Teaching English Language Vocabulary to ESL Learners via mobile phone applications short message service (SMS):

An Investigation Based on Arabic-speaking Learners

تدريس مفردات اللغة اُلإنجليزية لمتعلمي الإنجليزية كلغة ثانية باستخدام تطبيق الهاتف المحمول خدمة الرسائل القصيرة(SMS)

دراسة اكاديمية استقصائية أجريت على الطلبةالناطقين باللغة العربية

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Abstract

Vocabulary is the corner stone in learning English language that affects the four skills of the language (reading listening, speaking and writing). Accordingly, this dissertation investigates students' low achievement in learning second language vocabulary and how to improve their attainment by assimilating teaching, learning and technology in a model of partnering pedagogy. The study focuses on EFL male students in one of Dubai's secondary schools aged 16:19.

The diffusion of mobile phones all over the world is continually increasing , this dissertation applies mobile phones applications SMS in teaching and learning EFL vocabulary due to its comparatively low cost, quite use, asynchronous nature, and features of privacy . The study used the mixed approach (qualitative and quantitative) to investigate the effectiveness of using SMS applications on learning English vocabulary. Fifty students of grade 12 in Hamdan Bin Rashid for Secondary Education were the subjects of the study. Twenty five students in the control group studied academic vocabulary list of 60 words as a printed material. The other 25 students forming the experimental group studied the same 60 academic words via mobile phone applications (SMS). An analysis of the result showed no significant difference between both groups in the immediate post-test while there was a significant difference in the delayed post-test which signifies the effectiveness of using mobile phone applications in teaching and learning English vocabulary.

Key words: Vocabulary learning, Mobile phone, SMS

الخلاصة:

المفردات هي حجر الزاوية في تعلم اللغة الإنجليزية و التي تؤثر على المهارات الأربع للغة (القراءة والاستماع والتحدث و الكتابة) . ولذلك ، تبحث هذه الأطروحة أسباب تدني مستوى الطلاب في تعلم مفردات اللغة الإنجليزية و كيفية تحسينه من خلال دمج التعليم والتعلم بالتكنولوجيا في نموذج للشراكة التربوية . وتركز الدراسة على متعلمي اللغة الانجليزية من الذكور في واحدة من المدارس الثانوية بدبي الذين تتراوح أعمارهم بين 16:19.

بسبب استمرار تغلغل الهواتف النقالة في جميع أنحاء العالم ، تطبق هذه الأطروحة خدمة الرسائل القصيرة SMS في الهواتف النقالة في تعليم و تعلم مفردات اللغة الإنجليزية باعتبارها واحدة من التطبيقات ذات التكلفته المنخفضة نسبيا، والاستخدام الهادئ، و أنها لا تتطلب الرد مباشرة، بالاضافة الى مراعات مبدأ الخصوصية. استخدمت الدراسة المنهج المختلط (النوعي والكمي) للتحقيق في فعالية استخدام تطبيق الرسائل القصيرة (SMS) على تعلم مفردات اللغة اللإنجليزية. خمسون طالبا من الصف 12 في حمدان بن راشد للتعليم الثانوي شاركوا في الدراسة. درس خمسة وعشرون طالبا في المجموعة الضابطة قائمة المفردات الأكاديمية من 60 كلمة مطبوعة على ورق بينما درس 25 طالبا آخرين في المجموعة التجريبية نفس 60 كلمة الأكاديمية عبر تطبيق (SMS) في الهاتف المحمول .وأظهرت نتيجة التحليل أنه لا يوجد فرق كبير بين المجموعتين في الاختبار المباشر في حين كان هناك فرق كبير في الاختبار المتأخر مما يدل على فعالية استخدام تطبيق (SMS) في الهاتف المحمول في تعليم وتعلم مفردات اللغة الإنجليزية.

DEDICATION

This Research Paper is lovingly dedicated to the soul of my parents who had been my constant source of inspiration. They have given me the drive and discipline to tackle any task with enthusiasm and determination. I also dedicate this work to my wife as a humble sign of gratitude. Additionally I heartedly dedicate this work to my promising lovely children Sara, Sama and Saif, who are the source of my happiness and the core of my life as they make it really meaningful. They are also the genuine motive for my study and success as they are my sole and utmost consideration for every decision I take in this life.

Acknowledgements

My hope in writing my paper on using mobile phone in teaching and learning is not just to get a scientific degree but also to let educationalists think about new pedagogy that strengthens partnering and think about education in its broad sense. Is it education for tomorrow or for the rest of the students' lives? Hope and optimism derives from those educationalists who think to change the bored looks on our students' faces.

List of Tables

Number	Title	Page
Table I	Discovering learning burden	23
Table 1	Results of the pre- test of the Experimental and Control Groups	40
Table2	Results of the immediate post-test of the Experimental and Control Groups	41
Table 3	Results of the delayed post-test of the Experimental and Control Groups	43
Table 4	Coxhead (2000) Academic Word List	59
Table 5	The Academic word list of the Ministry of Education supported with meaning.	69
Table 6	The Academic Word List with parts of speech, contest, and Arabic synonym.	72

List of Figures

Figure Number	Title	Page
I	Atkinson-Shiffrin model	16
1	The Experimental Group pre-test	39
2	The control Group pre-test	40
3	the experimental group immediate post test results	42
4	the control group immediate post test results	42
5	Figure 5.The experimental group delayed post test results	44
6	The control group delayed post test results	44

Table of Content

Chapter 3
3- The study   30-37

3.1 – Participants: 30-32

3.2 Setting   32-33

3.3 Materials   33-37

Chapter 4

4-Findings   38-46

4.1 Research question 1   38-40

4.2 Research question 2.   41-43

4.3 Research Question 3   43-45

4.4 Research question 4   45-46

Chapter 5

5- Discussion   47-50

Chapter 6

6. Conclusion   51-52

References   52-58

Appendices   59-91

Chapter 1

Introduction

1.1   Background

In all the hoopla and debate that discuss the falling standard of students in learning English language as a foreign or a second language, the fundamental causes are ignored. This dissertation investigates the effectiveness of teaching vocabulary, the most important component of the language, via mobile phone applications (SMS). For many years, vocabulary was seen as an incidental component of the language, when teaching and learning languages were grammar based. With the advent of the communicative method, vocabulary gained a better position in relation to the position of grammar although the two are obviously interdependent. To show their equal importance vocabulary was regarded as the flesh and the vital organs while grammar was regarded as the skeleton. With the wide spread of English language as the main language of the internet, science and research, vocabulary occupied a dominant position. Nowadays, vocabulary is recognized by all the educational stakeholders as the most important part of the language. Additionally, this recognition is clarified by Schmitt (2008, p.329) who stated that "One Thing that students, teachers, material writers, and researchers can all agree upon is that learning vocabulary is an essential part of mastering a second language" .Moreover, vocabulary is considered as the building blocks that are used in constructing the language. Accordingly, languages cannot be learned without the most important part of them. Additionally language is defined as a means of communication, so it depends on sending and receiving comprehensible messages. Besides, language cannot be comprehensible without knowing much vocabulary. Moreover lexical competence is an integral part of the communicative competence; therefore teaching vocabulary is the central component of teaching a language. Brown (2007, p. 435) pointed out the importance of vocabulary by stating that "lexical items are basic to all of the four skills" and "the efficient storage (competence) and adept retrieval (performance) of those units". The importance of vocabulary to reading is confirmed by Beck et al (2002, p.1) who clarify that "A large vocabulary repertoire facilitates becoming an educated person to the extent that vocabulary is strongly

related to reading comprehension in particular and school achievement in general".

The common question related to vocabulary teaching is what vocabulary should be taught to what level. For example in grammar, a teacher should teach the uses of verb *to be* before teaching its use as an auxiliary in continuous tenses. Although some books contain word lists that should be covered during a certain course, these lists are not standard for all books in the same level. For example, the course book adopted by the UAE ministry of education "On Location" has a low coverage of the academic words, while the academic words are needed to prepare students for the university and for the proficiency exams adopted by National Admissions and Placement Office (NAPO) to prepare students for The Common Educational Proficiency Assessment (CEPA). In a nutshell, the present study used the first three sublists of Coxhead 2000 academic word list for two reasons. Firstly, the UAE ministry of education adopted them. Secondly, the first three sublists are required for the CEPA exam.

The other fundamental cause for the degradation of students' standards in learning English language as a foreign or a second language is the dated means of teaching. According to Dewey, J. (1916) "...if we teach today as we taught yesterday, we rob our children of tomorrow." Students should learn using the tools of their digital age. Prensky (2001) criticized the present way of teaching by stating that "Our students have changed radically. Today's students are no longer the people our educational system was designed to teach." Students change within the course of the world because of their afterschool experience with their digital tools. Designing education using traditional teaching aids causes duplicity in education that resulted in students' dissatisfaction. Mobile phone is one of the most extensively used instruments all over the world (Cui and Wang, 2008). The United Nation report of 2010 declared that there are 4.6 billion mobile phone subscribers all over the world. Besides, 6 billion messages are sent daily. It is also worth mentioning, mobile phone availability with students at school is 95% (Divitini, 2002).

Teaching using mobile phone has the merit of being able to learn anywhere and anytime. Consequently, students no longer suffer from the problem of class time constraint. On the other hand, the Mobile phone has a great advantage of providing students with high exposure of the targeted

material. The added value of mobile phone is that it is always in hand and can be fit in students' pocket that ensures its availability all the time and learning can occur all the time. Additionally, some researchers such as (Thornton and Houser, 2003, 2004, 2005) performed their studies in Japan and focused on what is called "the spacing effect". Students can learn better if they learn through certain doses of information that been exposed to detailed lesson presentation. The notion of "spaced effect" is supported by the empirical evidence of the cognitive psychology studies that confirm that constant and distributed learning is better than massed practice (Dempster, 1989 and Greene, 1989).On the same side, the researches of (Nation and Meara, 2002) confirmed the notion of "spaced effect". Comparing the paper materials to computer, the studies of (Thornton and Houser, 2005) showed what is called the "pushing message", where mobile phone has the merit of cumulative lesson which maximizes the exposure to information than the paper materials which offer lengthy and detailed presentation of the targeted information.

Different learners learn in different ways. For example, some students prefer studying words with pictures while others prefer to study vocabulary in sentences or accompanied with translation to L1. (Richards and Schmidt, 2002) call these differences "difference in cognitive style" .Furthermore, when the targeted language is not the medium of communication in the society, technological aids can facilitate the process of learning a foreign language (Rashtchi and Hajihassni, 2010). Consequently, using mobile phone applications can facilitate learning L2 vocabulary. Moreover, research on L2 vocabulary learning showed that representing vocabulary with models, realia or images can facilitate learning vocabulary. Through using mobile phones, words can be presented with images or even videos to illustrate the meaning (Chun and Plass, 1996). Psychologically, cognitive theories showed that using mobile phone in teaching L2 vocabulary is strengthened by the (dual-channels assumption) the human brain receive the new vocabulary verbally and visually.

1.2 The Scope of the Study

This dissertation discusses students' low achievement in English as a second/foreign language. Participants of the study were students of grade

12, arts section, Hamdan Bin Rashid for Secondary Education for boys, Dubai, UAE. Students of the public schools in Dubai lack lexical competence which is the main part in communicative competence. Besides, the lexical items are the essence of the four skills (reading, listening, writing and speaking). Once the lexical competence is low, performance in the four skills is also low. Students' low lexical competence has its reasons and results on students' achievement. As for the reasons, students in public schools study all the subjects in Arabic as Arabic is the main language of instruction. English is practiced only for fifty minutes a day. Using Arabic as the language of instruction deprives students from studying certain English lexical items related to subjects such as mathematics, science or history. Besides, Students communicate in Arabic in their after school life which affect their communicative competence negatively. Worth mentioning the teaching and testing methods that are followed in teaching all subjects including English focuses on memorizing and testing rather than real life communication, creativity and decision making.

As a result of the above mentioned reasons, students of the public schools suffer from being lectured, lack of respect and trust in their abilities to take the responsibility of their learning, lack of cooperation and communication with their peers on group work and projects, lack of creativity using their digital tools, lack of decision making as well as lack of lexical competence.

This dissertation studies the reasons, consequences and solutions to students' low lexical competence throughout studying variety of cognitive and educational theories that focus on the L2 vocabulary teaching and learning. The present study offers studying the academic word list in a creative way using technologies of the students' age with partnership with the students. The academic word list gains its importance from being a support to the text book that has shortage in the academic words. Besides, the participants of the study are students of grade 12 who will join the university and they need the academic words for their academia. Additionally the academic word list is needed for CEPA exam which is an essential requirement for joining the higher education system in the UAE.

To enrich the present study, the relevant literature including the previous studies on vocabulary using mobile phone were critically studied and presented in the literature review section. In a nutshell, this dissertation explores the problem of students' low attainment in learning L2

vocabulary in one of Dubai public schools and tries to present a genuine solution to the problem by trying some alternatives.

1.3   Aims and Objectives

This dissertation aims to show the importance of vocabulary to the EFL learners. Furthermore, the present study aims to critically examine teaching and learning in Dubai public schools. Additionally, this study aims to try a new approach to establish a pedagogical partnership with students using Mobile phones to teach and learn L2 vocabulary.

1.4   Research questions

Based on the above mentioned rationale aims and objectives this dissertation raises the following research questions:

1- How do the test results differ between the experimental and the controlled groups in the pre-test?
2- Is there a significant difference in learning between students who study vocabulary via mobile phone applications (SMS) and students who study vocabulary via printed materials?
3- Is there a significant difference in retention between students who study vocabulary via mobile phone applications (SMS) and students who study vocabulary via printed materials?
4- What are the advantages and disadvantages of vocabulary learning via SMS?

1.5   The Structure of the Study

This study contains six chapters. Chapter 1 is the introduction which presents the background of the study and the scope of the study. Besides the introduction section introduces the aims and the objects of the study as well as the research questions.

Chapter 2 represents the literature review where a historical preview about the change of the focus of learning changed from grammar based teaching to vocabulary based teaching. Additionally, vocabulary word lists are highlighted as an important part of this dissertation. Besides, criteria of knowing a word

are deliberately discussed, as well as the theories that dealt with vocabulary teaching and learning. Finally, the previous studies that dealt with teaching and learning vocabulary via mobile phone are discussed.

Chapter 3 introduces the study. The participants of the study with their background and their division to experimental group and control group are discussed. Besides, the settings of the study as well as the materials are highlighted in this chapter. Additionally, procedures of the study, the rationale and the ethical considerations are shown in this chapter.

Chapter 4 discussed the findings and the analysis of the results while chapter 5 highlighted the discussion, the pedagogical implications of the study and the limitations. Chapter 6 concludes the dissertation.

Chapter 2

2-Literature Review

One of the major challenges that face EFL learners in the Arabia in general is the limitation of their lexical competence. The present chapter discusses how focus of linguists changed from grammar-based teaching to vocabulary-based teaching. In addition, different vocabulary lists are going to be deliberated as an important part of this research. Furthermore, what a student should know about a word or the criteria of knowing words will be shown to draw the dimensions of words. Moreover, different theories and strategies of teaching and learning vocabulary will be represented. Finally, this chapter focuses on some of the previous studies that dealt with teaching vocabulary via mobile phone applications.

2.1 From grammar-based teaching to vocabulary-based teaching

2.1.1 Grammar-based teaching

Despite the central importance of vocabulary and grammar in English language, Wilkins (1972: 111) gave considerable importance to vocabulary, as he stated that "Without grammar, very little can be conveyed. Without vocabulary, nothing can be conveyed." David Wilkins was a British linguist who stressed the importance of vocabulary in 1972 when the Audio-Lingual Method was dominant in teaching and learning languages, and most linguists focus was on grammar. Furthermore, the era between 1940s and 1960 witnessed the birth and the adulthood of the behaviorism theory which considered language as behavioral skill mastered by forming the right habits. Consequently, pioneers of the Audio-lingual Methods such as Charles Fries declared that learning English language started with grammar as he stated that "sound linguistic principles" (Fries, 1945). Accordingly, The English language classes were merely intensive drilling on structural patterns and their pronunciation. The considerations of the Audio-lingual Method were analyzed by Decarrico (2001: 285) "because the emphasis was on grammatical and phonological structures, the vocabulary needed to be relatively simple, with new words introduced only as they were needed to make the drills possible." Additionally, it was believed that once a learner perfected

grammatical rules, vocabulary can take care of itself. On the same side, the Chomskyans during the 1950s and the early 1960s were away from the behaviorism theory; they confirmed that language learning cannot be a matter of a habit or repetition and reinforcement because children do not imitate the adult but use their own language. Additionally, Chomsky did not believe in teaching grammar as children can build their grammar. The consideration of grammar as the central base in learning languages was described by Knight (2001: 149) as "that language is primarily oral, and that it is a rule-governed system understandable in terms of increasing levels of complexity."

2.1.2 The turning point

The advent of the Communicative Language Teaching as a result of the work of Dell Hymes' (1972) notion of communicative competence and Halliday (1973) who focused on the functional use of a language, formed the start of the turning point from grammar dominance to vocabulary dominance. Despite of the notion of the communicative competence and the functional use of the language, there was not a dramatic change from the focus on grammatical rules drilling to vocabulary teaching. On the contrary, the 1970s witnessed vocabulary as a second dominant factor of language teaching and learning. Gradually, with the work of Swan and Walter (1984), who declared the importance of vocabulary teaching and learning in the process of learning languages. During the interval between 1980s and 1990s a breakthrough happen to move the interest from grammar to vocabulary. This development was summarized by Carter (2001: 43) "extensive corpora of spoken and written language and the creation of sophisticated computer-based access tools for such corpora." Collins Birmingham University International Language Database (COBUILD) project was an example of the development that influenced the EFL lexicology researchers in the late 1980s. Since then a flow of new authentic and natural examples of the language that are accepted by the native speakers enabled the researchers to study the behavior of words and expressions. Sinclair (qtd. in Carter 2001: 45) theorized that "Words enter into meaningful relations with other words around them, and yet all our current descriptions marginalize this massive contribution to meaning. The main reason for this marginalization is that grammars are always given priority and grammars barricade themselves against individual patterns of words."

