahasa Kedua</i>																																																																																																																																																																										
2. Course Code	TSLB3103																																																																																																																																																																										
3. Name(s) of academic staff	Hamidah binti Samsudin																																																																																																																																																																										
4. Rationale for the inclusion of the course/module in the programme	This course is relevant to student teachers of English as a Second Language as it provides the suitable content knowledge for them to understand the stages of acquiring a second language and the pedagogical implications for teaching.																																																																																																																																																																										
5. Semester and Year offered	Semester 2 Year 3																																																																																																																																																																										
6. Total Student Learning Time (SLT)	Face to Face				Non Face To Face				Total Guided and Independent Learning																																																																																																																																																																		
L = Lecture T = Tutorial P = Practical A = Assessment	L	T	P	A	L	T	P	A	126																																																																																																																																																																		
	30	15	-	3	30	30	-	18																																																																																																																																																																			
7. Credit Value	3																																																																																																																																																																										
8. Prerequisite (if any)	None																																																																																																																																																																										
9. Course Learning Outcomes (CLO)	<p>At the end of this course students will be able to:</p> <ol style="list-style-type: none"> <li>1. Elaborate on the psychological and instructional variables which affect second language acquisition among young learners. (C5, PLO3, CTPS3)</li> <li>2. Present an analysis of a lesson in relation to the theories of second language acquisition in groups. (C6, A2, PLO3, PLO4, PLO5, CTPS5, CS2, TS4)</li> <li>3. Explain key issues and concepts of bilingualism in second language acquisition. (C5, P2, A4, PLO3, PLO6, CTPS3, LL2)</li> <li>4. Examine the social and personal complexity of language learning among young learners. (C4, PLO2, PLO8, EM3)</li> <li>5. Integrate the theories of second language acquisition with practice in the primary ESL classroom. (C6, A4, PLO2, PLO6, LL2)</li> </ol> <table border="1"> <tr> <th colspan="17">LEARNING TAXONOMIES</th> </tr> <tr> <th rowspan="2">CLO</th> <th colspan="6">COGNITIVE DOMAIN</th> <th colspan="6">PSYCHOMOTOR DOMAIN</th> <th colspan="4">AFFECTIVE DOMAIN</th> </tr> <tr> <th>Remembering</th> <th>Understanding</th> <th>Applying</th> <th>Analyzing</th> <th>Evaluating</th> <th>Creating</th> <th>Perception</th> <th>Set</th> <th>Guided response</th> <th>Mechanism</th> <th>Complex or overt response</th> <th>Adaptation</th> <th>Origination</th> <th>Receiving</th> <th>Responding</th> <th>Valuing</th> <th>Organization Internalizing values (characterization)</th> </tr> <tr> <td></td> <td>C1</td> <td>C2</td> <td>C3</td> <td>C4</td> <td>C5</td> <td>C6</td> <td>P1</td> <td>P2</td> <td>P3</td> <td>P4</td> <td>P5</td> <td>P6</td> <td>P7</td> <td>A1</td> <td>A2</td> <td>A3</td> <td>A4</td> </tr> <tr> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>x</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>x</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>x</td> <td></td> <td></td> </tr> <tr> <td>3</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>x</td> <td></td> <td></td> <td>x</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>x</td> </tr> <tr> <td>4</td> <td></td> <td></td> <td></td> <td>x</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>5</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>x</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>x</td> </tr> </table>												LEARNING TAXONOMIES																	CLO	COGNITIVE DOMAIN						PSYCHOMOTOR DOMAIN						AFFECTIVE DOMAIN				Remembering	Understanding	Applying	Analyzing	Evaluating	Creating	Perception	Set	Guided response	Mechanism	Complex or overt response	Adaptation	Origination	Receiving	Responding	Valuing	Organization Internalizing values (characterization)		C1	C2	C3	C4	C5	C6	P1	P2	P3	P4	P5	P6	P7	A1	A2	A3	A4	1						x												2							x								x			3							x			x							x	4				x														5						x											x
LEARNING TAXONOMIES																																																																																																																																																																											
CLO	COGNITIVE DOMAIN						PSYCHOMOTOR DOMAIN						AFFECTIVE DOMAIN																																																																																																																																																														
	Remembering	Understanding	Applying	Analyzing	Evaluating	Creating	Perception	Set	Guided response	Mechanism	Complex or overt response	Adaptation	Origination	Receiving	Responding	Valuing	Organization Internalizing values (characterization)																																																																																																																																																										
	C1	C2	C3	C4	C5	C6	P1	P2	P3	P4	P5	P6	P7	A1	A2	A3	A4																																																																																																																																																										
1						x																																																																																																																																																																					
2							x								x																																																																																																																																																												
3							x			x							x																																																																																																																																																										
4				x																																																																																																																																																																							
5						x											x																																																																																																																																																										
10. Transferable Skills:	Critical Thinking Skills (CTPS2), Communication Skills (CS3), Teamwork (TS1), Managing Information and Life-long Learning Skills (LL2) and Professional Ethics and Moral (EM3)																																																																																																																																																																										

