



**THE EFFECT OF EXPLICIT VOCABULARY APPLICATION (EVA)
ON STUDENTS' ACHIEVEMENT AND ACCEPTANCE IN
LEARNING EXPLICIT ENGLISH VOCABULARY**

ZAILINA BINTI ZAKARIA

**MASTER OF COMPUTER SCIENCE
(MULTIMEDIA COMPUTING)**

2016



Faculty of Information and Communication Technology

**THE EFFECT OF EXPLICIT VOCABULARY APPLICATION
(EVA) ON STUDENTS' ACHIEVEMENT AND ACCEPTANCE IN
LEARNING EXPLICIT ENGLISH VOCABULARY**

Zailina Binti Zakaria

Master of Computer Science (Multimedia Computing)

2016

**THE EFFECT OF EXPLICIT VOCABULARY APPLICATION (EVA) ON
STUDENTS' ACHIEVEMENT AND ACCEPTANCE IN LEARNING EXPLICIT
ENGLISH VOCABULARY**

ZAILINA BINTI ZAKARIA

**A project submitted
in fulfillment of the requirements for the degree of Master of Computer Science
(Multimedia Computing)**

Faculty of Information and Communication Technology

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

2016

DECLARATION

I declare that this project entitled “The Effect of Explicit Vocabulary Application (EVA) on students’ Achievement and Acceptance in Learning Explicit English Vocabulary” is the result of my own research except as cited in the references. The project has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.

Signature :

Name : Zailina Binti Zakaria

Date :

APPROVAL

I hereby declare that I have read this thesis and in my opinion this thesis is sufficient in term of scope and quality for the award of Master of Computer Science (Multimedia Computing).

Signature :

Supervisor Name : Dr. Ahmad Naim Che Pee @ Hanapi

Date :

DEDICATION

Alhamdulillah

To my beloved Husband, Mother, Daughter and Son

Zalina Kemat and Uzairah Mohd Ali

To my beloved Supervisor

To my beloved Lecturers

To my beloved friends

ABSTRACT

The purpose of this study was to investigate the effects of mobile learning application on students' achievement and acceptance in learning explicit English vocabulary in KPTM Bangi. A mobile phone application that was called Explicit Vocabulary Application (EVA) was developed for this purpose to be used by the experiment group students in learning the topic. The independent variable was the EVA application, while the dependent variables were the students' achievement in test and presentation, and the perception of the students after using the EVA. Their achievement was measured using pre-test, post-test scores, and presentation scores, while the perception was measured by using a questionnaire. A total of 36 students from two classes of semester one who enrolled in January 2016 were selected in this study. They were divided into two groups: control group and experiment group, which each group consisted of 18 students and the students that belong to the experiment group was required to have android smartphone in order for them to be able to use the application. The findings indicate: (1) no significant difference between the pre-test scores of the control group and the experiment group, (2) a significant difference between the pre-test and post-test scores after using the application, (3) a significant difference between presentation scores between the control group and the experiment group, (4) a significant positive impact on students who used the application. Overall the findings clearly indicate that the students that used the application have better achievement than those who did not in their test and presentation. Through this study, the EVA is proven to influence the students' learning and motivation.

ABSTRAK

Tujuan kajian ini adalah untuk menyelidik keberkesanaan penggunaan aplikasi untuk telefon pintar yang dipanggil EVA dalam pencapaian pelajar and tindak balas penerimaan dalam pembelajaran perkataan khas Bahasa Inggeris di KPTM Bangi. Untuk tujuan ini satu aplikasi pembelajaran yang dipanggil EVA telah dibina khas untuk telefon pintar bagi kegunaan pelajar dalam pembelajaran topik ini. Pembolehubah bebas dalam kajian ini adalah aplikasi yang dibina (EVA), manakala, pembolehubah bersandar pula adalah prestasi pencapaian pelajar dalam ujian akhir and pembentangan, dan juga persepsi pelajar selepas menggunakan system aplikasi tersebut. Pencapaian prestasi mereka diukur dengan menggunakan markah ujian awal, markah ujian akhir dan juga markah persembahan. Manakala, tahap tindak balas sikap dan persepsi mereka diukur dengan menggunakan soal selidik. Seramai 36 pelajar telah dipilih dalam kajian ini yang semuanya terdiri daripada pelajar-pelajar semester satu kemasukan Januari 2016 di KPTM Bangi. Pelajar-pelajar ini dibahagikan kepada dua kumpulan, iaitu kumpulan terkawal dan kumpulan kajian. Setiap kumpulan mempunyai seramai 18 orang ahli dan mereka yang termasuk dalam kumpulan kajian wajib mempunyai telefon pintar yang berplatform android bagi membolehkan mereka menggunakan aplikasi tersebut. Hasil kajian ini telah merumuskan: (1) tiada perbezaan yang signifikan dalam markah ujian awal bagi kedua-dua kumpulan, (2) ada perbezaan yang signifikan dalam markah ujian awal dan ujian akhir bagi kumpulan yang menggunakan aplikasi EVA, (3) ada perbezaan signifikan dalam markah persembahan antara kumpulan terkawal dan kumpulan kajian (4) ada kesan yang sangat positif kepada sikap dan motivasi pelajar yang menggunakan aplikasi EVA dalam pembelajaran perkataan khas Bahasa Inggeris. Pada keseluruhannya, hasil kajian dengan jelas menyatakan yang penggunaan aplikasi EVA dalam telefon pintar ini mempunyai impak yang sangat positif dalam pencapaian markah ujian dan persembahan berbanding dengan mereka yang tidak menggunakannya. Dengan kajian ini juga, ia telah membuktikan yang aplikasi EVA telah mempengaruhi secara positif dalam pembelajaran pelajar-pelajar dan pada masa yang sama telah meningkatkan motivasi mereka.