2.1.3 Vocabulary-based teaching

On the other hand, Michael Lewis (1993) challenged the marginization of words by his lexical approach which was considered as an alternative to grammar-based approach. Here is the turning point which gave vocabulary the central position before grammar in learning and teaching English as Michael Lewis sees that language is 'grammaticalised lexis' rather than 'lexicalized grammar'. Moreover, the work of Michael Lewis gained its importance from two points. The first was that he used word 'lexis' instead of vocabulary to broaden the umbrella to contain individual words and lexical chunks. Lexical chunks are words related together such as 'happy occasion' 'if I were you'. The second point was that he declared that native speakers of English have a huge amount of lexical chunks that enable them to speak fluently and accurately. The lexical approach had its pedagogical implication. Teachers had to increase the individual words and the lexical chunks for students to communicate fluently and accurately like the native speakers. Consequently, a question emerged, how to increase students' vocabulary and lexical chunks?

2.2 Vocabulary word lists

Three approaches provided the answer for this question. First, the incidental learning approach which was summarized by Richards and Renandya (2002: 256) as "learning vocabulary as a by-product of doing other things such as reading or listening" meaning that student read and listen to variety of texts that increase their vocabulary and lexical chunks to enrich their banks of vocabulary. Besides, students can use these words and expressions in other contexts successfully. Second, explicating teachings approach, the focus on teaching vocabulary explicitly or center the students' activity to the development of vocabulary. Third, teachers developing strategies that enable students to increase their vocabulary account independently. The three approaches have their merits and demerits. Furthermore, the teachers and the students have the right to decide which approach suits the educational situation according to a number of factors such as students' proficiency, age, specialization and many others.

A pedagogical debate concerning which approach is suitable for which student was aroused. The incidental learning approach has its supporters such as Hunt and Beglar (2002: 256) justified that "most words in both first and second

languages are probably learned incidentally, through extensive reading and listening." Meaning that the more students read or listen the more vocabulary they gain. On the other hand, Schmitt (2000: 117) says "incremental in nature", meaning that words have variety of aspects such as form, meaning , register etc. which cannot be taught all at once, they increase along time. Accordingly, the incidental learning approach can be suitable for adult students not for the younger one. According to Schmitt the explicating teaching approach is more suitable for the beginners because of their limited range of vocabulary. Furthermore, Coady (1997) asked how can a young learner with limited range of vocabulary in his L2 read and comprehend a long text and explicit the meaning of the unknown words. Accordingly, Coady (1997: 229), called for "the beginner's paradox", which means that students should "learn enough words to learn vocabulary through extensive reading." Coady suggested providing students with a list of 3000 most frequently used words with translation to students' L1 can be useful for younger learners or beginners. On the other hand, Hunt and Beglar (2002; p.261) wondered about translation to L1 and how could translation affect the communicative competence, so they called for "knowing more than just its translated meaning or its L2 synonyms." They also called for "opportunities for elaborating word knowledge" by using known words to provide the meaning of the unknown words.

2.2.1 General Service List of English words

Writing about vocabulary word list, one cannot skip Michael West's (1953) A General Service List of English Words which is one of the most well-known. West's General Service list contains about 2000 word family. According to Hwang (1989) West's General Service list contains around 75% of the running words in nonfictional texts. Hirsh (1993) stated that West's General Service list contains around 90% of the running words in fictional texts. Although West's General Service list was used as a base for many graded readers, it faces two criticisms. The first related to size of the list. According to Engels (1968) the first 1000 words of West's General Service list cover about 75 plus of the running words of the nonfictional texts while the second 1000 words of West's General Service list cover only 4-5%. As for the age Richards (1976) criticized West's General Service list as it focus on the popular words in 1930s when it was prepared. These words (e.g. canal and crown) are no longer used in English as a second language while the list did not contain words that are so

popular in our age (e.g. computer). According to West (1953) he wanted to cover vocabulary that can be used by learners of the language including definitions of the words and excluding words that have the same function. This resulted in including some low frequency words and excluding high frequency words .Regardless of the criticism that targeted West General Service list, it is fundamental for learners of English as a second language or as a foreign language. Hwang and Nation (1989) and Hirsh and Nation (1992), reported that West's General Service list covers a wide range of texts.

2.2.2 Academic Word List

West General Service list is not the only vocabulary list for learners of English language but it was followed by other vocabulary lists such as the academic word list. (Campion and Elley (1971) and Praninskas (1972) suggested the academic word list for learners who finished the General Service Word List and intend to study specialized academic subjects. They searched for words that are not included in the General Service Word List and found in a wide range of academic courses and form their academic word list. On the other hand Lynn (1973) Ghadessy (1979) formed their academic word list by searching for the words that the university students wrote translation above them in their course books. All of the academic lists were included in a new list called University word list by Xue and Nation (1984). The university word list contains 800 word family related to the academia and not found in the general word list. On the other hand, Nation (2001) pointed out that the academic word list Coxhead (1997) containing 570 headwords is the best and essential for learners in the academia.

2.2.3 Technical Word List

Technical word lists contain words related to certain specialization such as economics, geography or technical lists. According to Nation (2001) these lists contain very special words that once you read the text you discover what subject you are dealing with. These word lists cover about 5% of the running words in technical texts. Dictionaries of technical items contain at most 1000 entries.

2.2.4 Low Frequency Word List

  Words which are not high frequency words, or academic words, or technical words or are not related to any subject area are called low frequency words such as the proper nouns and words that rarely used in English language such as *eponymous, gibbous, bifurcate, plummet, ploy*. They cover only 5% of the running words.(Hirsh, 1993) pointed out the limited scope of these lists as what is technical in a certain specialization may be low frequency word in other list .

The division of word lists into four divisions; general service word list, academic word lists, low frequency word list, and technical word list is important for teachers and syllabus designers to make a decision about what list they are going to use for what purpose. Their decision should depend on the frequency (low, moderate or high) and the range (wide or narrow). Maximizing students' benefits of the coverage of texts depends mainly on the correct decision of the word list and its suitability to the purpose of its usage.

2.3 The Criteria of Knowing a Word

Knowing the pronunciation and the meaning of a word is not everything about a word. Both teachers and learners of L2 vocabulary should focus on word knowledge for perfect teaching and learning .The present part spots light on five criteria that determine the full knowledge of a word; the Phonological Knowledge, the Syntactic Knowledge, the Morphological Knowledge, the Semantic Knowledge, and depth and breadth of the word Knowledge

2.3.1 The Phonological Knowledge

The importance of phonology stems from the studies of Brown and McNeil (1966) who discussed deliberately in their Tip of the Tongue phenomenon that learners tend to remember the initials and the finals of the words. Additionally, Aitchison (2003) discussed the same idea with a well-known technique called Bathtub Effect technique that a person in the bathtub all his body is covered except his head and toes (initials and finals). On the same ground Randall (2007, p103) stated that "the subjects could report different parts of the words; the initial sounds, the final sounds, the number of syllables, and the stress patterns." The phonological knowledge is very important for both teachers and learners of L2 vocabulary, as remembering the initials and the finals of words may lead to producing words other than

the targeted ones. Besides, learners of EFL should be aware of fundamental knowledge related to sounds, pronunciation, syllables and stress which are the main components of phonology.

2.3.2 The Syntactic Knowledge

Connecting the content words to the associated words is the essence of the syntactic knowledge. Connection between and among words occurs in two ways. The symbolic relationship concerns mainly with parts of speech noun, verb, adjective or adverb. To form a sentence learners connect nouns to verbs to other structural items to form a sentence. The other type of connection is the conceptual relationship between and among words to form a web of related words to produce concepts. Both the symbolic and the conceptual relationships help learners of L2 vocabulary to use flesh and organs (vocabulary) to fill in the skeleton (grammar) as(Hammer, 1991, p. 153)stated that "If language structure makes up the skeleton of language, then it is vocabulary that provides the vital organs and flesh,".

2.3.3 The Morphological Knowledge

The morphological knowledge is essential for L2 vocabulary learner as it shows the structure of the word. Some words contain stem and affix (e.g. misunderstanding) while others have only a stem or a root (e.g. water). Psychologically, words that have affixes are difficult in learning and retrieving because they are stored in two places in the brain while the stem only words are easy in memorizing and retrieving because they are stored in one place only in the brain. Learners of L2 vocabulary should acquire the morphological knowledge to build up words.

2.3.4 Semantic Knowledge

Language is not only used in classrooms but it is used everywhere. Accordingly, it is important for L2 vocabulary learner to study the semantic meaning in relation to the society. Some words are used to turn the meaning to be hidden such as in newspaper one reads 'Tax increases reduced to semantics' means that the government will increase tax using some misleading words.

2.3.5 Depth and Breadth of the word Knowledge

To have lexical competence, learners of L2 vocabulary should know the depth and the breadth of words. According to Snow (2005, p. 51) "Second language learners have shown to be impaired in depth of the word knowledge, even for frequently occurred words". The depth of a word means the literal meaning, synonyms, antonyms, morphological structure, syntactic use, phonological characteristics and the semantic meaning. On the other hand the breadth of a word means its relation to its related words. Knowing the depth and the breadth of a word helps EFL learners to enrich their account of vocabulary and have the lexical competence.

2.4 Teaching Vocabulary

There is an old joke that goes like this

Question: What do you need to know to be able to teach a horse?

Answer: More than the horse! (Adapted from Slavin 2012 p; 4)

The joke shows that the trainer and the horse are available but what is needed? Knowledge. Accordingly a teacher needs knowledge or skills to transmit the content to students mind. Not all the people who know can teach what they know .If someone is a walking encyclopedia but does not have the skills or knowledge to transmit knowledge to others; he cannot be a successful teacher. An effective teacher is the one who have the knowledge of the subject matter and the teaching and learning theories on one hand and the teaching skills on the other hand.

2.4.1 Vocabulary teaching and Learning Theories

The human brain is a meaning maker. Once a person sees, hears, touches, smells, tastes or feels something, within microsecond a process of relating the new piece of information to the previous ones starts and a decision is taken to memory the new piece of information or discarded (slivan 2012). Additionally, this process happens consciously or unconsciously. A teacher should know how to facilitate receiving new information and how to relate the new items of information to the previously taught ones. The following part deals with the psycho-educational theories that can help both teachers and learners to deal with vocabulary teaching and learning.

2.4.1.1 Information Processing Theories and L2 Vocabulary Teaching

The process by which information is processed and then remembered or forgotten was the main topic of researchers (e.g. Brown,and Cocking 1999;Tulving,and Craik,2000; Byrnes, 2001; Anderson,2005; Elias, and Saucier, 2006 Ashcraft and Radvansky, 2010) the process is known as Atkinson-Shiffrin model of information processing (Atkinson-Shiffrin 1968)(Summarized in figure 1) .The first point of the memory that deals with the received information is the sensory register where most of the received information is forgotten if nothing happened to them. Sperling (1960) performed an experiment on the sensory register by displaying a row of 12 letters to viewers and asked them to recall the top, meddle and the last letters of the row, none of the viewers gave the accurate answer. The educational implication of this experiment is that in presenting new vocabulary the teacher should not present so many and students should know beforehand the aim of the presentation. Moreover, we do not receive information from our senses as it is but they are influenced by our experience, state of mind and other factors where grasping the attention depends mainly on its relevance to us. Additionally, there are many ways to attract the attention of the students such as changing the level and the tone of the teachers' voice and increasing the amount of emotional content (real life situations). Third, using unusual stimuli to attract the attention of the student for example the science teacher who uses magic tricks in his lesson attracts more attention. Finally, telling the students that the following item of information is important can attract the students' attention.

If the students pay attention to the vocabulary the teachers present, the new vocabularies are sent to the second point of the memory system the short term memory or the working memory; a storage system that can hold limited information for a limited time (Ashcraft and Radvansky, 2010). The short term memory has two limitations. The first is that the short term memory can keep new information for at most 30 seconds. Accordingly, the teacher should consolidate the new vocabulary by rehearsal or repetition (Karpick and Roedinger, 2007). The second limitation is that the short term memory has limited capacity. It can receive from five to nine items a time (Thompson, 2000). Accordingly a teacher should not present more than nine vocabularies each lesson (Engle 2001). Of course there are individual differences concerning short term memory limitations. Persons' previous experience can

enhance the capacity of the short term memory (Engle, Nation and Cantor, 1990).

Long term memory is a large store that cannot be fully filled during a life. Once information reached long term memory, it cannot be lost (Tulving,and Craik,2000;). Long term memory is divided into three parts the episodic memory, semantic memory and the procedural memory (Ashcraft and Radvansky, 2010). The episodic memory is the memory that stores events of one's life. The semantic memory contains facts theories and generalized information. The procedural memory contains "knowing how" the skills and strategies. The process of learning vocabulary is likely happen in the semantic memory where the web of information or the schemata. The pedagogical implication is that vocabulary should be well organized into schemata to be easy in retaining.

Figure I

Atkinson-Shiffrin model
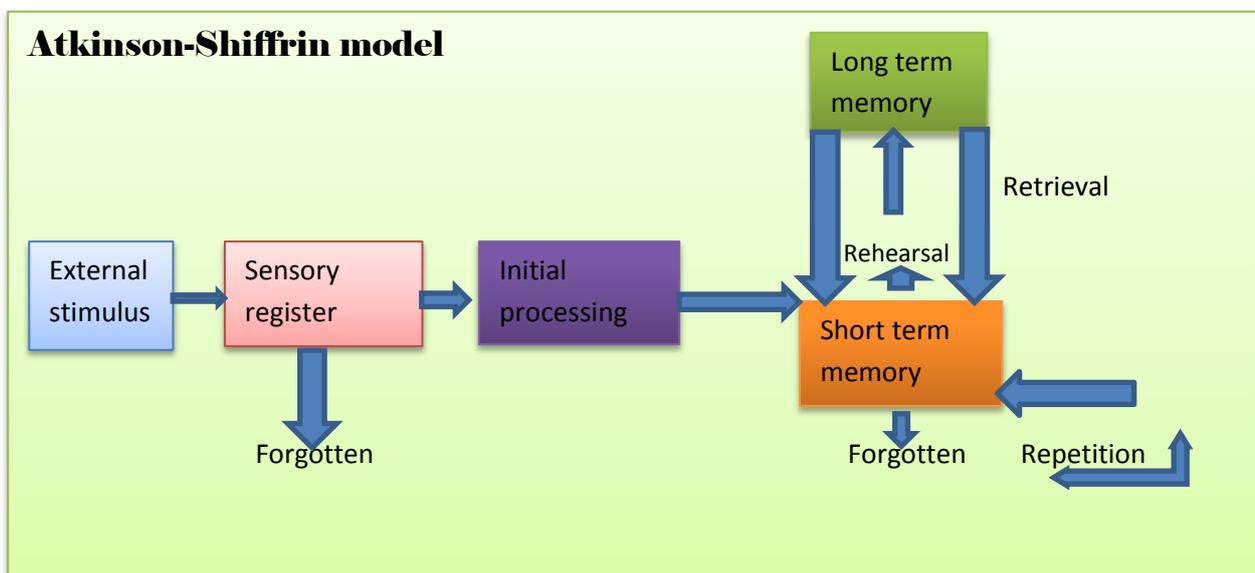
Source: Slavin (2012,p 127)

Atkinson-Shiffrin model is not the only model that dealt with information processing but there are other two models that discussed specific points deliberately. The two models are Level-Of-Processing Theory and Dual Code Theory.

A- Level-Of-Processing Theory (Tulving,and Craik,2000;) theorizes that people subject stimuli to different levels of mental processing and retain only the most thorough processing. (Craik, 2000) divided processing into two types of processing deep processing and shallow

processing. Shallow processing requires little mental efforts and not easily retained. For example if you see a boy, you can hardly remember him. On the other hand, deep processing requires more mental efforts. For example, if you know the boy's name you will likely remember him, but if you know that the boy is your new student in class you will remember him. Bower and Karlin (1974) asked a group of their students to look at the yearbook and classify photos as male and female, and asked the other group to classify the photos as very honest and less honest. The first group could not retain any of the photos but the second group could because the honesty rater requires more mental efforts than the gender rater. As for teaching implication the more information the student practices about a word (e.g. meaning, form and use) the better in retaining.

B- The Dual Code Theory Clark and Paivio, (1991) theorizes that information is stored in the long term memory in visual (episodic memory) and verbal (semantic memory). Recalling will be better if you hold the information in two formats better than one. Mayer (2008b) suggested that one can remember the face of a person better if he connects the face to his name.

The pedagogical implications of the information processing theories on vocabulary teaching and learning can be crystalized in the verbal learning strategies by (Ashcraft and Radvansky, 2010).Verbal learning activities are paired associate learning, serial learning and free recall learning. Paired associate learning means to associate two things together if you remember one you remember the other. As for vocabulary associating spelling of a word to its pronunciation and its meaning and its use can lead to remembering it easily. Serial learning means memorizing items in order and recalling them in the same order. It can be useful in vocabulary list memorization. Free-recall learning means to remember items but not in order. For example remembering words related to one subject without order as in schema model.