(Berkuat kuasa mulai Jun 2015)  
(Kemas kini Jun 2017)

## Appendix T

### Samples of Instrument Validation Forms

#### VALIDATION FORM 1

##### INSTRUCTIONS:

Here are some of the statements from the validation form related to the instruments that you value. After reviewing the instruments, please put the remark and circle the answer based on the following scale:

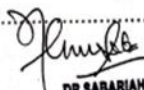
- 1 - Strongly disagree
- 2 - Disagree
- 3 - Not sure
- 4 - Agreed
- 5 - Strongly agree

No	Statements	Scale					Remark
		1	2	3	4	5	
1	The items of this instrument meet the target respondents. ✓	1	2	3	4	5	
2	The items of this instrument can be implemented perfectly. ✓	1	2	3	4	5	
3	The items of this instrument correspond to the time allocated. ✓	1	2	3	4	5	
4	The items of this instrument can view types of the vocabulary learning strategies used by the TESL teacher trainees ✓	1	2	3	4	5	
5	The items of this instrument can view how the online learning management system helps the TESL teacher trainees in enhancing their vocabulary learning strategies. ✓	1	2	3	4	5	
6	The items of this instrument can view the issues and challenges faced by the TESL teacher trainees in using the online learning management system ✓	1	2	3	4	5	

##### Suggestions and comments

- Approved with a slight correction  
 - Please insert some sample of gate-keepers' interview question.

Signature :



Name :

**DR SABARIAH MORAD**  
 Penasarah Kanan  
 Institut Pendidikan Guru Kampus Denduman  
 06000 Jitra, Kedah.

Position :

## VALIDATION FORM 2

### INSTRUCTIONS:

Here are some of the statements from the validation form related to the instruments that you value. After reviewing the instruments, please put the remark and circle the answer based on the following scale:

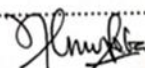
- 1 - Strongly disagree
- 2 - Disagree
- 3 - Not sure
- 4 - Agree
- 5 - Strongly agree

No	Statements	Scale					Remark
1	The items of this instrument meet the target respondents.	1	2	3	4	5	
2	The items of this instrument can be implemented perfectly.	1	2	3	4	5	
3	The items of this instrument can view how the online learning management system helps the TESL teacher trainees in enhancing their vocabulary learning strategies through the content subject	1	2	3	5	4	
4	The items of this instrument can view the issues and challenges faced by the TESL teacher trainees in using the online learning management system	1	2	3	4	5	

### Suggestions and comments

*Slight correction needed in terms of spelling*

Signature :



Name :

**DR SABARIAH MORAD**  
Pensyarah Kanan  
Institut Pendidikan Guru Kampus Berulaman  
06000 Jitra, Kedah.

Position :



كل

## VALIDATION FORM 1

### INSTRUCTIONS:

Here are some of the statements from the validation form related to the instruments that you value. After reviewing the instruments, please put the remark and circle the answer based on the following scale:

- 1 - Strongly disagree
- 2 - Disagree
- 3 - Not sure
- 4 - Agreed
- 5 - Strongly agree

No	Statements	Scale					Remark
1	The items of this instrument meet the target respondents.	1	2	3	4	5	
2	The items of this instrument can be implemented perfectly.	1	2	3	4	5	
3	The items of this instrument correspond to the time allocated.	1	2	3	4	5	
4	The items of this instrument can view types of the vocabulary learning strategies used by the TESL teacher trainees	1	2	3	4	5	
5	The items of this instrument can view how the online learning management system helps the TESL teacher trainees in enhancing their vocabulary learning strategies.	1	2	3	4	5	
6	The items of this instrument can view the issues and challenges faced by the TESL teacher trainees in using the online learning management system	1	2	3	4	5	