ACKNOWLEDGEMENTS

Bismilahirrahmanirahim..

In the Name of Allah, Most Gracious, Most Merciful,

First and foremost, Alhamdulillah to Allah, for giving me an opportunity, courage and patience to accomplished this study.

I would like to express my sincere appreciation to my supervisor, Dr. Ahmad Naim Che Pee @ Che Hanapi, and my co-supervisors, Dr. Mohd Hafiz Zakaria, and Encik Ibrahim Ahmad, for their very awesome supports and guidance throughout this work.

Last but not least, I deeply indebted to Madam Zalina Kemat and Madam Uzairah Mohd Ali, English Lecturers of KPTM for sharing knowledge and to my treasured family, for their Prayers and inspiration throughout the period of this research.

TABLE OF CONTENTS

	PAGE
DECLARATION	
APPROVAL	
DEDICATION	
ABSTRACT	i
ABSTRAK	ii
ACKNOWLEDGEMENTS	iii
TABLE OF CONTENTS	iv
LIST OF TABLES	vi
LIST OF FIGURES	vii
LIST OF APPENDICES	viii
LIST OF ABBREVIATIONS	ix
CHAPTER	
1. INTRODUCTION	1
1.1 Introduction	1
1.2 Background and Rationale	2
1.3 Problem Statement	3
1.4 Research Objectives	5
1.5 Research Questions	5
1.6 Scope of Study	6
1.7 Research Significance	7
1.8 Research Methodology	9
1.9 Conclusion	9
2. LITERATURE REVIEW	11
2.1 History and Evolution of Mobile Learning	11
2.2 Definition and Characteristics of Mobile Learning	14
2.3 The Role of Multimedia in Teaching and Learning English	15
2.4 The Importance of Vocabulary in ESL Communication	16
2.5 Geospatial Data Retrieval	17
2.6 Analysis on Current Geospatial Data Retrieval Approaches	22
3. RESEARCH METHODOLOGY	24
3.1 Introduction	24
3.2 Research Design	24
3.3 Participant	34
3.4 Expected Output	35
4. RESULT AND DISCUSSION	36
4.1 Introduction	36
4.2 Analysis of Pre-test Scores from Control Group and Experiment Group	36
4.3 Analysis of Pre-test and Post-test Scores from Experiment Group after Using EVA	41
4.4 Analysis of Presentation Scores from Control Group and Experiment Group	43

4.5	Analysis of Questionnaire Data from Experiment Group After Using EVA	44
4.6	Summary of Results	46
5.	CONCLUSION AND FUTURE WORK	47
5.1	Introduction	47
5.2	Discussion of Findings	47
5.3	Conclusions	50
5.4	Recommendations for Future Research	51
	REFERENCES	53
	APPENDICES	64