2.4.1.2 Behavioral Learning Theories and L2 Vocabulary Teaching

The systematic study of learning starts with the behavioral learning theory in the late 18th century and the beginning of the 19th century. Learning languages in general and vocabulary in particular is seen as a process of stimuli and response (Skinner, 1957). According to the principles of behaviorism teacher is the center of the educational process (a sage on the stage). Accordingly, they

have intensive focus on the stimuli response as an essence to the associative learning that provides clear idea of the learnt material. Besides, Behaviorists see learning as a building process that starts from the bottom to the top from parts to the whole. Accordingly, drilling on vocabulary and memorization were their main focus which is not completely refused. This trend was greatly praised by Lightbown and Spada (2004; p6) who considered the process of building habits is the foundation of learning a language by pointing out that "Traditional behaviorists believed that language learning is a result of imitation practice, feedback on success, and habit formation." Additionally, Randall (2007, p.6) confirmed the importance of stimuli response in learning L2 vocabulary by stating that "The central conditions for effective language learning is that of making language processing automatic. The tying of a particular stimulus to a response through a process of intensive practice is an obvious mechanism for attaining such automatic." On the other hand, behaviorism was bitterly criticized as considering learning languages is a relation between stimuli and response while language is more than building a habit. At all times, behaviorists focused on the role of reinforcement which is still used everywhere. Behaviorists differentiate between and among the different types of reinforcement. Primary reinforcement is closely related to the primary needs of the human being such as food and security. The secondary reinforcement is closely related to the secondary needs of people such as the need for praising and appreciation. The positive reinforcement is pleasurable consequences given to strengthen a preferable behavior while negative reinforce is used to strengthen a release from unpleasant situation. For example, a father who releases his son from doing the dishes to complete his homework is a negative reinforcement (Landrum and McDuffie, 2008). On the contrary, some teachers punish their students as a negative reinforcement. Worth mentioning here, punishment is used to weaken a response while negative reinforcement is used to strengthen responses. Furthermore, the intrinsic reinforcement stems from inside such as the sense of satisfaction that stems from achieving goals. The extrinsic reinforcement comes as a reward from the teacher. All these types of reinforcement are used during teaching vocabulary items and ask the students to provide synonyms and antonyms for the same word in different context.

2.4.1.3 The Social Learning Theory and L2 Vocabulary Teaching

Albert Bandura accepted most of the behaviorists' principles and added a focus on the effect of the cue on the behavior and the internal mental processes assuring that thoughts affect actions and actions affect thoughts (Bandura, 1986). According to Bandura, Skinner ignored the role of modeling and imitation and the benefits from others successes or failures. Bandura, (1986) and Schunk, (2000) see learning is shaped by model more than consequences. Bandura (1986) classifies observational learning into four phases. The first phase is the attentional phase or paying attention to a model. In classroom a teacher can be a model for his students to attract their attention. Retention phase is the second phase after getting the attention of the students a teacher presents the new vocabulary to imitate and give the opportunity to the students to practice or to rehearse. Reproduction phase is the third phase where students start to produce their own model. For example the teacher models pronouncing new words and students imitate his pronunciation and after that students produce their own pronunciation comparing their pronunciation to the model. Motivational phase is the last stage of the motivational learning as the production of the students is reinforced if it matches the model.

Another model of social learning theory is the self-regulation model (Zimmerman, 2000 and Pajares, 2004). Bandura (1997) theorized that people observe their own behavior and judge their behavior against their standards and reinforce or punish themselves. This model has its pedagogical implication on vocabulary teaching. Because of the time limitation of the classroom, students are asked to develop their vocabulary independently outside the walls of the classroom. Accordingly, the self-regulation model can be used by students to judge their work against students modelling.

2.4.1.4 The Constructivist Theory and L2 Vocabulary Teaching

With the development of the educational psychology researches, a need for engaging the student in his educational process considering the student as the center of learning in a trial to maximize the role of the student versus minimizing the role of the teacher. The role of the teacher has changed from

being ' a sage on the stage' to 'a guide on the side' from the center of learning to a facilitator of learning. You can give the ladder to the students to lead them to higher understanding but the students themselves must climb the ladder (Guskey and Anderman, 2008). Constructivism is built on the concept of social learning. Vygotsky confirms that students learn best in joint interaction with adults or more capable peer (Hall and Greeno, 2008). Students can increase their vocabulary account when they study with their teacher or their brighter peer. Furthermore, the constructivism theory was constructed on the concept of zone of proximal development where the zone of proximal development forms the range of difficult skill for the student. This zone of proximal development can be bridged by the assistance of the teacher or their more capable peer. If the students face some difficulties in pronouncing a word or the form or the use of a new word, they can seek help in a natural social manner. The third principle that forms the constructivism theory is the cognitive apprenticeship which is a combination of the social learning and the zone of proximal development (Harpz and Lefstein, 2000). Cognitive apprenticeship means that a student or a worker gains expertise gradually through interaction with the experts. Concerning teaching L2 vocabulary students can acquire new vocabulary gradually with the help of the teachers. The forth principle that the constructivism theory is constructed on is Vygotsky's mediated learning or scaffolding (Kozulin and Presseisen 1995). Mediated learning or scaffolding means to provide the student with challenging and realistic tasks and provide them with enough help instead of giving them bit by bit tell they build their own learning pyramid. This perspective confirms learning in depth better than learning that a mile wide and an inch deep (Egan 2008). This process reflects the top down processing which can be used in teaching L2 vocabulary through providing students with challenging text and asks them to discover its difficult vocabulary and work on them with the help of the teacher.

2.4.1.5 Stephen Krashen's Theory of Second Language Acquisition and L2 Vocabulary Teaching

Krashen's theory of second language acquisition (1982) suggests five hypotheses in learning a foreign language. The five hypotheses are the Acquisition-Learning hypothesis, the Monitor hypothesis, the Natural Order hypothesis, the Input hypothesis, and the Affective Filter hypothesis.

The Acquisition-Learning hypothesis differentiates between learning a language and acquiring a language. Acquisition of the language is the natural order that children follow in acquiring their L1 while learning is the process of learning a second language where the learner learns about the language rules. According to Krashen (1982) acquisition is more important than learning. Accordingly, learners and educators should follow the natural way of acquiring the L2 vocabulary. Furthermore the Monitor hypothesis explains the relationship between learning and acquiring a language confirming that monitoring or editing is closely related to learning not to acquiring. Krashen (1982) points out that the function of learning is to monitor communication and to correct errors stating that "Acquisition requires meaningful interaction in the target language - natural communication - in which speakers are concerned not with the form of their utterances but with the messages they are conveying and understanding." Moreover, the Natural Order hypothesis suggests that acquiring a language follows a natural and systematic order. The child acquires some morphemes before the others and some grammatical rules before the others. Accordingly, teachers and learners of L2 vocabulary should consider the hypotheses of the natural order in presenting the unmarked lexical items before the marked ones. The forth hypotheses is the comprehensible input. Krashen (1982) points out that the most important part of learning a language not vocabulary or grammar but the clarity of the message by stating that "The best methods are therefore those that supply 'comprehensible input' in low anxiety situations, containing messages that students really want to hear. These methods do not force early production in the second language, but allow students to produce when they are 'ready', recognizing that improvement comes from supplying communicative and comprehensible input, and not from forcing and correcting production." Finally, the Affective Filter hypothesis means the level of anxiety in learning a language. When the filter or the level of anxiety is low, the learners' ability to learn will be high. That necessitates providing L2 vocabulary in a friendly atmosphere.

2.4.2 L2 Vocabulary Teaching Strategies

Once vocabulary lists are deliberately discussed and The broad lines of teaching theories are deliberated, one should think of suggested strategies to teach vocabulary to EFL learners. Paul Nation (2001) presented an answer to the question focusing on the deliberate teaching of vocabulary saying that

"Deliberately teaching vocabulary is one of the least efficient ways of developing Learners' vocabulary knowledge but nonetheless it is an important part of a well-balanced vocabulary program." He also showed that the best way to deal with vocabulary is to teach small amount of vocabulary each time by stating that "The more complex the information is, the more likely the learners are to misinterpret it." On the same side, Nation (2001) explains how to give the meaning of the word. Furthermore, he mentioned eight ways to give the meaning of the word "Quickly give the meaning by (a) using an L1 translation, (b) using a known L2 synonym or a simple definition in the L2, (c) showing an object or picture, (d) giving quick demonstration, (e) drawing a simple picture or diagram, (f) breaking the word into parts and giving the meaning of the parts and the whole word (the word part strategy), (g) giving several example sentences with the word in context to show the meaning, (h) commenting on the underlying meaning of the word and other referents." As for the word form, Nation (2001) stated six methods to draw the attention to word form "Draw attention to the form of the word by (a) showing how the spelling of the word is like the spelling of known words, (b) giving the stress pattern of the word and its pronunciation, (c) showing the prefix, stem and suffix that make up the word, (d) getting the learners to repeat the pronunciation of the word, (e) writing the word on the board, (f) pointing out any spelling irregularity in the word." On the scale of word use and usage Nation (2001) explained certain ways to deal with word use "Draw attention to the use of the word by (a) quickly showing the grammatical pattern the word fits into (countable/uncountable, transitive/intransitive, etc), (b) giving a few similar collocates, (c) mentioning any restrictions on the use of the word (formal, colloquial, impolite, only used in the United States, only used with children, old fashioned, technical, infrequent), (d) giving a well-known opposite, or a well-known word describing the group or lexical set it fits into." According to Nations (2001) not all word in a word list need to be taught. On the contrary, a teacher spends time on teaching only the words of high frequency which the learners need. On the same side a teacher should consider the learning burden of the word or its relation to the learners' L1. Additionally, a question emerges that how can a teacher discover the learning burden of his students? In fact, Nations (2001) presented a table that summarized how to discover the learning burden.

Table I : Discovering learning burden

Meaning	Form and meaning Concept and referents Associations	Is the word a loan word in the L1? Is there an L1 word with roughly the same meaning? Does the word fit into the same sets as an L1 word of similar meaning?
Form	Spoken form Written form Word parts	Can the learners repeat the word accurately if they hear it? Can the learners write the word correctly if they hear it? Can the learners identify known affixes in the word?
Use	Grammatical functions Collocation Constraints on use	Does the word fit into predictable grammar patterns? Does the word have the same collocations as an L1 word of similar meaning? Does the word have the same restrictions on its use as an L1 word of similar meaning?

Table I :Adapted from Nation (2001)

The main purpose of working out the learning burden is to discover the learners' difficulties in learning new vocabulary and the present the sufficient help to the learner to avoid this difficulty.

Concerning teaching vocabulary, setting the context that is of high interest to students, vivid and relevant to learners live will engage the students' attention and generate the targeted vocabulary naturally. Additionally the language of the content should be understandable and easy to keep learners engaged. As engagement of the learner is the most important factor in teaching and learning in general and in teaching and learning languages in particular, teachers should elicit the targeted vocabulary from students for two reasons. First to keep learner engaged and actively participating. Second, to join what the previously learned vocabulary to the present ones because learners commented are "blank sheets of paper onto which a pre-ordained body of knowledge can be transferred in a neat, predictable manner." Furthermore, learning vocabulary should be cumulative as Nation (2001) stated that "We need to see learning any particular word as being a cumulative process where knowledge is built up over a series of varied meetings with the word." Moreover, vocabulary elicitation has many techniques as explaining, miming, using pictures, realia, giving synonym or association. In case all these techniques failed, a teacher has the last option to give the word and drill. Giving the word and drilling is an easy but not affective way of teaching vocabulary as it aims at memorizing the form and phonology and turns the whole process to be boring and meaningless. According to Choudhury (2010) drilling should follow the pattern of choral drilling, individual drilling, chain drilling, back and front drilling. Additionally, Concept Checking Questions should be relevant to the word (e.g. are skyscrapers tall?) but questions such as Do you understand? should be avoided, as they stimulate a mechanical response. Once the targeted vocabulary is presented, exercises such as defining activities, matching activities, gap fill activities and creative use of the targeted vocabulary (e.g. writing sentences or short stories.)

2.4.3 Developing Vocabulary Learning Strategies

Classroom time is so limited to teach the targeted vocabulary deliberately. Accordingly, teachers should teach their students some strategies to learn new vocabulary independently outside the classroom walls as Sokmen (1997: 225) commented it is "not for possible for students to learn all the vocabulary they need in the classroom." Furthermore, developing students' vocabulary

learning strategies is a genuine part of the vocabulary teaching processes to create independent learner. Additionally, O'Malley and Chamot (1990: 1) defined students' vocabulary learning strategies as "special thoughts or behaviors that individuals use to comprehend, learn or retain new information." Guessing the meaning of the unknown words in a context is one of the strategies that deliberately discussed in vocabulary literature. Guessing the meaning through context is described by Nation (2002: 271) as, "learners consciously focusing on unknown words, interrupting their normal reading, and systematically drawing on the available clues to work out the unknown word's meaning." Moreover, Keyword Method is another strategy that learners can use outside the classroom to create the learners web of associated words or creating their own dictionaries. This strategy is highlighted by Decarrico (2001: 291) stating that learners can possibly "write word pairs and semantic maps which help them visualize the associative network of relationships existing between new and familiar words." Writing about outside classroom vocabulary learning strategies cannot ignore the digital strategies that are used in developing vocabulary learning which will be discussed deliberately in the following part concerning teaching vocabulary in the digital age.

2.5 Previous studies on teaching L2 vocabulary to EFL learners via mobile phone

2.5.1 The effectiveness of vocabulary learning via mobile phone is a Taiwan study by (M. Lu; 2008).

The study lasted for two weeks and aims to examine the effectiveness of learning EFL vocabulary via mobile phone. Thirty high school students were randomly distributed into two groups to form an experimental group (15 learners) and control group (15 learners). The experimental group studied 14 words via mobile phone SMS applications while the control group studied the same 14 words through printed material. The second week groups switched. Students who studied the first week via mobile studied the second week through printed material and the vice versa. The study concluded that students who studied via mobile phone applications SMS showed better results than those who studied through printed material. The present study has some limitations such as the comparatively short time of the experiment (2 weeks) and the limited number of each group (14 learners) as well as the limited number of words (28 words).

2.5.2 In China a study entitled "Re-examining the effectiveness of vocabulary learning via mobile phones" by Haisen Zhang, Wei Song and Jack Burston (2011) focused on using mobile in learning L2 vocabulary. The aim of the study was to re-examine the effectiveness of the mobile phone applications as a tool in teaching L2 vocabulary. To that end, the researchers selected 78 university students to form the experimental group who studied vocabulary via SMS and the control group who studied vocabulary through printed materials. 130 vocabulary items were presented to students of the experimental group via mobile phone applications SMS. The same vocabulary items were presented through printed lists to the control group. The vocabulary items were extracted from TOEFL exams. The study concluded that learning vocabulary via mobile phone is effective only with the repeated exposures. The study mentioned some limitation to the use of mobile phone namely the limited memory that cannot hold a lot of SMSs. Besides, the limitation of the SMS characters may force the sender to send more than one SMS for one word. On the other hand, all the participants were of a certain background and all were students of arts.

2.5.3 In Iran the situation is quite similar. In a study entitled "Learning Vocabulary via Mobile Phone: Persian EFL Learners in Focus" by Saeed Taki , mobile phone was used to present vocabulary in written and pictorial forms. Participants were 158 pre-intermediate learners. Participants were divided into 4 groups, group 1 learners with higher visual and verbal abilities, group 2 learners with higher visual but lower verbal abilities, group 3 learners with both lower visual and lower verbal abilities, group 4 learners with lower visual but higher verbal abilities. The research investigates the effect of mobile-based presentation on teaching vocabulary definitions with annotation. To that end the researcher used a language efficiency exam, vocabulary level exam and background questionnaire to place students in different groups. Visual and verbal STM tests and recognition and recall tests were used to assess students' performance. Additionally, the material was presented in 3 types. Type 1, the words were presented with their pronunciation, parts of speech and L1 meaning. Type 2 presented the material of type 1 with example sentence. Type 3 presented the material of type 1 with a picture. The researcher concluded that students with high verbal and visual abilities performed better when they study word with pictorial or written annotations. Besides, students with low visual and verbal abilities performed better with words without annotations. Students with high visual ability but low verbal

ability performed better with pictorial annotation. Students with high verbal ability but low visual ability performed better with written annotation. The study did not specify the number of words taught to each group. The effect of mobile phone applications was the main aim of the research results focused on the types of learners and the types of materials that suit them.

2.5.4 "Successful Learning of Academic Word List Via MALL: Mobile Assisted Language Learning" by Alemi M., Sabra M.R. and Lari Z. (2012).

Mobile phones are one of the most useful tools during the last two decades with availability of 95% among students (Divitini, Haugalokken, andNorevik, 2002).The main theme of the article is using mobile phone killer applications (SMS) or Short Message Service in learning academic vocabulary that exceeds all expectations because of its low cost, asynchronous nature and features of privacy and quiet use (Mitchell, Heppel, and Kadirire 2002). The study tries to probe two areas. Firstly, the study aims at investigating the difference in learning academic vocabulary via SMS and by using dictionary. Secondly, investigating the difference in the retention of academic vocabulary items provided via SMS and by using dictionary. The study tries to assess learning and retention related to academic vocabulary items for both male and female with age range between 18 and 21 which distinguishes this study from the previous studies that investigate the effect of SMS on vocabulary learning. The experiment is conducted with 45 participants who are divided into two groups, the experimental group (N=28) and the control group (N=17) .They attended a general English course Active Skills For Reading 4 (Anderson 2008). Both groups were taught by the same instructor .On the one hand, the study concludes that using SMS in learning vocabulary shows slightly positive difference from using dictionary in learning vocabulary .On the other hand, it shows a significant difference in retention of the academic vocabulary via SMS from using dictionary.

The article "Successful Learning of Academic Word List via MALL" is closely related to second language teaching and learning as it depends in its approach on the cognitive and sociocognitive approaches that imply the use of technology into teaching communicatively. The Cognitive psychologists see the process of learning as a psychological process that the learner depends on interaction of the acquired knowledge and the comprehensible input to construct his/her mental model of language learning, Piaget (1985). Warschauer and Meskill (2000) suggest integrating technologies such as text

reconstruction software, concordancing software and multimedia simulation software. Sociocognitive approaches define the process of learning as a process of socialization where the learner should interact in an authentic social context to practice language in context of real life situations. (Warschauer and Meskill 2000) .In addition, Teaching languages has been supplemented with the use of technologies (Salabarry, 2001).Additionally, teaching vocabulary is closely related to phonetics, phonology, morphology, semantics and pragmatics which affect the four skills of language learning.