### Suggestions and comments

The interview questions from Gu and Johnson (1996) were suitable for the participants to answer the research questions

Signature : *[Signature]*  
 Name : **UMMI RITA @ AISHAH BT TAJUDDIN**  
 Position : **Pensyarah  
 Jabatan Bahasa  
 IPG Kampus Darulaman  
 08000 Jitra, Kedah Darul Aman.**

## VALIDATION FORM 2

### INSTRUCTIONS:

Here are some of the statements from the validation form related to the instruments that you value. After reviewing the instruments, please put the remark and circle the answer based on the following scale:

- 1 - Strongly disagree
- 2 - Disagree
- 3 - Not sure
- 4 - Agreed
- 5 - Strongly agree

No	Statements	Scale					Remark
1	The items of this instrument meet the target respondents.	1	2	3	4	5	
2	The items of this instrument can be implemented perfectly.	1	2	3	4	5	
3	The items of this instrument can view how the online learning management system helps the TESL teacher trainees in enhancing their vocabulary learning strategies through content subject	1	2	3	5	4	
4	The items of this instrument can view the issues and challenges faced by the TESL teacher trainees in using the online learning management system	1	2	3	4	5	

### Suggestions and comments

The online structured interview 2 questions are suitable for the respondents to answer the research questions

Signature :

*[Signature]*

Name :

**MINI RITA @ AISHAH BT TAJUDDIN**  
Pensyarah

Position :

Jabatan Bahasa  
IPG Kampus Darulaman  
00000 Jitra, Kedah Darul Aman.

### VALIDATION FORM 3

#### INSTRUCTIONS:

Here are some of the statements from the validation form related to the instruments that you value. After reviewing the instruments, please put the remark and circle the answer based on the following scale:

- 1 - Strongly disagree
- 2 - Disagree
- 3 - Not sure
- 4 - Agreed
- 5 - Strongly agree

No	Statements	Scale					Remark
1	The items of this instrument meet the target respondents.	1	2	3	4	5	
2	The items of this instrument can be implemented perfectly.	1	2	3	4	5	
3	The items of this instrument can view types of the vocabulary learning strategies used by the TESL teacher trainees	1	2	3	4	5	
4	The items of this instrument can view how the online learning management system helps the TESL teacher trainees in enhancing their vocabulary learning strategies through content subject	1	2	3	4	5	
5	The items of this instrument can view the issues and challenges faced by the TESL teacher trainees in using the online learning management system	1	2	3	4	5	

#### Suggestions and comments

face to face interview questions  
are suitable for the research  
participants to answer the  
objectives.

Signature :

*[Signature]*

Name :

**MINI RITA @ ARSHAM BT TAJUDDIN**  
Pensyarah

Position :

Jabatan Bahasa  
IPG Kampus Darulaman  
00000 Jitra, Kedah Darul Aman.