LIST OF TABLES

TABLE	TITLE	PAGE
1.1	Free English Vocabulary Online Apps Available in Android Smartphone	8
2.1	E-learning and M-Learning Terminology	13
2.2	Comparisons of E-Learning to M-Learning	13
2.3	Mobile Learning Definitions	14
2.4	Theory –based Categories of Mobile Activity	15
3.1	Language Faculty Survey (N = 5)	25
3.2	Quantitative Data Analysis	33
4.1	Pre-test Scores from Control Group and Experiment Group	37
4.2	Descriptive Statistics: Pre-Test Scores for Control Group and Experiment Group	37
4.3	Post-test Distribution of Scores for Control Group and Experiment Group	38
4.4	Post-test Scores from Control Group and Experiment Group	39
4.5	Post-test Distribution of Scores for Control Group and Experiment Group	40
4.6	Pre-test and Post-test Scores from Experiment Group	41
4.7	Descriptive Statistics: Pre-test and Post-test Scores of Experiment Group	42
4.8	Paired t-Test of Pre-test and Post-test for Experiment Group	42
4.9	Control Group Scores for Class Presentation (N = 18)	44

4.10	Experimental Group Scores for Class Presentation (N = 18)	44
4.11	Experiment Group Survey (N = 18)	45
5.1	Research on Student Learning and Mobile Devices	49

LIST OF FIGURES

FIGURES	TITLE	PAGE
2.1	Perspective of Learning Paradigms	12
2.2	E-learning, M-Learning and Flexible Learning Relationship	12
2.3	Main Page of http://freerice.com/	19
3.1	EVA Main Page	29
3.2	EVA Main Menu	29
3.3	Cooking Ingredients Screen	30
3.4	Cooking Verbs Screen	30
3.5	Cooking Tools Screen	31
4.1	Distribution Graph of Pre-test Scores for Control and Experiment Groups	38
4.2	Distribution Graph of Post-test Scores for Control and Experiment Groups	40

LIST OF APPENDICES

APPENDIX	TITLE	PAGE
A	List of Cooking Vocabulary	64
B	Pre-Test And Post-Test Questions	76
C	Faculty Survey	82
D	Presentation Evaluation Form	86
E	Learners Questionnaire	87

CHAPTER 1

INTRODUCTION

1.1 Introduction

For the past decades, mobile devices have been progressively developed from a luxury item to necessity. The reduction in cost tremendously makes the gadget more affordable and it makes higher institutions students can afford to have them. A report published by Malaysian Communications and Multimedia Commission in 2014 (MCMC, 2014), showed that 35.1% Malaysians of age 20 to 29 dominated the hand phone usage in Malaysia. This percentage included students in higher institutions in Malaysia. It was also reported that the use of smartphones continued to grow in 2014 and it continues to grow until now. Since the internet penetration reached 66% among Malaysian of total population of 29 million (MCMC, 2014), it has inspired me to develop an application that can be used by the youth in higher institution to learn explicit English vocabulary that can be accessed by smartphones instead of learning using traditional methods in class. The main reason to choose English language vocabulary as the focus in this study is because English has been a very important language around the world as it is used widely for communication across borders. English language had been introduced to Malaysian since British colonial government and still continues even after the independence of Malaysia in 1957. The language has been introduced as a language of social context, sociocultural, education, business, industries, media, library, political, and communication.

English language is expanding in Malaysia as communication language in working and education. Unfortunately, many students feel that learning English as a second language (ESL) is hard and challenging because so many elements influence the effectiveness of the learning like motivation, gender, age and social-cultural background (Balderrama & Diaz-Rico, 2006). In learning ESL to Malaysian students, it is vital to make the teaching and learning process more interesting. Educators must create flexible, interactive and systematic environment to facilitate the learning process. When student learn, they gain new skills that effect in their intellectual development and transformation. The improvement and the effectiveness of a learning process could be measured by their transformation and achievement (Willett, 1994). In order to investigate students English language proficiency a lot works need to be done to examine the relationship between the learning needs and the technology used especially when dealing with English for specific purposes (Nallaya.S, 2012). In this study, the usage of the an explicit English vocabulary application in Android smart phones is the main activity in order to establish a relationship between the tool and the communication competency and vocabulary acquisition among the Semester One students in KPTM Bangi.

1.2 Background and Rationale

Nowadays English has been used by Malaysians to communicate with the global community (L.H. Phan et. al., 2013). As the importance of English language increases, learners should be introduced to methods that can enhance the effectiveness of the teaching and learning process of ESL in addition to the traditional teaching methods. The emerging and developing of multimedia technology and its application is a new technique on English teaching model in the modern era. Multimedia has been proven as a technology that plays a positive role in encouraging activities and initiatives of student in English class (Solanki et.

al., 2012). They also found that Multimedia teachings enhance teaching content that initiates the “student-centered” teaching pattern and essentially improve the class efficiency. Due to large classes in learning English subject, it somehow creates difficulties in delivering verbal communication. The utilization of multi-media can initiate a personalised and co-operative teaching compared to the traditional teaching model which is stressed on teachers’ instruction which produced limited information to the student in class. On the other hand, multimedia technology creates more attractive visual and authentic environment for the students to increase their interest and initiatives during and after class to gain more information. By using the multi-media technology, the process of English learning will be more “student-centered” but less time-consuming in class. Therefore, the new method of teaching promised the improvement of teaching quality and communicative competence among students (Solanki et. al., 2012).