The central conception in this article is the integration of one of mobile phone applications in learning and retention academic word list. This study includes some key concepts such as MALL:Mobile Assested Language Learning is a teaching method that uses mobile to maintain independence and centeredness(o'Malley 2003).Vocabulary retention: The ability to retain words that are previously learnt. Academic word list: The Academic Word List (Averil Coxhead, 2000 a list of 570 high-incidence and high-utility academic word families for Secondary School, Higher Education, Career. These concepts are correlated to teaching L2 vocabulary to EFL students, as the main influential theories on this study are the cognitive and the sociocognitive theories .The cognitive approaches emphasis on the concept of modality which means that learners construct models in learning language depending on the interaction between comprehensible input and cognitive knowledge. The cognitive approach integrates using technologies such as telecommunication and multimedia software (Warschauer and Meskill 2000).The sociocognitive approaches also suggest using technological devices to use the language in an authentic social context. Relatively, the present study is influenced by the cognitive multimedia approach which is supported by Mayer (2007).The dual-channel assumption (visual and auditory) which proposes that meaningful learning occur when connections occur between different presentations related to the same information. (Mayer 1997; Moreno and Mayer 2003).

2.5.5 The Impact of Text-Messaging on Vocabulary Learning on Iranian EFL Learners by Omid Tabatabaei and Abdolsamad Heidari Goojani (2012)

Mobile phone is a mini computer always in pocket and always on (Prensky, 2005). Mobile phone is the new generation of ICT. The present study "The Impact of Text-Messaging on Vocabulary Learning of Iranian EFL Learners" tries to investigate the effectiveness of using mobile phone cheapest applications SMS in teaching L2 vocabulary to EFL students in Iran. To this end

the researchers formed two groups of equal numbers (30 each) of EFL learners to form the experimental group and the control group. Both groups were 60 participants gathered from 90 high schools participated in the study. The groups were designed according to the result of a proficiency pretest. One of the tools of the experiment was vocabulary words from the book of *English for Pre-University Students* by Birjandi, Samimi and Anabisarab (2007). Vocabularies were taught to the control group and the experimental group using synonyms and antonyms. Six to seven words were introduced and taught to these students each session. The students in the control group were asked to handle the teacher a sentences showing the meaning of the taught words on paper, while the experimental group students were asked to send sentences via SMS to the teacher showing the meaning of the targeted words. The t-test results showed that the students of the experimental group outperformed the students of the control group which shows the effectiveness of using tools related to the students' digital age.

The central conceptions of this research are Mobile assisted language learning; Involvement load hypothesis; Short message service. These concepts are closely related to the theories of cognitive theories of learning and the second language acquisition. Additional these concepts are related to the constructivists' theory that calls for giving the learners the opportunity to build their own learning.

2.5.6 In Saudi Arabia, Al-Shehri, S. (2011a). Context in our pockets: Mobile phones and social networking as tools of contextualizing language learning is a regional study that used mobile phone to create learning environment that encouraged student–centeredness and collaborative language learning. 33 university students were selected to use their out-of-class photos, videos and texts to reflect upon them in classroom in a trial to connect the out-of class environment to the in-class activity. Participants of the study showed satisfaction to use mobile phone in contextualizing their real life activities.

Chapter 3

3- The study

Limited lexical competence of the EFL learners in Dubai public schools is the main reason for this study that probes deeply for ways to overcome this problem and to improve student's lexical competence. This chapter spots light on the participants, the setting of the study, the materials used along the study, the procedures that are followed to fulfill the study, the research rationale of the study as well as the ethical considerations.

3.1 – Participants:

50 students attending Hamdan Bin Rashid School for Secondary Education in Dubai, United Arab Emirates form the population of the present study. Worth mentioning, participants of this study share the same social background as all of the participants are Emirati students living in the same area. Furthermore, all the participants share almost the same economical background in other words no economic gap among the students that may affect their quality of learning. Besides, students study EFL in a public school where Arabic is used as the language of instructions for all subjects. Additionally, participants have studied English for 12 years in public schools. All the participants are in grade 12 who study the same English language course book ON Location by Thomas Bye. Moreover the participants' age ranges between 17 and 19 years old. The participants were categorized into two symmetric groups of 25 students each after having proficiency pre-test (appendix 5); the experimental group and the control group.

3.1.1 The control group:

The control group consists of 25 students study academic word list (appendix 2) that is adopted by National Admissions and Placement Office (henceforth NAPO) to prepare students for The Common Educational Proficiency Assessment (henceforth CEPA). All the public schools adopt this academic wordlist to prepare students for CEPA exam. A lot of efforts and time were spent learning students the academic word list following the keyword technique where students were taught words and their translation in L1.

Besides, teachers followed the rote learning technique that stated that teachers model for their students and students repeat till they memorize the words and their meaning. On the other side, the students; results in CEPA exam were always disappointing especially in vocabulary test. Studying the problem reveals that using vocabulary lists with their translation to L1 has weakened the students' ability to memorize especially the words are not related or linked in a context. Secondly, words are presented in the academic word list and their translation in L1 only without any reference to their parts of speech (e.g. noun, verb, adjective, and adverb) which weakened the contextual use of words. Thirdly, the overuse of translation to L1 weakened the students' competence in practicing the targeted language. Besides, using the rote learning technique of drilling and repeating till memorizing is not suitable for students of the 21st century.

To avoid the previously mentioned problems, the researcher presents the solution in two points. Adding two fields to the word list containing parts of speech and an English example to clarify the usage of the words of the word list will finish the problem. Accordingly a new shape of the wordlist was presented to the control group (appendix 3). The daily dose was decided to be from 5 to 9 words a session as the short term memory can receive from five to nine items a time (Thompson, 2000). Besides, students of the control group are asked to identify the word, its part of speech, the context of the word throughout the given example and its L1 translation. Furthermore, students of the control group are asked to use the words in sentences of their own to clarify their meaning and share these sentences in their group before delivering the sentences to the teacher for correction. Worth mentioning, all the work of the control group was presented on paper. Two types of tests will be conducted. The first is immediate posttest to test the knowledge level. The second is a delayed posttest to test retention.

3.1.2 The experimental group

The experimental group consists of 25 students who form another class of grade 12. The experimental group students were surveyed about the availability of mobile phones and the students' readiness to use their mobiles as the messages will be reciprocal (appendix 4). Students of the experimental group studied the same material as the control group. They studied the academic word list with abbreviation of the parts of speech (e.g. noun =N., verb=V., adjective=Adj., and adverb=Adv.). Besides, an example that clarifies

the usage of the word is added. Additionally, the translation of a word into L1 is included. Words are sent to students via SMS on their mobile phone. Once the student receive the message, he replies with a sentence shows his understanding to the meaning of the word. Furthermore, the student can send a synonym or antonym of the sent word to confirm his understanding. Pictures of the teachers' messages and students' replies are shown in (appendix 6). The daily dose was decided to be from 5 to 9 words a day. Two types of tests will be conducted. The first is immediate posttest to test the knowledge level. The second is a delayed posttest to test retention.

3.2 Setting

Results of the proficiency exams show clear curb in students' L2 vocabulary attainment. This low achievement has negatively affected students' ability to practice the four skills of English. This limitation stems from two main reasons (what and how). Concerning "what" the students learn at school, students in Hamdan Bin Rashid for Secondary education study around ten subjects at school. Nine subjects out of ten are taught in Arabic which weakens the students' lexical competence. English language is practiced only for 5 hours a week. The English course books have low coverage of the academic vocabulary that participates in the deterioration of the students' communicative competence. Furthermore, English language is turned from being a language of communication to be a material for the final exam. On the other side final exams do not focus on students' lexical competence, so students do not pay much attention in attaining new vocabulary. Concerning "how" or the methods and the tools used in teaching English at public schools, teachers and learners can easily note the students short attention span or their inability to concentrate because of the dated tools that are used in teaching English language at school. Students use their own tools to educate themselves after school. Worth mentioning, students learn better if they use the tools of their age (e.g. mobile phone, smart phone, tablet PCs, laptop, computers and personal media players). The present study aims at overcoming the problems related to what is taught and how it is taught. As for the material that the participants are going to study, students are to study the (Coxhead 2000) Academic word list provided by the ministry of education as a preparation tool for CEPA exam which is essential requirement to join the UAE establishments for higher education. Three academic word lists containing 60

academic words are to be taught using both of the traditional methods of teaching for the control group and the digital methods for the experimental group. As for the limitations related to "how", or the teaching aids, Mobile phones and smart phones are used to overcome the problems related to classroom time limitation and digitalize students learning to cope up with the students digital age.

3.3 Materials

3.3.1 Word lists

The present study aims at exploring the causes of limited attainment of L2 vocabulary concerning students of Hamdan Bin Rashid for secondary Education as well as finding a solution for this problem. To this end, a mixed approach of the qualitative and the quantitative approaches is used to probe deeply for the reasons for students' low lexical competence. A longitudinal study that lasts six weeks is adopted. Additionally, 60 academic vocabulary words are used to investigate the problem. The academic words were adopted from (Coxhead 2000) Academic word list that contains ten sublists and a total number of words of 3000 academic words (Appendix 1). Moreover, 60 words were chosen for many reasons. The first three academic word lists are provided by the UAE ministry of education to support students in their CEPA exam. The second reason beyond using the academic word lists is the low coverage of the academic words in the students' course books ON Location by Thomas Bye, so the academic word lists are used to compensate the low coverage of the academic word lists in students' course book. Thirdly, students of grade 12 who are the subjects of this study are going to use the academic words in their future academic life.

3.3.2 Survey

A survey written in both English and Arabic was distributed to check students' willingness to use their mobile phone in learning L2 vocabulary as the operation was reciprocal (Appendix 4). Students were to receive the academic words and their parts of speech and an example that uses the word in a sentence and finally the Arabic synonym of the word. Furthermore, students were to send sentences using the academic words to show their understanding of the words and their usage. Some students preferred to use the Whatsapp applications as a free application, and it has the ability to form

groups and the participations will be visible to every one of the group. The survey was distributed only to the 25 students of the experimental group .The survey consisted of ten questions the first four questions ask about the availability of the mobile phone and the applications (Do you have a mobile phone? Do you have a smart phone? Do you have SMS applications? Do you have Whatsapp applications?).The second set of questions was to get students agreement to use their mobile phone for learning L2 vocabulary (Do you agree to use your mobile phone applications SMS in sending messages during the process of learning L2 vocabulary? Do you agree to use your mobile phone applications Whatsapp in sending messages during the process of learning L2 vocabulary? Are you willing to receive messages at any time between 2pm and 8pm?). The third set of questions aimed at investigating the suitable number of messages that a student can send or receive (How often can you receive messages a day? How often can you send messages a day?).The last question asks about students' preference of using different mobile phone applications (what applications do you prefer to use SMS or Whatsapp?).

3.3.3 The diagnostic test (Proficiency pretest)

The proficiency pretest consisted of 40 items depending on randomly chosen words from Coxhead's Academic Word List to investigate two aspects. The first was to discover the present level of the students while the second was to determine the new vocabulary to be included during the study. The proficiency pretest (Appendix 5) consisted of three main parts to test three main areas. The first part contained 30 multiple choice items that focus on the word meaning. The first part discussed the word meaning through three sessions. The first session contained 15 multiple choice items to choose the suitable words to complete sentences. The second session focused on matching words to their meaning. The third session asked the students to exclude words that were not synonym to the targeted words. Although the multiple choice question is perfect for word meaning questions, it has some limitations that affect its authenticity and adequacy. Some students may choose some correct responses by luck which gives misleading results. To avoid the previous limitation, some other forms of questions were added such as grouping and filling in gaps to balance the exam. On the other hand, the second part of the proficiency pretest focused on collocation of words consisted of 5 items. Students were asked to relate listed words to groups of words that occur together. Collocation question came as a treatment to the

idea of word chunk by Michael Lewis (1993). The last part of the proficiency pretest is the word families' part that focused on the parts of speech of words. Students were asked to fill in the spaces with the suitable word from a list regarding its correct form.

3.3.4 Post-test (short term memory test)

Multiple choice tests were administrated to assess students' recognition of new academic words similarly used by Sonbul and Schmitt (2009) on designing their test to assess word recognition. Each targeted word has four options; the correct answer and three distracters. Additionally, the distracters were used based on the meaning of the word and its spelling criteria (e.g. commission, admission, submission). According to Coombe (2007) multiple choice questions are used as they assess the knowledge and the comprehension level at the same time. Besides, multiple choice questions are good tools as they are reliable, easy in marking and flexible to assess all levels of students. Furthermore, multiple choice questions go in line with the CEPA exam format which in a way or another can help students deal with CEPA exam. The immediate posttest (Appendix 7) consists of 20 multiple choice items. The content vocabularies are taken from the first 60 words of the academic word list of (Coxhead 2000) adopted by the ministry of education to support students in their CEPA exam.

After two weeks of studying and testing, both groups were exposed to a delayed posttest (Appendix 8) to assess students' retention. The test consists of twenty items following the same format of the proficiency pretest. The first part set of questions contains 5 multiple choice questions following the technique of testing the word meaning and spelling criteria. The second set of questions contains 5 matching questions where the students were asked to match the listed words to their related groups. Matching questions are used to test the comprehensible input that requires understanding to the meaning of the word and understanding to the meaning of its group of related words. The third set of questions contains 5 gap filling questions focusing on the parts of speech to test the morphological competence. Students were to place the listed words into gaps paying attention to the form of the word. The last set of questions contains 5 gap filling questions focusing on the semantic use of words. A short passage with five gaps is to be filled from a list of words. The

aim of this test is to compare the effect of using mobile phone applications to traditional wordlist paper on students' retention and therefore on their long term memory.

3.4 Procedure

All the participants of the present study, 50 students from Hamdan Bin Rashid School for Secondary Education were subject to a pretest focused on 40 items selected from 60 academic word list (Appendix 5). Furthermore, to get accurate results some measures were taken to guarantee the reliability of the results.

1- Students were asked to set their tables in straight rows as if they were in a final exam.
2- Students were asked to switch off all their electronic devices.
3- Electronic and hard copy dictionaries or vocabulary word lists were not allowed.
4- Students were asked to avoid guessing as the result of the present test would not affect their overall results.
5- To avoid stress and its consequences on the results, students were asked to deal with the test as a daily task. According to Milton(2005, p.342) "In reality we know that faced with a test they do not always behave either reasonably or consistently"
   The proficiency pretest was administrated to the entire participants. Categorizing the participants into control group or experimental group depended mainly on the result of the pretest.

The two groups studied the targeted vocabulary in different ways. The control group studied vocabulary through word lists as printed material. From five to nine new vocabulary items were taught every session. Students were to present the pre taught words in sentences to show their understanding to the new academic words and submitted them written to the teacher. On the other side the experimental group received from 5 to 9 words a day through SMS. Furthermore, students of the experimental group were asked to send a sentence using the targeted words in sentences and send them back to the teacher using SMS and the teacher corrected the mistakes if there by SMS.

Posttest was administrated to both groups immediately after finishing studying the targeted vocabulary. The same precautions of the proficiency pretest were followed in both the immediate posttest and the delayed

posttest to guarantee reliable results. Additionally, both groups were subject to delayed posttest to assess students' retention or long term memory.

3.5 The Research Rationale

The present study unites three strands of todays' pedagogical discussions concerning students' low achievements in English language learning in general, and L2 vocabulary learning in particular. The first strand is that our students are technologically changing because of their outside-of-school technological experience which results in their dissatisfaction of the type of education that cannot touch their real world. The second strand is that a better education is needed rather than "telling and testing" pedagogy. Thirdly, the digital technology has already conquered our classrooms and needs only to be activated to have real, engaging and fruitful education. The Research Rationale the present study is to compare two types of learning; the traditional learning and the digital learning to find better ways of teaching and learning L2 vocabulary especially when technology is available and usable.

3.6 Ethical Consideration

Ethical principles are genuine part of the present study. I adhere to the British University ethical consideration in every word written or action taken along this study. I took full consent from the administration of the school where the study was performed. Additionally, I got full consent sent from all the participants of this study and their desires to acceptor decline participation was fully respected and considered. At all times, I promised to keep participants' names and participations anonymous and I kept my promise as numbers were used instead of names.

Chapter four will discuss and analyze the results of the present study and the findings. Besides, the pedagogical implications are going to be deliberated a long chapter four.

Chapter 4

4-Findings

This chapter discusses the findings of the study addressing the research questions one by one. Furthermore, the pedagogical implications of mobile phone applicationss will be examined.

4.1 Research question 1

How do the test results differ between the experimental and the control groups for the pre-test?

An analysis of the pre-test results shows a number of facts related to the participants of the study. First, there are clear symmetries between the control group and the experimental group. Second, students are low achievers in English in general. All the subjects of the two groups fail to score the passing score (60%) as required in the ministry of education general exams or in the CEPA exam.

Table1 clarifies that there are clear symmetries between the control group and the experimental group concerning the pre-test exam results. As for the mean, both groups are nearly equal. The mean of the experimental group is 27.5 while the mean of the control group is 27.8. According to the result analysis of the pre-test, there is no significant difference between the two groups concerning the standard deviation. The standard deviation of the experimental group is 12.37437 while the standard deviation of the control group is 12.12607. Concerning standard error or means, the experimental group scores 2.474 while the control group scores 2.425. Calculating the results of both groups with the confidence level of 90 and 95 the difference is not statistically significant.