## Appendix U

### Samples of Validators Appointment Letters

	<p><b>PUSAT PENGAJIAN PENDIDIKAN DAN BAHASA MODEN</b> <b>SCHOOL OF EDUCATION AND MODERN LANGUAGES</b> College of Arts and Sciences Universiti Utara Malaysia 06010 UUM SINTOK KEDAH DARUL AMAN MALAYSIA</p>	 <p>Tel: 604-928 5381 Faks (Fax): 604-928 5382 Laman Web (Web): <a href="http://www.seml.uum.edu.my">www.seml.uum.edu.my</a></p>
<p>UUM/CAS/SEML/P-74/3/21 19 November 2018</p>		
<p>Dr. Sabariah Bt. Merad, Institut Pendidikan Guru Kampus Darulaman, 06000 Jitra Kedah Darulaman</p>		
<p>Puan,</p>		
<p><b>Perantikan Sebagai Pakar Penilai Kesahan Instrumen, "Exploring Vocabulary Learning Strategy Using Online Learning Management System Among TESL Teacher Trainees"</b></p>		
<p>Dengan hormatnya ingin saya merujuk kepada perkara di atas.</p>		
<p>2. Sehubungan dengan itu ingin saya memaklumkan bahawa Umazah Bt. Omar (No. Matrik : 94709) adalah merupakan pelajar saya yang sedang mengikuti pengajian di peringkat Kedoktoran di Pusat Pengajian Pendidikan dan Bahasa Moden, Universiti Utara Malaysia, Sintok, Kedah Darulaman.</p>		
<p>3. Penyelidikan beliau adalah mengenai " Exploring Vocabulary Learning Strategy Using Online Learning Management System Among TESL Teacher Trainees"</p>		
<p>4. Oleh yang demikian, saya sebagai Penyelia, ingin melantik Dr. sebagai salah seorang pakar penilai kesahan instrumen-instrumen berkenaan. Kesudian Dr. menerima perantikan ini adalah sangat dihargai dan saya yakin akan membantu pelajar berkenaan dalam melaksanakan penyelidikannya.</p>		
<p>5. Bersama ini disertakan instrumen-instrumen dan satu set soal selidik kesahan instrumen untuk tindakan Dr.</p>		
<p>Sekian, terima kasih.</p>		
<p><b>"BERKHIDMAT UNTUK NEGARA"</b> <b>"KEDAH AMAN MAKMUR – HARAPAN BERSAMA MAKMURKAN KEDAH"</b> <b>"ILMU BUDI BAKTI"</b></p>		
<p>Saya yatu menjalankan amanah</p> <p> (PROF. MADYA DR. AIZAN YAACOB) Penyelia Pelajar Pusat Pengajian Pendidikan &amp; Bahasa Moden UUM College of Arts and Sciences Universiti Utara Malaysia</p>		
<p>Universiti Pengurusan Terkemuka The Eminent Management University</p> <p></p>		





PUSAT PENGAJIAN PENDIDIKAN DAN BAHASA MODEN  
SCHOOL OF EDUCATION AND MODERN LANGUAGES  
College of Art and Sciences  
Universiti Utara Malaysia  
06010 UUM SINTOK  
KEDAH DARUL AMAN  
MALAYSIA



Tel: 604-928 5381  
Faks (Fax): 604-928 5382  
Laman Web (Web): [www.semi.uum.edu.my](http://www.semi.uum.edu.my)

UUM/CAS/SEML/P-74/3/21  
19 November 2018

Mimi Rita @Aishah Bt. Tajuddin,  
Jabatan Bahasa,  
Institut Pendidikan Guru Kampus Darulaman,  
06000 Jitra,  
Kedah Darulaman

Puan,

Perlantikan Sebagai Pakar Penilai Kesahan Instrumen, "Exploring Vocabulary Learning Strategy Using Online Learning Management System Among TESL Teacher Trainees"

Dengan hormatnya ingin saya merujuk kepada perkara di atas.

2. Sehubungan dengan itu ingin saya memaklumkan bahawa Umamah Bt. Omar (No. Matrik : 94709) adalah merupakan pelajar saya yang sedang mengikuti pengajian di peringkat Kedoktoran di Pusat Pengajian Pendidikan dan Bahasa Moden, Universiti Utara Malaysia, Sintok, Kedah Darulaman.

3. Penyelidikan beliau adalah mengenai " Exploring Vocabulary Learning Strategy Using Online Learning Management System Among TESL Teacher Trainees"

4. Oleh yang demikian, saya sebagai penyelia, ingin melantik Dr. sebagai salah seorang pakar penilai kesahan instrumen-instrumen berkenaan. Kesudian Dr. menerima perlantikan ini adalah sangat dihargai dan saya yakin akan membantu pelajar berkenaan dalam melaksanakan penyelidikannya.

5. Bersama ini disertakan instrumen-instrumen dan satu set soal selidik kesahan instrumen untuk tindakan Dr.

Sekian, terima kasih.

"BERKHIDMAT UNTUK NEGARA"

"KEDAH AMAN MAKMUR – HARAPAN BERSAMA MAKMURKAN KEDAH"

"ILMU BUDI BAKTI"

Saya yang menjalankan amanah

(PROF. MADYA DR. AIZAN YAACOB)

Penyelia Pelajar  
Pusat Pengajian Pendidikan & Bahasa Moden  
UUM College of Arts and Sciences  
Universiti Utara Malaysia

Universiti Pengurusan Terkemuka  
The Eminent Management University





PUSAT PENGAJIAN PENDIDIKAN DAN BAHASA MODEN  
SCHOOL OF EDUCATION AND MODERN LANGUAGES  
College of Art and Sciences  
Universiti Utara Malaysia  
06010 UUM SINTOK  
KEDAH DARUL AMAN  
MALAYSIA