1.3 Problem Statement

English as the second language is thought to all Malaysian since kindergarten until high school and higher institutions. The English language is a compulsory subject that must be thought in all schools including government schools and private schools. This language is thought to all Malaysians in schools in hoping that they can master the language in order to be part of global society. Surprisingly, even though they have learnt English for at least 11 years in school system, most Malaysian still have not mastered the language efficiently. Students in colleges especially in Kolej Poly-Tech MARA (KPTM) all over Malaysia are still having problems to communicate in English well and this result in poor communication skills among graduates. As a result of that, the graduates fail to converse good English during interview and on job as a result of lacking of English language proficiency and confidence. This problem contributed to high rates of

unemployment. The Malaysian Insider (2014) reported that 60% of the young recruits' main problem was low English proficiency. In September 2014, a similar survey was conducted by JobStreet.com stated that 55% of companies who took part in the survey said that less English proficiency was the major reason that contributed to the unemployment among graduates (The Malaysian Insiders, 2014). Since English language is a global language for communication and education, proficiency in English is crucial to all Malaysians if they want to be recognized in global society. Even though many higher institutions in Malaysia use English as the medium of instructions in their curriculum, most students and graduates especially Malays still cannot improve their communicative competency during studies and working environment. The main problem is they are lacking in confidence due to lack of English vocabularies. Students of ESL must have a certain level of knowledge of vocabulary for successful communication to happen (Longhurst, 2013). Surprisingly, most students or graduates know how to write English well, but when it comes to verbal communication, they simply cannot fulfil the task well. They think too long in order to construct just a simple statement and this can affect their credibility especially during job interviews. Therefore, the construction of this study will focus on the examination of the relationship between the English communication performance of Semester One students and the mobile application in learning explicit English vocabulary. An Explicit Vocabulary Application (EVA) that is going to be developed is focusing in cooking vocabularies which include cooking verbs, cooking ingredients and cooking tools. The main reason why cooking vocabularies are chosen in this application to be used in this research is because they are daily vocabularies to the students and hopefully it will make them feel more confidence during presentation.

1.4 Research Objectives

In this research, we focus to study on the effectiveness of teaching and learning explicit English vocabulary using Explicit Vocabulary Application (EVA) via mobile phones in ESL classroom. It is my aim to establish the relationship between the used of the Explicit Vocabulary Apps (EVA) in teaching and learning cooking vocabulary to ESL students could ultimately enhance the overall communicative ability (Schmitt, 2000, p. 116) and vocabulary acquisitions at the end of the session. The objectives of this study are:

- a. To investigate the technique that is used by the lecturer in teaching English vocabulary in KPTM Bangi.
- b. To develop an Explicit Vocabulary Apps (EVA) to motivate the students in learning explicit English vocabulary.
- c. To evaluate the effectiveness of the mobile apps in improving vocabulary acquisitions and words pronunciation in the hope of enhancing their communication competency.

1.5 Research Questions

This study will use quantitative method to gain the answers to the following research questions:

- Is there any significant difference on the pre-test scores of control group and experiment group?
- Is there any significant difference between the pre-test and post-test scores of experiment group?

- Is there any significant improvement in terms of words pronunciation between the control group students and the experiment group students who use EVA during class presentation?
- Is there any significant improvement in communication competency among students who use EVA?
- What is the acceptance level of students on the formal use of mobile application in ESL learning in the classroom?

1.6 Scope of Study

The focus of this study is to discover the effectiveness of learning explicit English vocabulary using the EVA among semester one students of KPTM Bangi who enrolled in January 2016. This study will focus on two groups of students; a Control Group and an Experiment Group which each group consists of 18 students regardless of gender and level of English proficiency. The requirement of the experiment group students is that they must have android smart phones to make them able to use the EVA application. Students with iPhone cannot use this application since the language that was used to develop this application was only for Android platform. The identified students need to download the application through their smartphone once they got instructions from their English lecturer who is also the test examiner and the presentation observer. The EVA is used by the lecturer as a supplementary tool in teaching explicit cooking vocabularies including ingredients, verbs and tools that are going to be used in their cooking project presentation during their class session. The cooking topic is used in this study because we want to introduce daily vocabularies to the students to make them feel more confidence during presentation. The participants that were chosen were semester one of KPTM Bangi's students as they were the groups which most likely have the lowest English proficiency

skill compared to students in their upper semester. At the same time, those participants were likely had same level of English background since most of them were high school leaver who are from age 19 to 22 years old.