Table 1 Results of the pre- test of the Experimental and Control Groups

Group	N.	Mean	ST. Deviation	Std. Error mean
Experimental	25	27.5	12.37437	2.474
Control	25	27.8	12.12607	2.425

The result analysis shows that all the subjects of the control group and the experimental groups are low achievers as none of the participants achieved the pass mark (60%). Graph 1 shows the result of the pre-test concerning the experimental group while graph 2 shows the scores of the control group

Graph 1: The Experimental Group pre-test
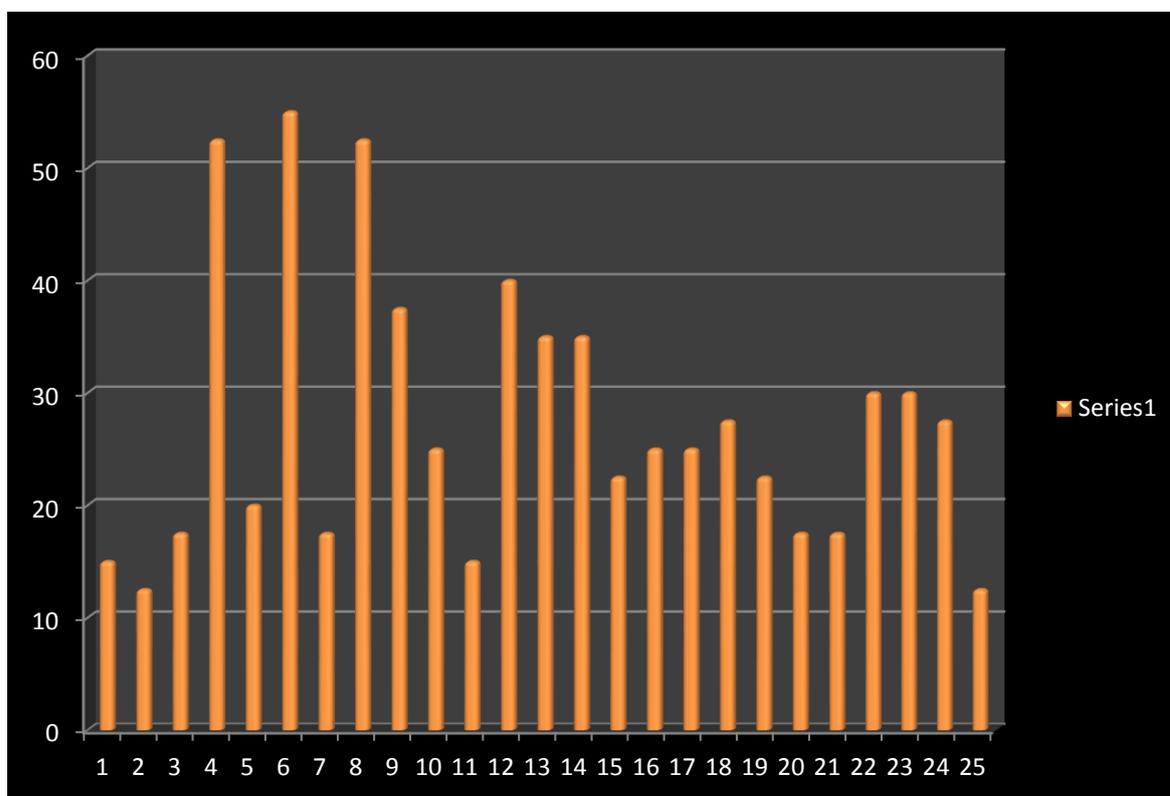
Figure 1- The Experimental Group pre-test

Graph 1: The Control Group pre-test
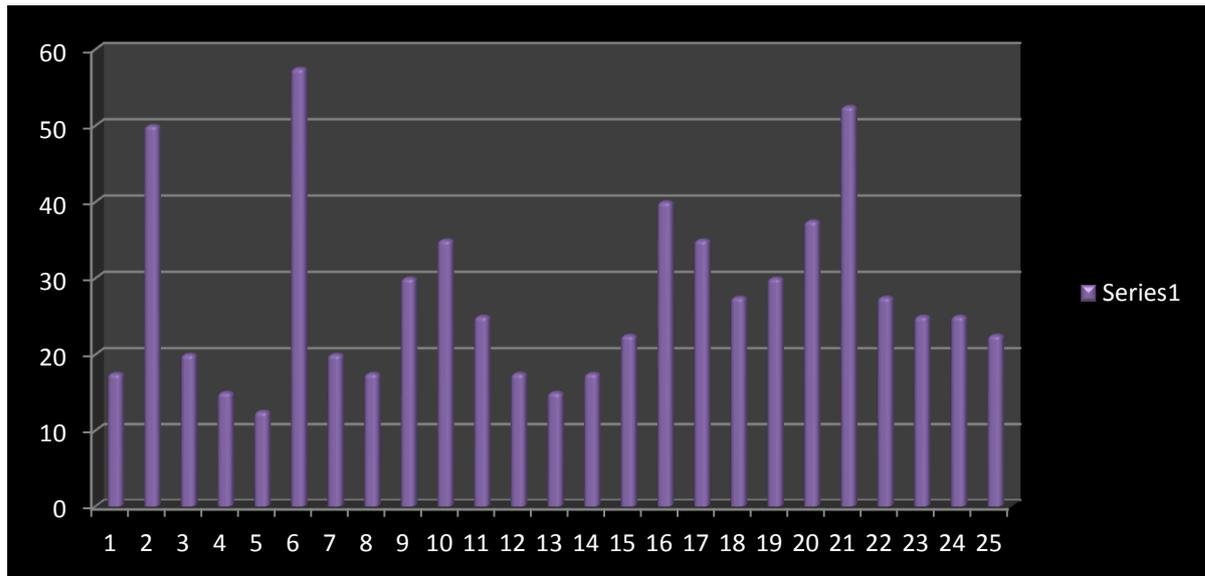
Figure 2- The control Group pre-test

Additionally the pre-test showed the markedness of specific vocabulary for the students which guided the teacher to give more attention to the vocabulary with markedness. In general students faced some difficulties in dealing with multisyllabic words in section A. In section B, students showed better understanding of questions that depend on guessing the meaning especially when both the word and its meaning are shown in context. In section C, students showed the worst result when words and their multiple choices were shown without a context. Comparing the students' performance in section B to their performance in section A clarifies that students perform better if words are presented within context. Section D tests knowledge of collocation and students had the opportunity to use guessing to remove the odd words. Section E discussed the word form and students showed lack of understanding of the form of words and their usage.

4.2 Research question 2.

Is there a significant difference in learning between students who study vocabulary via mobile phone applications (SMS) and students who study vocabulary via printed materials?

To answer the second research question, the researcher made use of the need of the students to identify and learn the first 60 words of the academic word sublists of (Coxhead, 2000) for the CEPA exam which is a basic requirement for joining the academic institutions in the UAE. The experimental group studied the same vocabulary via mobile phone applications SMS. Besides, the control group studied through printed material. Table 2 shows the result of the immediate post-test post.

Table 2. Results of the immediate post-test of the Experimental and Control Groups

Group	N.	Mean	ST. Deviation	Std. Error mean
Experimental	25	70.8	7.729812	1.545
Control	25	71.0	9.013878	1.802

Table 2 shows the result analysis of the immediate post-test that shows the same number of participants of both groups. Concerning the mean or the average, the result shows 70.8 for the experimental group while the control group scored 71 which show no difference between the two groups. As for the standard deviation, the experimental group recorded 7.72 while the control group recorded 9.01 which also show no significant difference between the two groups. The standard of error mean shows that the experimental group recorded 1.545 while the control group recorded 1.802. Calculating the results of both groups with the confidence level of 90 and 95the difference is not statistically significant.

Graph 3 and graph 4 show the scores of both groups in the immediate post-test

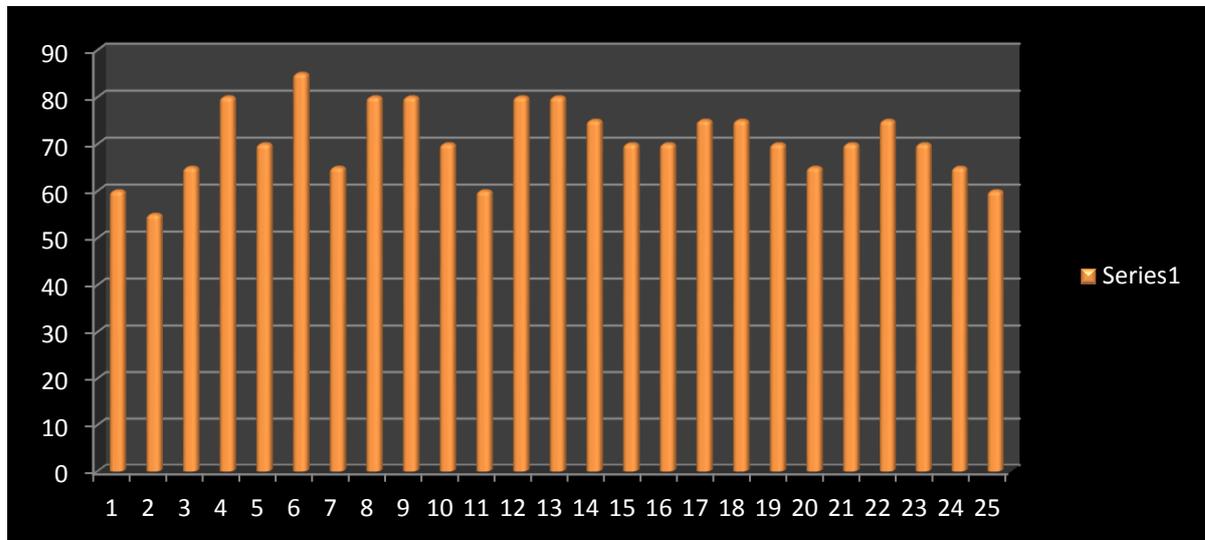## Graph 3 the experimental group immediate post test results

Figure 3- the experimental group immediate post test results

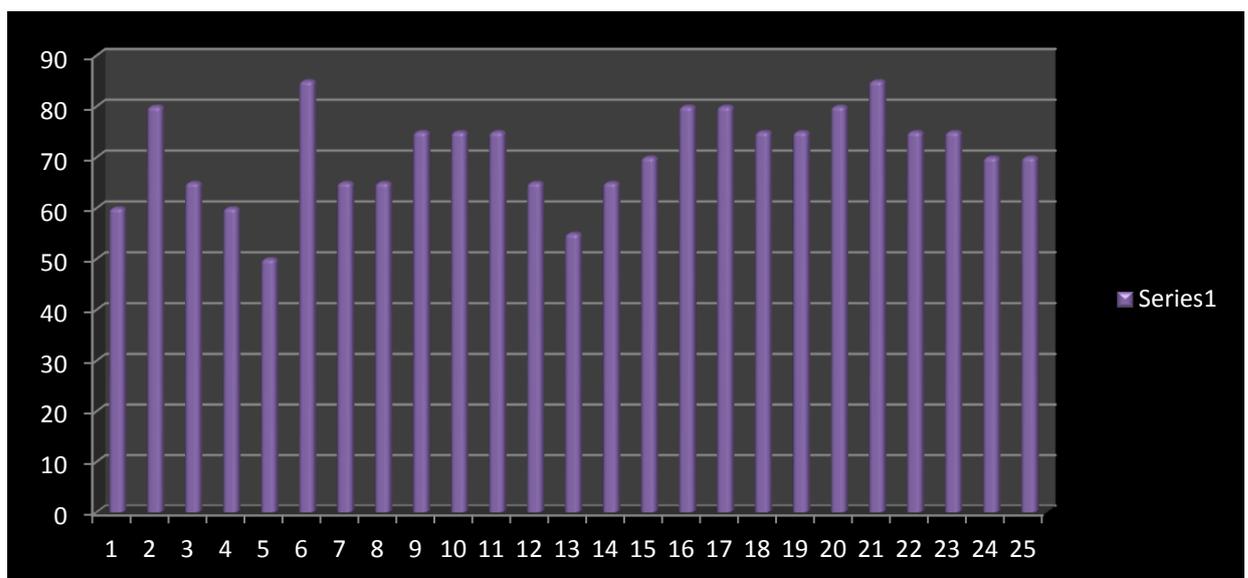## Graph 4 the control group immediate post test results

Figure 4.The control group immediate post test results

Graphs 3 and 4 show the results of the immediate post-test that show development of students' level in answering vocabulary tests comparing

to the pre-test results. The reasons of this development may return back to the concentration of the students on limited word lists or to the sense of competition between the two groups, or to the extensive attention drown by the teachers around the project.

4.3 Research Question 3

Is there a significant difference in retention between students who study vocabulary via mobile phone applications (SMS) and students who study vocabulary via printed materials?

To answer the third research question, after approximately two weeks (exactly 10 days) of the immediate post-test, both of the experimental group and the control group had a delayed post-test to examine the effect of using mobile phone applications SMS on the long term memory. The same exam was distributed to both groups. The results of the delayed post-test are shown in table 3.

Table 3. Results of the delayed post-test of the Experimental and Control Groups

Group	N.	Mean	ST. Deviation	Std. Error mean
Experimental	25	73.8	9.0461	1.809
Control	25	62.8	7.9162	1.583

Table 3 shows the comparison in results of the delayed post-test of the experimental group and the control group. The number of the participants in both groups does not change 25 participants in each group. Concerning the average, there is a significant difference between the two groups. The experimental group scored 73.8 while the control group scored 62.8. on the same side the standard of deviation recorded a significant difference as the experimental group recorded 9.0461 while the control group recorded 7.9162. The standard error of mean showed a slight difference as the experimental group calculated 1.809 but the

control group calculated 1.583. With confidence level of 90 and 95 this test is statistically significant. Mean 1 does not equal mean 2.

Graphs 5 and 6 show the results of the delayed post-test.

Graph 5 the experimental group delayed post-test results
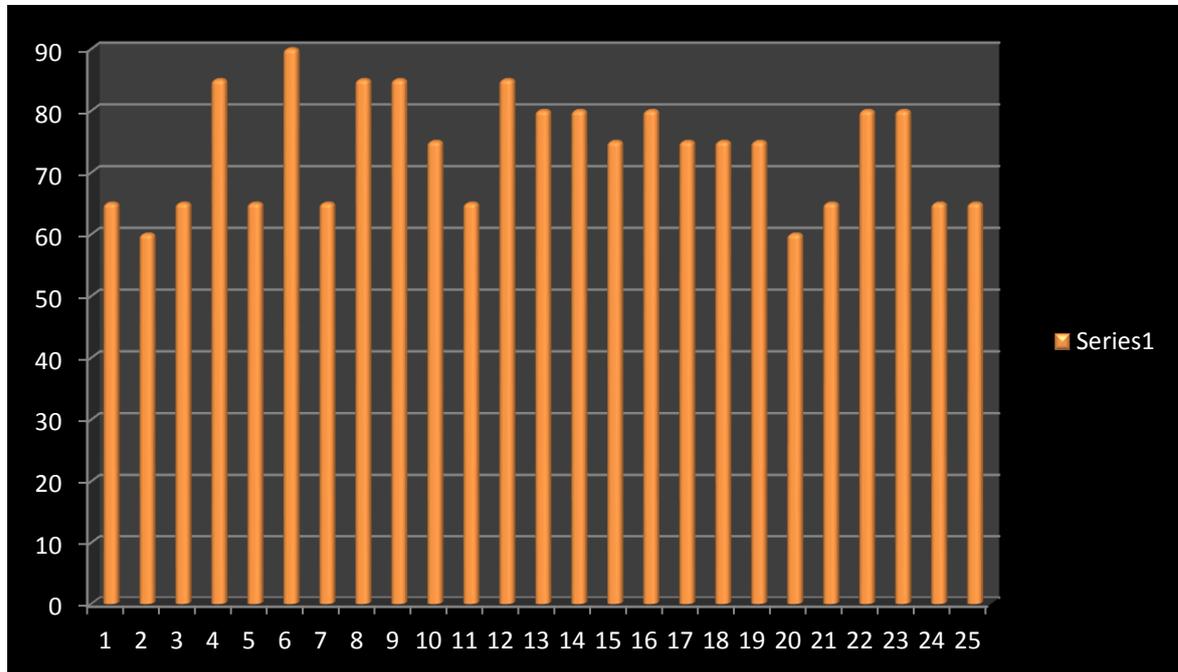
Figure 5.The experimental group delayed post test results

Graph 6 the control group delayed post-test results
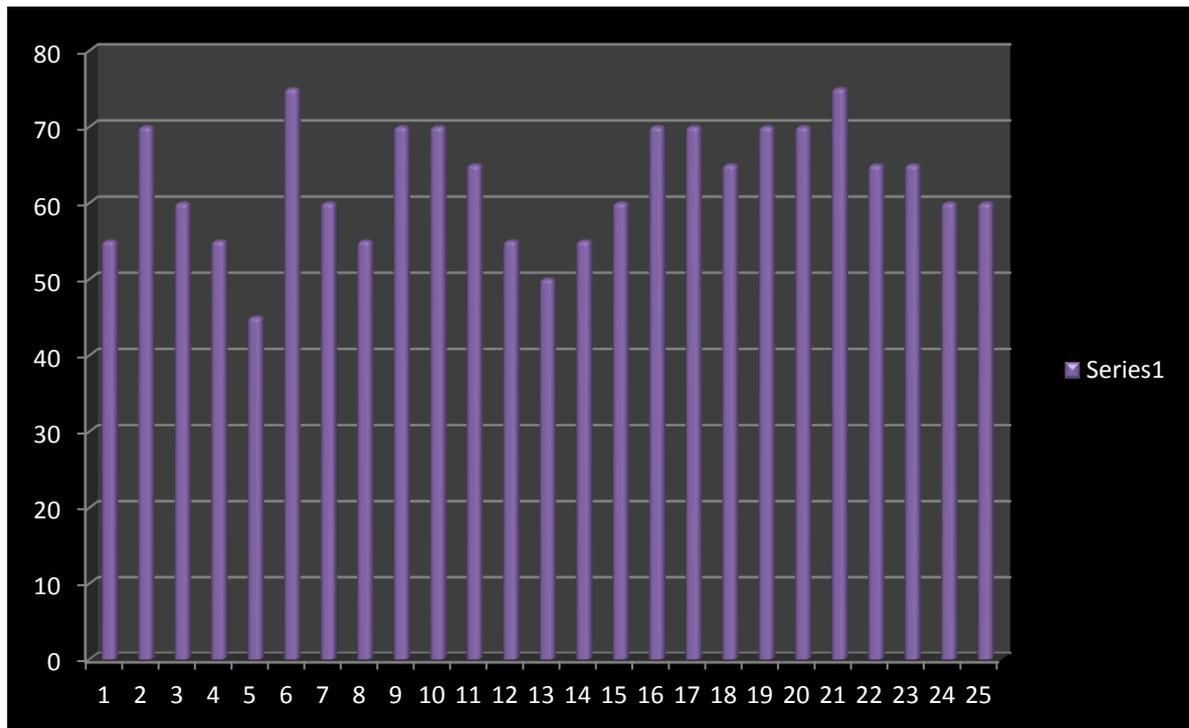
Graph 5 shows the developed level in retention of the academic word list in the experimental group while graph 6 shows a slight decline in the level of retention concerning the control group. On the other hand the overall increase in the level of the students' results compared to the results of the pretest cannot be overlooked.