Tel: 604-928 6361  
Faks (Fax): 604-928 6362  
Laman Web (Web): [www.seml.uum.edu.my](http://www.seml.uum.edu.my)

UUM/CAS/SEML/P-74/3/21  
19 November 2018

En. Kamarulizam bin Yusoff,  
Jabatan Bahasa,  
Institut Pendidikan Guru Kampus Darulaman,  
06000 Jitra,  
Kedah Darulaman

Tuan,

Perlantikan Sebagai Pakar Penilai Kesahan Instrumen, "Exploring Vocabulary Learning Strategy Using Online Learning Management System Among TESL Teacher Trainees"

Dengan hormatnya ingin saya merujuk kepada perkara di atas.

2. Sehubungan dengan itu ingin saya memaklumkan bahawa Umazah Bt. Omar (No. Matrik : 94709) adalah merupakan pelajar saya yang sedang mengikuti pengajian di peringkat Kedoktoran di Pusat Pengajian Pendidikan dan Bahasa Moden, Universiti Utara Malaysia, Sintok, Kedah Darulaman.

3. Penyelidikan beliau adalah mengenai " Exploring Vocabulary Learning Strategy Using Online Learning Management System Among TESL Teacher Trainees"

4. Oleh yang demikian, saya sebagai penyelia, ingin melantik Dr. sebagai salah seorang pakar penilai kesahan instrumen-instrumen berkenaan. Kesudian Dr. menerima perantikan ini adalah sangat dihargai dan saya yakin akan membantu pelajar berkenaan dalam melaksanakan penyelidikannya.

5. Bersama ini disertakan instrumen-instrumen dan satu set soal selidik kesahan instrumen untuk lindakan Dr.

Sekian, terima kasih.

"BERKHIDMAT UNTUK NEGARA"

"KEDAH AMAN MAKMUR – HARAPAN BERSAMA MAKMURKAN KEDAH"

"ILMU BUDI BAKTI"

Saya yang menjalankan amanah

(PROF. MADYA DR. AIZAN YAACOB)

Penyelia Pelajar  
Pusat Pengajian Pendidikan & Bahasa Moden  
UUM College of Arts and Sciences  
Universiti Utara Malaysia

Universiti Pengurusan Terkemuka  
The Eminent Management University





PUSAT PENGAJIAN PENDIDIKAN DAN BAHASA MODEN  
SCHOOL OF EDUCATION AND MODERN LANGUAGES  
College of Art and Sciences  
Universiti Utara Malaysia  
06010 UUM SINTOK  
KEDAH DARULAMAN  
MALAYSIA



Tel: 604-928 5381  
Faks (Fax): 604-928 5382  
Laman Web (Web): [www.seml.uum.edu.my](http://www.seml.uum.edu.my)

UUM/CAS/SEML/P-74/3/21  
19 November 2018

Dr. Julinamary A/p A Parnabas,  
Institut Pendidikan Guru  
Kampus Darulaman,  
06000 Jitra  
Kedah Darulaman

Puan,

Perlantikan Sebagai Pakar Penilai Kesahan Instrumen, "Exploring Vocabulary Learning Strategy Using Online Learning Management System Among TESL Teacher Trainees"

Dengan hormatnya ingin saya merujuk kepada perkara di atas.

2. Sehubungan dengan itu ingin saya memaklumkan bahawa Umazah Bt. Omar (No. Matrik : 94709) adalah merupakan pelajar saya yang sedang mengikuti pengajian di peringkat Kedoktoran di Pusat Pengajian Pendidikan dan Bahasa Moden, Universiti Utara Malaysia, Sintok, Kedah Darulaman.

3. Penyelidikan beliau adalah mengenai "Exploring Vocabulary Learning Strategy Using Online Learning Management System Among TESL Teacher Trainees"

4. Oleh yang demikian, saya sebagai penyelia, ingin melantik Dr. sebagai salah seorang pakar penilai kesahan instrumen-instrumen berkenaan. Kesudian Dr. menerima perantikan ini adalah sangat dihargai dan saya yakin akan membantu pelajar berkenaan dalam melaksanakan penyelidikannya.

5. Bersama ini disertakan instrumen-instrumen dan satu set soal selidik kesahan instrumen untuk tindakan Dr.

Sekian, terima kasih.