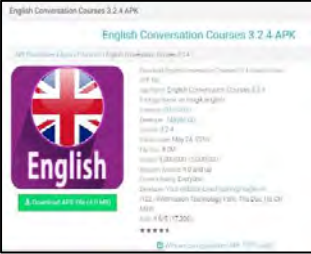


1.7 Research Significance

This research will help students in learning and gaining more explicit English vocabulary during their study in college and hoping that they can improve their vocabulary databases in order to perform better in their speaking and oral presentation. The acquisition of vocabularies is very important to the ESL students compared to grammar because without enough vocabulary, people cannot convey good message to the other party and it can create communication breakdown. From previous researches, scholars stated that vocabulary acquisition is improved if they learn using audio and visual components concurrently. Currently there are some applications that are available online to learn English vocabularies such as *Busuu*, *English Conversation Course*, *English Listening*, and *uVocab*. Table 1.1 shows the applications that are freely available in the internet to learn English vocabulary.

Most applications available worked as generic English dictionary for users where students had to type for the words that they are looking for spelling, pronunciation, correct usage or any other aspect of English. Most of these applications did not feature any related images for the searched words. In comparison, the apps (EVA) that was developed for this research focused on explicit vocabulary that they have to learn for the subject assignment. The apps was equipped with features such as English word pronunciation, images for each word and Malay language translation which should help the learners easily to acquire the vocabulary that they want to use during presentation. Since Malay language is the first language (L1) of the students, we did not want to ignore them in the application. Even

though our objective of this study was to improve their English vocabulary acquisitions and words pronunciation, but by adding those Malay words can assist them to understand better. This was proven by a research that we cannot omit the appearance of the first language (L1) in ESL learning process (Schweers, 1999; Larsen-Freeman, 2000; Nation, 2003; Butzkamm, 2003). The first language (L1) when used properly can be very beneficial in learning second language. This statement was supported by Brown (2000, p. 68) who claimed that the L1 can be an assisting factor and not just an intrusive factor, and teachers are encouraged to integrate the L1 into second language lesson in order to influence students' interest in engaging them with the second language (Schweers, 1999). The apps developed also used as an additional teaching tool to assist the lecturer in class to teach explicit English vocabulary to enhance the vocabulary acquisition in order to improve communication competency among KPTM Bangi students.

Table 1.1: Free English Vocabulary Online Apps Available in Android Smartphone

 <p style="text-align: center;">Busuu</p>	 <p style="text-align: center;">English Conversation Course</p>
 <p style="text-align: center;">English Listening</p>	 <p style="text-align: center;">uVocab</p>

1.8 Research Methodology

This research will use the ADDIE model which consists of Analysis, Design, Development, Implementation, and Evaluation phases. The analysis phase is done by using literature reviews and needs analysis which consists of survey to KPTM Bangi English lecturers. The findings of the analysis phase will be used as guidelines and references for the next stages. A total of 36 students from two classes in semester one in KPTM Bangi were selected as the respondents in this study. The development of the EVA application used Apps Inventor 2 which is an open source platform that is specifically used to develop applications for android mobile phones. The topics chosen were Cooking Ingredients, Cooking Verbs and Cooking Tools. In this application, the students will be introduced with fifteen cooking ingredients, twenty-four cooking verbs and twelve cooking tools. The application must be applied in android smart phones. Therefore students that were selected to be in the experiment group must have this type of smart phones in order for them to apply the EVA. In this study, we employed quantitative method approach. Quantitative data was obtained through a close-ended survey, pre-test, post-test, observation and close-ended questionnaires. The quantitative information gained from the survey, pre-test, post-test, observation, and questionnaires was analysed by SPSS version 23 to produce descriptive and inferential statistics.

1.9 Conclusion

The Malaysian Communications and Multimedia Commission (MCMC) reported in 2014 that 35.1% Malaysians of age 20 to 29 dominated the hand phone usage in Malaysia and the internet penetration reached 66% among Malaysian and it continues to grow until now. The increase of this technology usage has changed teaching and learning methodology especially in teaching and learning English as a second language. Students in