4.4 Research question 4

What are the advantages and disadvantages of vocabulary learning via SMS?

By the end of the project students were asked to report about the advantages and the disadvantages of using mobile phone applications SMS in learning the academic word list. Students reported their opinions via SMS to the researcher.

4.4.1. The advantages of using mobile phone applications SMS in learning L2 vocabulary.

Students reported that learning vocabulary via mobile phone has the advantages of studying, revising and reciting at any time and everywhere. Besides, students declared that they make use of their

spare time during travelling by bus to and from school. Furthermore, students confirmed that they started spending more time in studying vocabulary than before.

"Using SMS in learning academic words lets me revise everywhere even in the bus" student 4 number of the experimental group.

The ring tone of the message reminds students to revise and recite their vocabulary list. Student 13 number of the experimental group reported "the ring tone of the message reminds me to revise new vocabulary".

Learning vocabulary via mobile phone has the advantages of spaced effect or the fragmented learning. Students learn through doses of learning not accumulated learning. This meaning was expressed by student 18 number of the experimental group by writing that "learning vocabulary via mobile phone lets me study word by word"

The convenience of the mobile phone is another advantage as it can be carried easily and useable, while students cannot carry their vocabulary printed materials everywhere. Student 23 number of the experimental group wrote "I can carry a mobile everywhere while I cannot carry vocabulary books everywhere.

Studying vocabulary via mobile phone is engaging, and motivating to the students as students enjoy using their own tools in studying vocabulary. Besides, vocabulary is studied for everyday use not only for the exam. Additionally, students expressed that messages last for a long time on the telephone memory that can enable them to revise and recite for a long time. This meaning was expressed by student 6 number of the experimental group "Reading vocabulary in messages was really interesting and useful."

4.4.2   The disadvantages of using mobile phone applications SMS in learning L2 vocabulary.

In rare cases when a student have an old fashion mobile phone with limited memory, a student reported that he has to delete the old messages to receive the new ones. Besides, the limited characters of his

mobile phone let him receive the message as units not one. Additionally, it can be considered as a sort of annoyance to students as sending messages was not scheduled. Furthermore, one complained how to get the vocabulary message from tons of messages he received daily.

Chapter 5

5- Discussion

5.1 Discussion of the results

This study discussed and highlighted an important pedagogical issue to explore students' low achievement in English language learning in one of Dubai's secondary schools (Hamdan Bin Rashid for Secondary Education). The study used the mixed approach in researching the problem and exploited a number of treatments to probe deeply and find solution to the problem.

The first treatment was a pretest or a diagnostic test to help in distribution of the students in experimental and control group. Secondly, the pretest helped in determining which vocabulary was marked for the students in order that more attention might be paid it during the project. Thirdly, the pretest helped to recognize the student's style of learning and the best ways to present new vocabulary. The result analysis of the study revealed clear symmetries between the two

groups. This result contradicts the results of previous studies of Alemi M., Sabra M.R. and Lari Z. (2012) who used different numbers of participants of each group which may affect the results of their study. On the other hand the result is in line with Haisen, Z, Wei, S, and Burston, J (2011) whose study showed clear symmetries between the two groups

The second treatment was the immediate post-test which was held immediately after the course of the study. The result analysis showed that no significant difference between the two groups in recognition level. This result is in accord with Alemi M., Sabra M.R. and Lari Z. (2012) whose studies' results stated that there is no significant difference between the experimental group and the control group in recognition level. It is worth mentioning, the result is not in line with Lu (2008), which showed a significant difference between the two groups. Additionally, this result contradicts the results of and Haisen, Z, Wei, S, & Burston, J (2011) who declared that students who studied via mobile phone outperformed the students who study through printed material in the immediate post-test.

The Third treatment was the delayed posttest which was held after approximately two weeks after the immediate post-test. The result analysis showed a significant difference between the experimental group and the control group. The score of the experimental group which used the mobile phone applications SMS in learning L2 vocabulary outweighed the control group which used the printed materials in learning L2 vocabulary. This result fits in with Alemi M., Sabra M.R. and Lari Z. (2012), and Haisen, Z, Wei, S, and Burston, J (2011).On the other side, this result contradicts the results of previous studies which showed that both groups' scores decreased in the delayed post-test (Lu, 2008).

The findings of the study highlighted the usefulness and the effectiveness of using mobile phone applications in teaching and learning L2 vocabulary in both levels of recognition and retention. This study also confirms that using the mobile phone in learning vocabulary has the ability to transfer learned vocabulary from short term memory to long term memory. That may result from the continuous revising of

vocabulary especially because the mobile phone is always at hand. The results of the study also stresses that students can do better if they become responsible for their learning. Accordingly, new methods of teaching should be implemented in our classrooms to encourage students to use their tools to study and revise their acquired knowledge. This study also reveals many pedagogical implications of using mobile phone in teaching and learning.

5.2 Implications for pedagogical practices

Although learning vocabulary via mobile phone applications is a new way of transforming language learning from the traditional ways of teaching and learning to the technological means of learning, the new method can only be used as complementary to the traditional ones such as the dictionaries, vocabulary books and the text-based method of teaching vocabulary. Pavičić Takač (2008) stated that depending only on one medium can weaken learning while depending on more than one media strengthens learning.

To avoid annoying, distracting and disturbing students during their afterschool activities, delivery schedules should be activated to suit teachers' and students' schedules, otherwise mobile phones will be discouraging instead of being motivating. Besides, students should be taught how to create groups on their mobile to avoid wasting their time searching for vocabulary messages. Furthermore, students should be familiarized to accept the technological inconvenience as technology is not always reliable.

Using mobile phone applications in teaching vocabulary enhances students' ability to transfer learned vocabulary to the long term memory, which appears to be the effect of continuous revising. On the other hand, results of the immediate post-test showed no difference between using mobile in learning and using printed material. On the same side, students reported some innate advantages and disadvantages in both methods. Accordingly, a blend of both methods is highly recommended to be used in teaching L2 vocabulary.

5.3 The Limitation of the study

This section is designed to discuss some limitation of the study. Concerning the population of the study, it consists of 50 male students from one school. With a small sample size, caution must be applied especially since the study focused on only one gender from one school. It seems that if the study included female students, much would be learned about different learning styles. Besides, It appears to me that the result of the study could be more reliable if it included students from other schools. Additionally, t is important to bear in mind that the groups are homogeneous because they are related to a certain environment. Accordingly, the results of the study must be applied with caution especially with heterogeneous groups. As for the wordlist used in the study, although Coxhead developed her academic word list several times, the study used the original academic wordlist as the earlier list is laid down by the UAE ministry of education as a base for CEPA exam which is a basic requirement to join the academic establishments in the UAE. Moreover, as far as I am concerned, further research is needed on memory testing and the transformation of vocabulary from short term memory to the long term memory as a result of repeating and revising words. Finally, the Hawthorne effect might have played a role in improving the vocabulary learning performance of the experimental group as the researcher works in the same school where the study was done.

Chapter 6

6. Conclusion

This study explored and discussed the causes of students' low achievement in EFL in one of Dubai's secondary schools (Hamdan Bin Rashid Secondary School for Secondary Education). Vocabulary has been one of the main problems but could also be the solution for the low attainment in EFL because of its key role in English language teaching and learning. Learners should learn a number of English vocabularies to perfect the four skills of the language (listening, reading, speaking, and writing). The present study tried to offer a solution to the problem by assessing the effectiveness of using mobile phone applications SMSs in learning and retaining vocabulary.

The findings of the study show the effectiveness and the usefulness of using mobile phone applications in teaching and learning vocabulary. Subjects of the experimental group who used mobile phones in learning showed an increasing improvement in learning new academic vocabulary in the immediate post-test. On the same side, the experimental group outperformed the control group in the delayed post-test that was designed to assess students' retention.

Although the findings of the present research are in line with the empirical studies that dealt with the same issue, participants reported some inherent advantages and disadvantages of studying vocabulary via mobile phone or through printed material. Additionally, the results analysis of the immediate post-test showed no difference between the two groups. Accordingly, it is highly recommended to use mobile phone as complementary to the traditional methods. It appears that the mobile phone can be used to support the traditional methods but not to replace face to face instruction and assessment.

Despite the limitations discussed in chapter 5, this study highlighted some strong points in mobile learning such as the use of the mobile phone in two-way communication between teacher and student in vocabulary learning, testing and reporting. Additionally, the present study confirms sound principles in education such as self-study in which the learners are responsible for their learning. Furthermore, using mobile phone applications SMS in a reciprocal way strengthened the learner-centred learning that focuses on the student as the main focus of education.

References

Aitchison, J. (2003). *Words in the Mind*. Oxford: Blackwell Publishing Ltd.

Alemi, M., Sarab, M.R.A., Lari, Z. (2012). Successful learning of academic word list via MALL: Mobile assisted language learning. *International Education Studies, Vol. 5*(6), pp. 99-109

- Al-Shehri, S. (2011). Mobile social networking in language learning: A transformational tool. *International Journal of Mobile Learning and Organisation, Vol. 5*(3/4), pp. 345-359.

Ashcraft, M. H., & Radvansky, G. A. (2010). *Cognition (5th ed.) Memory, and Cognition,* 35, 317–333. Broadbent, D. E. (1971). Decision and stress. New York, NY

Atkinson, R. C., & Shiffrin, R. M. (1968). Human memory: A proposed system and its control processes. In K.W. Spence &J.T. Spence (Eds.), *The Psychology of Learning and Motivation, Vol.* 2, pp. 89-195.

Bandura,A.(1986) *Social foundation of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall

Bower, G. H., & Karlin, M. B. (1974) Depth of processing pictures of faces and recognition memory. *Journal of experimental Psychology, Vol. 103,* pp.751-757

Brown,T.(2007)A new approach to attention deficit disorder. *Educational Leadership, Vol. 64 (5),* pp.22-28

Campion, M.E. and W.B. Elley. 1971. *An Academic Vocabulary List.* Wellington: NZCER.

Carter, R. (2001). Vocabulary. In Ronald Carter and David Nunan (eds.). *The Cambridge Guide to Teaching English to Speakers of Other Languages*. (pp. 42-47). Cambridge: Cambridge University Press.

Clark, J.M., & Paivio, A.(1991) Dual coding theory and education. *Educational Psychology Review, Vol. 3(3), pp.* 149-210

Coady, J. (1997). L2 vocabulary acquisition through extensive reading. In J. Coady & T. Huckin (Eds.), *Second language vocabulary acquisition* (pp. 225–237). Cambridge: Cambridge University Press.

Coombe, C. (2007) "Assessing vocabulary development in the language classroom."In Davidson, P; Coombe, C; Lloyd, D; and Palfreyman, D.(eds**)** *Teaching and Learning Vocabulary In Another Language.*
Coxhead, A. (2000) 'A New Academic Word List', *TESOL Quarterly*.vol 34(2), pp. 213-238.

Chun, D., M., & Plass, J. L. (1996). Effects of multimedia annotations on vocabulary acquisition. *The Modern Language Journal, Vol. 80, pp.* 183-198.

Cui, G., & Wang, Sh. (2008). Adopting cell phones in EFL teaching and learning. *Journal of Educational Technology Development and Exchange, Vol. 1, pp.* 69-80.

Decarrico, J. S. (2001). Vocabulary Learning and Teaching. In Marianne Celce-Murcia (ed.). *Teaching English as a Second or Foreign Language*. (pp. 285-289). Boston, MA: Heinle &Heinle.

Dempster, F. N (1989) Spacing effects and their implications for theory and practice. *Educational Psychology Review, Vol. 1,* pp. 201-208

Dewey, J. (1916). *Democracy and Education*. New York: Free Press Retrieved November 21, 2005 fromhttp://www.ilt.columbia.edu/publications/dewey.html

Divitini,M., Haugalokken, O.K.& Norevik, P.A. (2002) *Improving communication through mobile technologies: Which possibilities?* Paper presented at the Ieee international workshop on wireless and mobile technologies in education, Sweden

Egan, K. (2008). Learning in depth. *Educational Leadership, Vol. 66 (3)* pp. 8-64

Engels, L.K. 1968. The fallacy of word counts. *IRAL Vol. 6:* pp. 213-231.

Engle,R.W. (2001). What is working memory capacity? In H.L. Roediger, J.S.Nairne, I. Neath, & A.M. Suprenant (Eds), *The nature of remembering: essay in honor of Robert G Crowder* (pp. 297-314). Washington DC: American Psychological Association.

Engle,R.W., Nations,J.K., & Cantor,J. (1990). Is "working memory capacity"just another name of word knowledge? *Journal of Educational Psychology, Vol. 82(4)* pp. 799-804.

Fries, Charles. (1945). *Teaching and Learning English as a Foreign Language*. Michigan: Michigan University Press.

Ghadessy, M. 1979. Frequency counts, word lists, and materials preparation: a new approach. *English Teaching Forum Vol. 17, (1) pp.* 24-27.

Guskey, T., & Anderman, E. (2008) Students at bat.*Educational leadership, Vol. 66 (3),* pp. 8-15

Haisen, Z, Wei, S, & Burston, J 2011, 'REEXAMINING THE EFFECTIVENESS OF VOCABULARY LEARNING VIA MOBILE PHONES', *Turkish Online Journal Of Educational Technology, Vol. 10(3),* pp. 203-214, Education Research Complete, EBSCOhost, viewed 28 December 2013.

 Hall, R., & *Greeno*, J. G. (*2008*). Conceptual learning. In T. L. Good (Ed.), *21st century education: A reference handbook, volume one*.

Halliday, M.A.K. (1973). *Explorations in the Functions of Language.* London: Edward Arnold.

Harmer, J. (1991). *The practice of English language teaching.* London: Longman.

Harpaz, Y., & Lefstein, A. (2000)Communities of thinking. *Educational Leadership Vol. 58 (3) pp.* 54-57

Hirsh, D. 1992. *The vocabulary demands and vocabulary learning opportunities in short novels.* Unpublished MA thesis, Victoria University of Wellington, New Zealand.

Hunt, A., and David B. (2002). Current Research and Practice in Teaching Vocabulary. In Jack C. Richards and Willy A. Renandya (eds.). *Methodology in Language Teaching: An Anthology of Current Practice*. (pp. 258-266). New York: Cambridge University Press.

Hymes, D. (1972). *Models of the interaction of language and social life*. In J. Gumperz & D. Hymes (eds.), *Directions in sociolinguistics: The ethnography of communication*. New York: Holt, Rinehart and Winston, pp. 35 71.

Karpicke, J. D., & Roediger,H.L. (2007)Repetition during retrieval is the key to long term retention. *Journal of memory and language, Vol. 43,* pp. 508-529

Kozulin, A., & Presseisen, B.Z. (1995). Mediated learning experience and psychological tools:Vygotsky's and Feuerstein's perspectives in a study of student learning. Educational Psychologists, *Vol.* 30, pp. 67-75.

Krashen, S. (1985). *The input hypothesis: Issues and implications.* New York: Longman

Knight, P. (2001). The Development of EFL Methodology. In Christopher N. Candlin and Neil Mercer (eds.). *English Language Teaching in its Social Context: A Reader*. (pp. 147-165). London: Routledge.

Landrum, T.J., & McDuffie, K.A92008). Behavioral. In T. L. Good (Ed.) 21st century learning (Vol. 1, pp. 161-167). Thousand Oaks, CA:Sage

Lewis, M. (1993). *The Lexical Approach: The State of ELT and a Way Forward*. Hove, England: Language Teaching Publications.

Lightbown, M. P. and Spada, N. (2004). 2nd, Ed. *How Languages are Learned*. Oxford: Oxford University Press.

Lu, MM 2008, 'Effectiveness of vocabulary learning via mobile phone', Journal Of Computer Assisted Learning, *Vol.* 24 (6) pp. 515-525, Education Research Complete, EBSCOhost, viewed 28 December 2013.

Lynn, R.E. 1973. Preparing word lists: a suggested method. *RELC Journal Vol. 4 (1) pp.* 25-32.

Mayer, R.E. (1997). Multimedia learning: Are we asking the right questions? *Educational Psychologist*, *Vol.* 32, pp. 1-19.

Mayer, R. E. (2003). Elements of a science of e-learning. *Journal of Educational Computing Research*, *Vol.* 29(3), pp. 297-313.

Mayer, R.E. (2008b).*Learning and instruction*. (2nd ed.). Upper Saddle River, NJ: Pearson Merrill Prentice Hall.

McNeill, D. (1966), 'Developmental Psycholinguistics', in: *The Genesis of Language: A Psycholinguistic Approach,* ed. F. Smith & G.A. Miller, Cambridge, MA: M.I.T. Press

Mitchell, A., Heppel, S., & Kadirire, J. (2002). *Technology Watch Research Report*. Anglia: UltraLab.

Nation, P. (2002). Best Practice in Vocabulary Teaching and Learning. In Jack C. Richards and Willy A. Renandya (eds.). *Methodology in Language Teaching: An Anthology of Current Practice*. (pp. 267-272). New York: Cambridge University Press.