"BERKHIDMAT UNTUK NEGARA"  
"KEDAH AMAN MAKMUR – HARAPAN BERSAMA MAKMURKAN KEDAH"  
"ILMU BUDI BAKTI"

Saya yang menjalankan amanah

(PROF. MADYA DR. AIZAN YAACOB)

Penyelia Pelajar  
Pusat Pengajian Pendidikan & Bahasa Moden  
UUM College of Arts and Sciences  
Universiti Utara Malaysia

Universiti Pengurusan Terkemuka  
The Eminent Management University



## Appendix V

### Sample of EPRD Letter



KEMENTERIAN PENDIDIKAN MALAYSIA  
BAHAGIAN PERANCANGAN DAN PENYELIDIKAN DASAR PENDIDIKAN  
ARAS 1-4, BLOK E8  
KOMPLEKS KERAJAAN PARCEL E  
PUSAT PENTADBIRAN KERAJAAN PERSEKUTUAN  
62604 PUTRAJAYA

TEL : 0388846591  
FAKS : 0388846579

Ruj. Kami : KPM.600-3/2/3-eras(2413)  
Tarikh : 18 Januari 2018

UMAZAH BT. OMAR  
NO. KP : 661018025600

NO 46, PERSIARAN ALAM 3, TAMAN SERI ALAM  
6700 PENDANG  
KEDAH

Tuan,

**KELULUSAN UNTUK MENJALANKAN KAJIAN DI SEKOLAH, INSTITUT PENDIDIKAN GURU, JABATAN PENDIDIKAN NEGERI DAN BAHAGIAN DI BAWAH KEMENTERIAN PENDIDIKAN MALAYSIA**

Perkara di atas adalah dirujuk.

2. Sukacita dimaklumkan bahawa permohonan tuan untuk menjalankan kajian seperti di bawah telah diluluskan.

**" EXPLORING VOCABULARY LEARNING STRATEGY USING ONLINE LEARNING MANAGEMENT SYSTEM AMONG TESL TEACHER TRAINEES "**

3. Kelulusan adalah berdasarkan kepada kertas cadangan penyelidikan dan instrumen kajian yang dikemukakan oleh tuan kepada bahagian ini. Walau bagaimanapun kelulusan ini bergantung kepada kebenaran Jabatan Pendidikan Negeri dan Pengetua / Guru Besar yang berkenaan.

4. Surat kelulusan ini sah digunakan bermula dari **1 Januari 2019** hingga **28 Februari 2019**.

5. Tuan dikehendaki menyerahkan senaskhah laporan akhir kajian dalam bentuk *hardcopy* bersama salinan *softcopy* berformat pdf dalam CD kepada Bahagian ini. Tuan juga diingatkan supaya mendapat kebenaran terlebih dahulu daripada Bahagian ini sekiranya sebahagian atau sepenuhnya dapatan kajian tersebut hendak diterbitkan di mana-mana forum, seminar atau diumumkan kepada media massa.

Sekian untuk makluman dan tindakan tuan selanjutnya. Terima kasih.

**"BERKHIDMAT UNTUK NEGARA"**

Saya yang menjalankan amanah,

Ketua Penolong Pengarah Kanan  
Sektor Penyelidikan dan Penilaian Dasar  
b.p. Pengarah  
Bahagian Perancangan dan Penyelidikan Dasar Pendidikan  
Kementerian Pendidikan Malaysia

salinan kepada:-

JABATAN PENDIDIKAN KEDAH

\* SURAT INI DIJANA OLEH KOMPUTER DAN TIADA TANDATANGAN DIPERLUKAN \*





AWANG HAD SALLEH  
GRADUATE SCHOOL OF ARTS AND SCIENCES  
UUM College of Arts and Sciences  
Universiti Utara Malaysia  
06010 UUM SINTOK  
KEDAH DARUL AMAN  
MALAYSIA



Tel.: 604-928 5266/5269/5299  
Faks (Fax): 604-928 5297  
Laman Web (Web): <http://ahags.uum.edu.my>  
Email: [ahagservices@uum.edu.my](mailto:ahagservices@uum.edu.my)

Our Ref. : UUM/CAS/AHSGS/94709

Date : 2 August 2021

**TO WHOM IT MAY CONCERN**

Dear Sir/Madam

**DATA COLLECTION FOR PROJECT PAPER/ THESIS**

This is to certify that **Mrs. Umazah binti Omar (Matric Number: 94709)** is a full-time graduate student in Doctor of Philosophy (Education) at UUM College of Arts and Sciences.

She needs to do her field study and data collection for her project paper/thesis in order to fulfill the partial requirements of her graduate studies title of **Exploring Vocabulary Learning Strategies using Technology among TESL Teacher Trainers**.

For further information regarding her research work for project paper/thesis, kindly contact her supervisor, Assoc. Prof. Dr. Aizan binti Yaacob (email: [aizan904@uum.edu.my](mailto:aizan904@uum.edu.my)).

We sincerely hope that your organization will be able to assist her in the data collection.

Thank you.

**"PRIHATIN RAKYAT: DARURAT MEMERANGI COVID-19"**

**"SERVING THE NATION"**

**"KEDAH SEJAHTERA – NIKMAT UNTUK SEMUA"**

**"KNOWLEDGE, VIRTUE, SERVICE"**

Upholding the principles of trust and integrity

**SURAYA BINTI DERAMAN**

Senior Principal Assistant Registrar

p.p Dean

Awang Had Salleh Graduate School of Arts and Sciences

UUM College of Arts and Sciences

UUM/CAS/AHSGS/94709

Universiti Pengurusan Terkemuka  
The Eminent Management University





AWANG HAD SALLEH  
GRADUATE SCHOOL OF ARTS AND SCIENCES  
UUM College of Arts and Sciences  
Universiti Utara Malaysia  
06010 UUM SINTOK  
KEDAH DARUL AMAN  
MALAYSIA



Tel. 604 - 928 5299  
Faks (Fax): 604 - 928 5297  
Laman Web (Web): <http://ahsgs.uum.edu.my>  
Emel : [ahsgsservices@uum.edu.my](mailto:ahsgsservices@uum.edu.my)

Rujukan kami : UUM/CAS/AHSGS/94709

Tarikh : Ogos 2021

Cawangan Latihan Dalam Perkhidmatan  
Bahagian Biasiswa & Pembiayaan  
Kementerian Pendidikan Malaysia  
Aras 1, Blok 2251, Jalan Usahawan 1  
63000 Cyberjaya, Selangor  
(u.p.: Unit Biasiswa)

Tuan/Puan

#### PENGESAHAN PENGAJIAN PELAJAR

Adalah dimaklumkan bahawa Umazah binti Omar (No. Kad Pengenalan: 661018-02-5600) merupakan pelajar pascasiswazah Universiti Utara Malaysia dan maklumat pelajar adalah seperti berikut:

Nombor Matrik	: 94709
Program	: Ph.D (Pendidikan)
Pengkhususan	: Pendidikan
Kolej	: Sastera dan Sains
Sesi Kemasukan	: September 2012 (Trimester Pertama Sesi 2012/2013)
Tempoh Pengajian	: 12 hingga 21 trimester
Trimester Semasa	: 21 trimester
Struktur Program	: Penyelidikan
Jenis Pengajian	: Sambilan
Penyelia Pertama	: Prof. Madya Dr. Aizan binti Yaacob ( <a href="mailto:aizan904@uum.edu.my">aizan904@uum.edu.my</a> )
Penyelia Kedua	: Dr. Siti Nazuar binti Sailin ( <a href="mailto:sitinaz@uum.edu.my">sitinaz@uum.edu.my</a> )

Berdasarkan kepada rekod, pelajar masih dalam tempoh pengajian dan pihak Sekolah Siswazah menyokong permohonan lanjutan tempoh biasiswa beliau.

Sebarang pertanyaan, sila e-mel ke [ahsgsservices@uum.edu.my](mailto:ahsgsservices@uum.edu.my).

Sekian dan salam hormat.

"PRIHATIN RAKYAT: DARURAT MEMERANGI COVID-19"

"WAWASAN KEMAKMURAN BERSAMA 2030"

"BERKHIDMAT UNTUK NEGARA"

"KEDAH SEJAHTERA - NIKMAT UNTUK SEMUA"

"ILMU BUDI BAKTI"

Saya yang menjalankan amanah

  
SURAYA BINTI DERAMAN  
Ketua Pendaftar Kanan  
b.p. Dekan

Universiti Pengurusan Terkemuka  
The Eminent Management University