Nation, I.S.P. (2001). *Learning Vocabulary in Another Language*. Cambridge: Cambridge University Press.

O'Malley, J. M. and A. U. Chamot. (1990). *Learning Strategies in Second Language Acquisition*. Cambridge: Cambridge University Press.

Pavičić Takač, V. (2008). *Vocabulary learning strategies and foreign language acquisition*. Clevedon, UK: Multilingual Matters.

Praninskas, J. 1972. *American University Word List*. London: Longman.

Prensky M. (2005) What can you learn from a cell phone? Almost anything! *The Innovate Gateway* **1** (June/July). Available at: http://www.innovateonline.info/index.php? view=article&id=83 (last accessed 25 Feb 2014).
Randall, M. (2007). *Memory, Psychology and Second Language Learning*. Amsterdam: John Benjamin Publishing Co.

Rashtchi, M. & Hajihassani, H. (2010). Blog-assisted language learning: A possibility in teaching reading to Iranian EFL learners. *International Journal of Language Studies, Vol. 4*(4), pp. 245-362.

 Richards, J. C., & Schmidt, R. (2002). Dictionary of language and applied linguistics (3rd ed.). England: A Pearson Education Book.

Richards, J.C. l974. Word lists: problems and prospects. *RELC Journal Vol. 5:* pp.69-84.
Salaberry, M. R. (2001). The use of technology for second language learning and teaching: A retrospective. *Modern Language Journal, Vol. 85*, pp. 39-56. http://dx.doi.org/10.1111/0026-7902.00096

Schmitt, N. (2000). *Vocabulary in Language Teaching*. Cambridge: Cambridge University Press.

Schmitt, N. (2008)Instructed second language vocabulary learning*. Language Teaching Research, Vol. 1*2(3): pp. 329 -363.

Schunk.D. (2000).*learning theories* (3rd ed.)Upper Saddle River, NJ: Merrill/Prentice-hall

Slavin, R.E. (2012). *Educational psychology : theory and practice (*10th ed*.)* Boston, Mass. Pearson.

Snow, C.E. and Young-Suk Kim. (2007) "Large Problem Spaces: The Challenge of Vocabulary for English Language Learners." In Wagner, R.K., Muse, A.E. and Tannenbaum, K.R*. Vocabulary Acquisition: Implications for Reading Comprehension.* New York: Guildford Press. pp 123-131.

Sokmen, A. (1997). Current Trends in Teaching Second Language Vocabulary. In N. Schmitt and M McCarthy (eds.). *Vocabulary: Description, Acquisition and Pedagogy*. (pp. 237-257). Cambridge: Cambridge University Press.

Sonbul, S. & Schmitt, N. (2009).Direct teaching of vocabulary after reading: is it worth the effort? *ELT Journal.* Available from http:eltj.oxfordjournals.org.

Swan, M., & Catherine W. (1984). *The Cambridge English Course 1 (teacher's book)*. Cambridge: Cambridge University Press.

Tabatabaei, O, & Goojani, A 2012, 'The Impact of Text-Messaging on Vocabulary Learning of Iranian EFL Learners', *Cross-Cultural Communication, 8, 2,* pp. 47-55, Academic Search Complete, EBSCOhost, viewed 28 December 2013.

Taki, S, & Khazaei, S 2011, 'Learning Vocabulary via Mobile Phone: Persian EFL Learners in Focus'*, Journal Of Language Teaching & Research, 2, 6,* pp. 1252-1258, Education Research Complete, EBSCOhost, viewed 28 December 2013.

Thornton, P. & Houser, C. (2003). Using Mobile Web and Video Phones in English Language Teaching: Projects with Japanese College Students. In B. Morrison, C. Green & G. Motteram (Eds.), *Direction in CALL: Experience, Experiment & Evaluation* (pp. 207-224).

Thornton, P. & Houser, C. (2004). Using Mobile Phones in Education*. In Proceedings of International Workshop on Wireless and Mobile Technologies in Education (WMTE2004)* (pp. 3-10). Jungli, Taiwan: IEEE Computer Society Press.

Thornton, P. & Houser, C. (2005). Using Mobile Phones in English Education in Japan. *Journal of Computer Assisted Learning, Vol. 21*, pp. 217-228.

Warschauer, M., & Meskill, C. (2000). Technology and second language teaching. In J. W. Rosenthall (Ed.), *Handbook of undergraduate second language education* (pp. 303-318). NJ, Mahwah: Lawrence Erlbaum.

Wilkins, D.A. (1972) *Linguistics in Language Teaching.* London:Edward Arnold.

Xue Guoyi and I.S.P. Nation. 1984. A university word list. *Language Learning and Communication Vol. 3:* pp. 215-229.

- **APPENDICES**

Appendix 1

Coxhead (2000) Academic Word List

Sublist 1 of the Academic Word List - Most Frequent Words in Families

This sublist contains the most frequent words of the Academic Word List in the Academic Corpus.

1. *analysis*
2. *approach*
3. *area*
4. *assessment*
5. *assume*
6. *authority*
7. *available*
8. *benefit*
9. *concept*
10. *consistent*
11. *constitutional*
12. *context*
13. *contract*

14. *create*
15. *data*
16. *definition*
17. *derived*
18. *distribution*
19. *economic*
20. *environment*
21. *established*
22. *estimate*
23. *evidence*
24. *export*
25. *factors*
26. *financial*

27. *formula*
28. *function*
29. *identified*
30. *income*
31. *indicate*
32. *individual*
33. *interpretation*
34. *involved*
35. *issues*
36. *labour*
37. *legal*
38. *legislation*
39. *major*

40. *method*
41. *occur*
42. *percent*
43. *period*
44. *policy*
45. *principle*
46. *procedure*
47. *process*
48. *required*
49. *research*
50. *response*
51. *role*
52. *section*
53. *sector*
54. *significant*
55. *similar*
56. *source*
57. *specific*
58. *structure*
59. *theory*
60. *variables*

Sublist 2 of Academic Word List - Most Frequent Words in Families

This sublist contains the second most frequent words in the Academic Word List from the Academic Corpus.

1. *achieve*
2. *acquisition*
3. *administration*
4. *affect*
5. *appropriate*
6. *aspects*
7. *assistance*
8. *categories*
9. *chapter*
10. *commission*
11. *community*
12. *complex*
13. *computer*
14. *conclusion*
15. *conduct*
16. *consequences*
17. *construction*
18. *consumer*
19. *credit*
20. *cultural*
21. *design*
22. *distinction*
23. *elements*
24. *equation*
25. *evaluation*
26. *features*
27. *final*
28. *focus*
29. *impact*
30. *injury*
31. *institute*
32. *investment*
33. *items*
34. *journal*
35. *maintenance*
36. *normal*
37. *obtained*
38. *participation*
39. *perceived*
40. *positive*
41. *potential*
42. *previous*
43. *primary*
44. *purchase*
45. *range*
46. *region*
47. *regulations*
48. *relevant*
49. *resident*
50. *resources*
51. *restricted*
52. *security*
53. *sought*
54. *select*
55. *site*
56. *strategies*
57. *survey*
58. *text*
59. *traditional*
60. *transfer*

Sublist 3 of Academic Word List - Most Frequent Words in Families

This sublist contains the third most frequent words of the Academic Word List in the Academic Corpus.

1. *alternative*
2. *circumstances*
3. *comments*
4. *compensation*
5. *components*
6. *consent*
7. *considerable*
8. *constant*
9. *constraints*
10. *contribution*
11. *convention*
12. *coordination*
13. *core*
14. *corporate*
15. *corresponding*
16. *criteria*
17. *deduction*
18. *demonstrate*
19. *document*
20. *dominant*
21. *emphasis*
22. *ensure*
23. *excluded*
24. *framework*
25. *funds*
26. *illustrated*
27. *immigration*
28. *implies*
29. *initial*
30. *instance*
31. *interaction*
32. *justification*
33. *layer*
34. *link*
35. *location*
36. *maximum*
37. *minorities*
38. *negative*
39. *outcomes*
40. *partnership*
41. *philosophy*
42. *physical*
43. *proportion*
44. *published*
45. *reaction*
46. *registered*
47. *reliance*
48. *removed*
49. *scheme*
50. *sequence*
51. *sex*
52. *shift*
53. *specified*
54. *sufficient*
55. *task*
56. *technical*
57. *techniques*
58. *technology*
59. *validity*
60. *volume*

Sublist 4 of Academic Word List - Most Frequent Words in Families

This sublist contains the fourth most frequent words of the Academic Word List in the Academic Corpus.

1. *access*
2. *adequate*
3. *annual*
4. *apparent*
5. *approximated*
6. *attitudes*
7. *attributed*
8. *civil*
9. *code*
10. *commitment*
11. *communication*
12. *concentration*
13. *conference*
14. *contrast*
15. *cycle*
16. *debate*
17. *despite*
18. *dimensions*
19. *domestic*
20. *emerged*
21. *error*
22. *ethnic*
23. *goals*
24. *granted*
25. *hence*
26. *hypothesis*
27. *implementation*
28. *implications*
29. *imposed*
30. *integration*
31. *internal*
32. *investigation*
33. *job*
34. *label*
35. *mechanism*
36. *obvious*
37. *occupational*
38. *option*
39. *output*
40. *overall*
41. *parallel*
42. *parameters*
43. *phase*
44. *predicted*
45. *principal*
46. *prior*
47. *professional*
48. *project*
49. *promote*
50. *regime*
51. *resolution*
52. *retained*
53. *series*
54. *statistics*
55. *status*
56. *stress*
57. *subsequent*
58. *sum*
59. *summary*
60. *undertaken*

Sublist 5 of Academic Word List - Most Frequent Words in Families

1. academic
2. adjustment
3. alter
4. amendment
5. aware
6. capacity
7. challenge
8. clause
9. compounds
10. conflict
11. consultation
12. contact
13. decline
14. discretion
15. draft
16. enable
17. energy
18. enforcement
19. entities
20. equivalent
21. evolution
22. expansion
23. exposure
24. external
25. facilitate
26. fundamental
27. generated
28. generation
29. image
30. liberal
31. licence
32. logic
33. marginal
34. medical
35. mental
36. modified
37. monitoring
38. network
39. notion
40. objective
41. orientation
42. perspective
43. precise
44. prime
45. psychology
46. pursue
47. ratio
48. rejected
49. revenue
50. stability
51. styles
52. substitution
53. sustainable
54. symbolic
55. target
56. transition
57. trend
58. version
59. welfare
60. whereas

Sublist 6 of Academic Word List - Most Frequent Words in Families

1. abstract
2. accurate
3. acknowledged
4. aggregate
5. allocation
6. assigned
7. attached
8. author
9. bond
10. brief
11. capable
12. cited
13. cooperative
14. discrimination
15. display
16. diversity
17. domain
18. edition
19. enhanced
20. estate
21. exceed
22. expert
23. explicit
24. federal
25. fees
26. flexibility
27. furthermore
28. gender
29. ignored
30. incentive
31. incidence
32. incorporated
33. index
34. inhibition
35. initiatives
36. input
37. instructions
38. intelligence
39. interval
40. lecture
41. migration
42. minimum
43. ministry
44. motivation
45. neutral
46. nevertheless
47. overseas
48. preceding
49. presumption
50. rational
51. recovery
52. revealed
53. scope
54. subsidiary
55. tapes
56. trace
57. transformation
58. transport
59. underlying
60. utility

Sublist 7 of Academic Word List - Most Frequent Words in Families

1. *adaptation*
2. *adults*
3. *advocate*
4. *aid*
5. *channel*
6. *chemical*
7. *classical*
8. *comprehensive*
9. *comprise*
10. *confirmed*
11. *contrary*
12. *converted*
13. *couple*
14. *decades*
15. *definite*
16. *deny*
17. *differentiation*
18. *disposal*
19. *dynamic*
20. *eliminate*
21. *empirical*
22. *equipment*
23. *extract*
24. *file*
25. *finite*
26. *foundation*
27. *global*
28. *grade*
29. *guarantee*
30. *hierarchical*
31. *identical*
32. *ideology*
33. *inferred*
34. *innovation*
35. *insert*
36. *intervention*
37. *isolated*
38. *media*
39. *mode*
40. *paradigm*
41. *phenomenon*
42. *priority*
43. *prohibited*
44. *publication*
45. *quotation*
46. *release*
47. *reverse*
48. *simulation*
49. *solely*
50. *somewhat*
51. *submitted*
52. *successive*
53. *survive*
54. *thesis*
55. *topic*
56. *transmission*
57. *ultimately*
58. *unique*
59. *visible*
60. *voluntary*

Sublist 8 of Academic Word List - Most Frequent Words in Families

1. *abandon*
2. *accompanied*
3. *accumulation*
4. *ambiguous*
5. *appendix*
6. *appreciation*
7. *arbitrary*
8. *automatically*
9. *bias*
10. *chart*
11. *clarity*
12. *conformity*
13. *commodity*
14. *complement*
15. *contemporary*
16. *contradiction*
17. *crucial*
18. *currency*
19. *denote*
20. *detected*
21. *deviation*
22. *displacement*
23. *dramatic*
24. *eventually*
25. *exhibit*
26. *exploitation*
27. *fluctuations*
28. *guidelines*
29. *highlighted*
30. *implicit*
31. *induced*
32. *inevitably*
33. *infrastructure*
34. *inspection*
35. *intensity*
36. *manipulation*
37. *minimised*
38. *nuclear*
39. *offset*
40. *paragraph*
41. *plus*
42. *practitioners*
43. *predominantly*
44. *prospect*
45. *radical*
46. *random*
47. *reinforced*
48. *restore*
49. *revision*
50. *schedule*
51. *tension*
52. *termination*
53. *theme*
54. *thereby*
55. *uniform*
56. *vehicle*
57. *via*
58. *virtually*
59. *widespread*
60. *visual*

Sublist 9 of Academic Word List - Most Frequent Words in Families

1. *accommodation*
2. *analogous*
3. *anticipated*
4. *assurance*
5. *attained*
6. *behalf*
7. *bulk*
8. *ceases*
9. *coherence*
10. *coincide*
11. *commenced*
12. *incompatible*
13. *concurrent*
14. *confined*
15. *controversy*
16. *conversely*
17. *device*
18. *devoted*
19. *diminished*
20. *distorted/distortion* - equal figures
21. *duration*
22. *erosion*
23. *ethical*
24. *format*
25. *founded*
26. *inherent*
27. *insights*
28. *integral*
29. *intermediate*
30. *manual*
31. *mature*
32. *mediation*
33. *medium*
34. *military*
35. *minimal*
36. *mutual*
37. *norms*
38. *overlap*
39. *passive*
40. *portion*
41. *preliminary*
42. *protocol*
43. *qualitative*
44. *refine*
45. *relaxed*
46. *restraints*
47. *revolution*
48. *rigid*
49. *route*
50. *scenario*
51. *sphere*
52. *subordinate*
53. *supplementary*
54. *suspended*
55. *team*
56. *temporary*
57. *trigger*
58. *unified*
59. *violation*
60. *vision*

Sublist 10 of the Academic Word List - Most Frequent Words in Families

This sublist contains the least frequent words of the Academic Word List in the Academic Corpus.

1. *adjacent*
2. *albeit*
3. *assembly*
4. *collapse*
5. *colleagues*
6. *compiled*
7. *conceived*
8. *convinced*
9. *depression*
10. *encountered*
11. *enormous*
12. *forthcoming*
13. *inclination*
14. *integrity*
15. *intrinsic*
16. *invoked*
17. *levy*
18. *likewise*
19. *nonetheless*
20. *notwithstanding*
21. *odd*
22. *ongoing*
23. *panel*
24. *persistent*
25. *posed*
26. *reluctant*
27. *so-called*
28. *straightforward*
29. *undergo*
30. *whereby*

Appendix 2:
The Academic word list of the Ministry of Education supported with meaning.

Academic Word Sub- Lists 1 – 5

Word	المعنى	Word	المعنى	Word	المعنى
analysis	تحليل	method	أسلوب	credit	رصيد
approach	منهج/ يقترب	occur	يحدث	cultural	ثقافي
area	منطقة / مساحة	percent	بالمئة	design	يصمم
assessment	تقييم	period	فترة	distinction	تفوق
assume	يفترض	policy	سياسة	elements	عناصر
authority	سُلطة	principle	مبدأ	equation	معادلة
available	متوفر	procedure	الإجراء	evaluation	تقييم
benefit	يستفيد	process	عملية	features	مظاهر
concept	مفهوم	required	مطلوب	final	نهائي
consistent	متماسك	research	بحث	focus	يركز
constitutional	دستوري	response	رد	impact	يؤثر
context	نص	role	دور	injury	جرح
contract	عقد	section	قسم	institute	معهد
create	يبدع	sector	قطاع	investment	استثمار
data	بيانات	significant	مميز	items	بند / عناصر
definition	تعريف	similar	مشابه	journal	صحيفة
derived	مشتق من	source	مصدر	maintenance	ترميم
distribution	توزيع	specific	محدد	normal	عادي
economic	اقتصادي	structure	تركيب	obtained	حقق
environment	بيئة	theory	نظرية	participation	مشاركة
established	تأسس	variables	متغيرات	perceived	أدرك
estimate	يقدر	achieve	يحقق	positive	ايجابي
evidence	شاهد \ دليل	acquisition	اكتساب	potential	إمكانية
export	يصدر	administration	إدارة	previous	سابق
factors	عوامل	affect	يؤثر	primary	رئيسي
financial	مالي	appropriate	مناسب	purchase	يشتري
formula	معادلة	aspects	جوانب	range	مجال
function	وظيفة / يصل	assistance	مساعدة	region	إقليم
identified	معروف	categories	فئات	regulations	تنظيمات
income	دخل	chapter	فصل من كتاب	relevant	مطابق
indicate	يدل على	commission	عمولة	resident	مقيم
individual	فرد	community	مجتمع	resources	مصادر
interpretation	ترجمة شفوية	complex	معقد	restricted	مقيد
involved	مرتبط ب	computer	حاسوب	security	أمن
issues	قضايا	conclusion	خاتمة	sought	تم بحثه / بُحث
labour	عمالة	conduct	سلوك	select	يختار
legal	شرعي	consequences	عواقب	site	موقع
legislation	تشريع	construction	بناء/مضمون/معنى	strategies	خطط
major	أساسي	consumer	مستهلك	survey	مسح ميداني
text	نص	traditional	تقليدي	transfer	ينقل

2

Word	المعنى	Word	المعنى	Word	المعنى
alternative	بديل	philosophy	علم الفلسفة	error	خطأ
circumstances	ظروف	physical	بدني	ethnic	طائفي
comments	تعليقات	proportion	تناسب / يكافئ	goals	أهداف
compensation	تعويض	published	نشر	granted	منح
components	مكونات	reaction	ردة فعل	hence	حيث
consent	قبول	registered	سجل	hypothesis	فرضية
considerable	ملحوظ	reliance	اتكال	implementation	تطبيق
constant	مستمر	removed	مزال	implications	تضمين
constraints	إكراه	scheme	خطة	imposed	مفروض
contribution	إسهام	sequence	تتابع	integration	تداخل
convention	اجتماع	sex	جنس	internal	داخلي
coordination	تنسيق	shift	ينقل	investigation	تحقيق
core	مركز	specified	محدد	job	وظيفة
corporate	يتشارك	sufficient	كاف	label	شريط لاصق
corresponding	منسجم	task	مهمة	mechanism	تقنية
criteria	معايير	technical	تقني	obvious	واضح
deduction	طرح	techniques	تقنيات	occupational	مهني
demonstrate	يبرهن	technology	تكنولوجيا	option	خيارات
document	وثيقة / مستند	validity	سريان المفعول	output	مخرجات
dominant	مسيطر	volume	جهاز الصوت	overall	الكل
emphasis	تأكيد	access	مدخل	parallel	توازي
ensure	يؤكد	adequate	كاف	parameters	حدود
excluded	غير متضمن	annual	سنوي	phase	مرحلة
framework	إطار	apparent	واضح	predicted	توقع
funds	أموال	approximate	تقريبي	principal	رئيسي
illustrated	موضح	attitudes	سلوك/ميول	prior	قبل
immigration	هجرة	attributed	ينسب	professional	مهني
implies	يتضمن	civil	مدني	project	مشروع
initial	ابتدائي	code	رمز	promote	يحث
instance	مثال	commit	يتعهد	regime	نظام
interaction	تفاعل	communicate	يتواصل	resolve	يقرر
justification	تبرير	concentrate	يركز	retain	يحتجز
layer	طبقة	conference	مؤتمر	series	مسلسل
link	يربط	contrast	تباين	statistics	إحصائيات
location	موقع	cycle	حلقة	status	حالة
maximum	حد أعلى	debate	جدل/يتشارك	stress	توتر
minorities	أقليات	despite	بالرغم	subsequent	التالي
negative	نفي / سلبي	dimensions	أبعاد	sum	مبلغ
outcomes	مخرجات	domestic	محلي	summary	موجز
partnership	مشاركة	emerge	يبزغ	undertake	تعهد

3

Word	المعنى	Word	المعنى	Word	المعنى
alternative	بديل	philosophy	علم الفلسفة	error	خطأ
circumstances	ظروف	physical	بدني	ethnic	طائفي
comments	تعليقات	proportion	تناسب / يكافئ	goals	أهداف
compensation	تعويض	published	نشر	granted	منح
components	مكونات	reaction	ردة فعل	hence	حيث
consent	قبول	registered	سجل	hypothesis	فرضية
considerable	ملحوظة	reliance	اتكال	implementation	تطبيق
constant	مستمر	removed	مزال	implications	تضمين
constraints	إكراه	scheme	خطة	imposed	مفروض
contribution	إسهام	sequence	تتابع	integration	تداخل
convention	اجتماع	sex	جنس	internal	داخلي
coordination	تنسيق	shift	ينقل	investigation	تحقيق
core	مركز	specified	محدد	job	وظيفة
corporate	يتشارك	sufficient	كاف	label	شريط لاصق
corresponding	منسجم	task	مهمة	mechanism	تقنية
criteria	معايير	technical	تقني	obvious	واضح
deduction	طرح	techniques	تقنيات	occupational	مهني
demonstrate	يبرهن	technology	تكنولوجيا	option	خيارات
document	وثيقة / مستند	validity	سريان المفعول	output	مخرجات
dominant	مسيطر	volume	جهاز الصوت	overall	الكل
emphasis	تأكيد	access	مدخل	parallel	توازي
ensure	يؤكد	adequate	كاف	parameters	حدود
excluded	غير متضمن	annual	سنوي	phase	مرحلة
framework	إطار	apparent	واضح	predicted	توقع
funds	أموال	approximate	تقريبي	principal	رئيسي
illustrated	موضح	attitudes	سلوك / ميول	prior	أول
immigration	هجرة	attributed	ينت	professional	مهني
implies	يتضمن	civil	مدني	project	مشروع
initial	ابتدائي	code	رمز	promote	يحث
instance	مثال	commit	يتعهد	regime	نظام
interaction	تفاعل	communicate	يتواصل	resolve	يقرر
justification	تبرير	concentrate	يركز	retain	يحتجز
layer	طبقة	conference	مؤتمر	series	مسلسل
link	يربط	contrast	تباين	statistics	احصائيات
location	موقع	cycle	حلقة	status	حالة
maximum	حد أعلى	debate	جدال / يتشارك	stress	توتر
minorities	أقليات	despite	بالرغم	subsequent	التالي
negative	نفي / سلبي	dimensions	أبعاد	sum	مبلغ
outcomes	مخرجات	domestic	محلي	summary	موجز
partnership	مشاركة	emerge	يبزغ	undertake	تعهد

Appendix 3:
The Academic Word List with parts of speech, contest, and
Arabic synonym.

Coxhead Academic Wordlist

The first 60 words

No	Academic word	Parts of speech	context	Arabic meaning
1	analyze	V.	He analyzed the way children learn language for his Master's thesis.	يحلل
2	approach	V.	The cat slowly approached the bush where the mouse was hiding.	يقترب
3	area	N.	They want to build a new shopping mall in an area which is presently forest.	منطقة
4	assess	V.	We will use the first week of classes to assess your speaking ability.	يقيس
5	assume	V.	When you didn't come to work I just assume that you were sick.	يفترض
6	authority	N.	He is a well-known authority on the language used by bees to communicate the location of food.	سلطة
7	available	Adj.	The apartment will be available on June first.	متوفر
8	benefit	N.	One of the benefits of studying English in Victoria is that you have the opportunity to speak English outside of class.	فائدة
9	concept	N.	For very young children, the concept of truth and lies are not very clear.	مصطلح-معنى
10	consist	V.	The test will consist of a series of true or false questions and two essay questions.	يتكون
11	constitute	V.	Canada's aboriginal population constitutes a small but important part of our country.	يشكل
12	context	N.	Vocabulary is generally easier to understand if you look at it in context.	نص

5

13	contract	N.	The young popstar became famous while still in high school after winning a <u>contract</u> with a major record label.	عقـد
14	create	V.	A department store spokesman says that their new outlet will <u>create</u> more than 75 permanent jobs in the city.	يـخلق
15	data	N.	We will need to examine a lot more <u>data</u> before we can make any conclusions.	بـيـانـات
16	define	V.	It can be quite difficult to clearly <u>define</u> abstract ideas such as love or friendship.	يـعرف
17	derived	V.	Many words in English are <u>derived</u> from French.	يـشتق
18	distribute	V.	Could you please <u>distribute</u> the answer sheets while I hand out the tests?	يـوزع
19	economy	N.	The Canadian <u>economy</u> is largely based on natural resources.	اقـتصا د
20	environment	N	There are many things you can do in your everyday life to help protect the <u>environment</u>, such as recycling or riding a bicycle.	بـيئة
21	established	V.	The English Language Program at the University of Victoria was <u>established</u> in May of 1987.	تــأسس
22	estimate	N.	His <u>estimate</u> for the renovations to our house was $2,250.	يـقـدر
23	evidence	N.	The police freed a suspected murderer because they didn't have enough <u>evidence</u> to charge him.	دلـيـل
24	export	V.	In the future, Canada will be under great pressure to <u>export</u> fresh water to the United States.	يـصدر
25	factors	N.	Environmental pollution seems to be an important <u>factor</u> in the increase in cancers all over the world.	عوامـل
26	finance	V.	The government has announced a special program to help <u>finance</u> new small businesses.	يـمـول
27	formula	N.	Coca-Cola has a secret <u>formula</u> for its beverage that is only known to a small group of people.	معـادلـة

28	function	N.	The function of the heart is to pump blood throughout the body.	وظيفة (شيء)
29	identified	V.	The woman was unable to identify the man who stole her purse because it had been too dark at the time of the robbery.	يتعرف على
30	income	N.	It is generally quite difficult to raise a family on a single income in Canada today, so very often both parents work full-time.	دخل
31	indicate	V.	Your continued lateness for class indicates to me that you are not really a very serious student.	يدل على
32	individual	N.	The oldest individual to win a medal in the Olympics was Oscar Swahn, who won a silver medal in shooting at the age of 72.	فرد
33	interpret	V.	The old woman couldn't speak English, so her grandchildren had to interpret for her.	يترجم
34	involve	V.	Nick's job as a salesman involves a lot of travelling around the province	يتضمن
35	issue	N.	An important issue under discussion in the world of sport today is the participation of professional athletes in the Olympic Games.	قضية
36	labour	N.	Management is meeting with labour to begin discussions on a new contract.	عمال
37	legal	Adj.	He was arrested for drunk driving because he had drunk more than the legal limit of alcohol.	شرعي
38	legislation	N.	The government recently passed legislation which prohibits tobacco advertising at sporting events.	تشريع
39	major	Adj.	Smoking is a major cause of cancer.	أساسي
40	method	N.	I don't think hitting children is a very effective method of teaching them anything.	طريقة
41	occur	V.	The accident occurred about 9:00 this morning.	يحدث
42	percentage	N.	I think that the percentage of students that have to repeat a level in this program is	نسبة مأوية

			usually about 25% or less.	
43	**period**	**N.**	Living in Berlin during the <u>period</u> when the Berlin Wall was torn down was an unforgettable experience.	فـتـرة
44	**principle**	**N.**	Our society supposedly believes in the <u>principle</u> of equality for all.	مـبـدأ
45	**proceed**	**V.**	Attention passengers on flight 514 to Honolulu. Please <u>proceed</u> to gate 33 where your plane is now boarding.	يـتقـدم
46	**process**	**N.**	It is important to learn a <u>process</u> which will help you to guess the meaning of new vocabulary from context.	عمـلـية
47	**policy**	**N.**	It is the <u>policy</u> of our government that no one should be without food or shelter.	سيـاسـة
48	**require**	**V.**	This airline seat-sale <u>requires</u> you to book your ticket at least a month in advance.	يـتطلب
49	**research**	**N.**	Some <u>research</u> into second language learning suggests that oral fluency may increase with moderate amounts of alcohol.	بـحث
50	**respond**	**V.**	You must <u>respond</u> to our offer within 30 days or it will be withdrawn.	يـستـجيب
51	**role**	**N.**	Doctors are as yet unsure what <u>role</u> diet plays in the development of the disease.	د و ر
52	**section**	**N.**	The grammar notes appear in the back <u>section</u> of the book.	قـسم
53	**sector**	**N.**	Jobs in the tourism <u>sector</u> have risen by over 5% this year.	قطـا ع
54	**significant**	**Adj.**	We have noticed a <u>significant</u> improvement in Teddy's attitude since you had a talk with him.	ذ و أ هميـة
55	**similar**	**Adj.**	The culture of the United States is quite <u>similar</u> to that of Canada.	مشـا بـه
56	**source**	**N.**	The <u>source</u> of the river is somewhere in the mountains.	مصـد ر
57	**specific**	**Adj.**	I don't know what you mean. Can you be a bit more <u>specific</u> about what problems your car is having?	مـحد د
58	**structure**	**N.**	The traditional family <u>structure</u> has undergone a	تـركـيب

| 59 | theory | N. | Many theories now state that vocabulary development is even more important than grammar study for second language learners. | نـظريـة |
| 60 | vary | V. | The amount of rain we receive varies from year to year of course, but this year has been very dry. | يـخـتـلف |

Parts of speech: Noun=N. Verb=V. Adjective=Adj. Adverb=Adv.

Appendix 4:

Survey

This survey aims to assess the availability of mobile phone with the experimental group and the agreement of the participants to use their mobile phone and credit to send SMS.

Please tick the suitable answer for you

No.	Question	Yes	No
1	Do you have a mobile phone?		
2	Do you have a smart phone?		
3	Do you have SMS application?		
4	Do you have Whatsapp application?		
5	Do you agree to use your mobile phone application SMS in sending messages during the process of learning L2 vocabulary?		
6	Do you agree to use your mobile phone application Whatsapp in sending messages during the process of learning L2 vocabulary?		
7	Are you willing to receive messages at any time between 2pm and 8pm?		

		1	2	3	4
8	How often can you receive messages a day? How often can you send messages a day?				

9	How often can you receive messages a day? How often can you send messages a day?				

		SMS	WHATSAPP	BOTH
10	What application do you prefer to use?			

Appendix 5:
The Proficiency Pre-test

I-   Word meaning

A. <u>Read the sentences and choose the best answer that complete the sentences.</u>

1. He did an _____ of the way children learn language for his Master's thesis.

a- achievement   b- analysis   c- environment

2. He was arrested for drunk driving because he had drunk more than the _____ limit of alcohol.

a- significant   b- annual   c- legal

3. The culture of the United States is quite _____ to that of Canada.

a- similar   b- physical   c- internal

4. The Canadian _____ is largely based on natural resources.

a- document   b- philosophy   c- economy

5. Environmental pollution seems to be an important _____ in the increase in cancers all over the world.

a- issue   b- task   c- project

6. The apartment will be _____ on June first.
   a- available b- principal c- professional

7. The young popstar became famous while still in high school after winning a _____ with a major record label.
a- summary b- contract c-regim

8. Your continued lateness for class _____ to me that you are not really a very serious student.
a- stresses b- indicates c- debates

9. Living in Berlin during the _____ when the Berlin Wall was torn down was an unforgettable experience.
a- core b- funds c- period

10. Some _____ into second language learning suggests that oral fluency may increase with moderate amounts of alcohol.
a- reactions b- integrations c- theories

11. One of the _____ of studying English in Victoria is that you have the opportunity to speak English outside of class.
   a- benefits b- codes c-cycles

12. The cat slowly _____ the bush where the mouse was hiding.
   a- Shifted b- approached c- ensured

13. A department store spokesman says that their new outlet will _____ more than 75 permanent jobs in the city.
a- access b- approximate c-create

14. The government recently passed _____ which prohibits tobacco advertising at sporting events.
a- legislation b- task c- phase

B. Read the sentences and choose the word or phrase that best matches the meaning of the target word.

Use context clues to determine the correct meaning.

15. There are many things you can do in your everyday life to help protect the **environment**, such as recycling or riding a bicycle.

a- technology b- surrounding c-attitudes

16. The **source** of the river is somewhere in the mountains.

a- spring b- journal c-potential

17. You must **respond** to our offer within 30 days or it will be withdrawn.

a- affect b- reply c- select

18. The government has announced a special program to help **finance** new small businesses.

a- sponsorship b- sector c- commission

19. It is the **policy** of our government that no one should be without food or shelter.

a- plan b- resident c-survey

20. The oldest **individual** to win a medal in the Olympics was Oscar Swahn, who won a silver medal in shooting at the age of 72.

a- item b- institute c- person

21. The old woman couldn't speak English, so her grandchildren had to **interpret** for her.

a- transfer b- translate c-transact

22. For very young children, the **concepts** of truth and lies are not very clear.

a- acquisition   b- notion   c- aspects

23. The English Language Program at the University of Victoria was **established** in May of 1987.

a- recognized   b-purchased   c-restricted

24. Our society supposedly believes in the **principle** of equality for all.

a- value   b- assistance   c- structure

C. **Read each target word and the list below. One word in each list is NOT a synonym for the target word. Cross it out**.

25. We will need to examine a lot more **data** before we can make any conclusions.

a- facts   b- conference   c- statistics

26. They want to build a new shopping mall in an **area** which is presently forest.

a- zone   b- region   c- criteria

27. Smoking is a **major** cause of cancer.

a- layer   b- main   c- chief

28. Doctors are as yet unsure what **role** diet plays in the development of the disease.

a- part   b- act   c- link

29. Coca-Cola has a secret **formula** for its beverage that is only known to a small group of people.

a- method   b- recipe   c-debate

30. I don't know what you mean. Can you be a bit more **specific** about what problems your car is having?

<center>a- vague   b- exact   c- precise</center>

II- Collocation

D. <u>Match each target word in the box with the group of words that regularly occur with it. In all cases, the target word comes before the word in the list. One of the given words is extra.</u>

statistical
disposable
undertake
precise
 pursue

      31. ………..

objectives
careers
interests
policies

      32. ………..

analysis
significance
techniques
tables

      33. ………..

challenge
journey
responsibility
training

      34. ………

nature
moment
details

location

III- Word families

E. Complete each sentence using the words in the box. Be sure to use the correct form of each word.

definition	involve	assessment	consistence	estimation	Proceed

35. We will use the first week of classes to _____ your speaking ability.

36. The test will _____ of a series of true or false questions and two essay questions.

37. Nick's job as a salesman _____ a lot of travelling around the province.

38. His _____ for the renovations to our house was $2,250.

39. Attention passengers on flight 514 to Honolulu. Please _____ to gate 33 where your plane is now boarding.

40. It can be quite difficult to clearly _____ abstract ideas such as love or friendship.
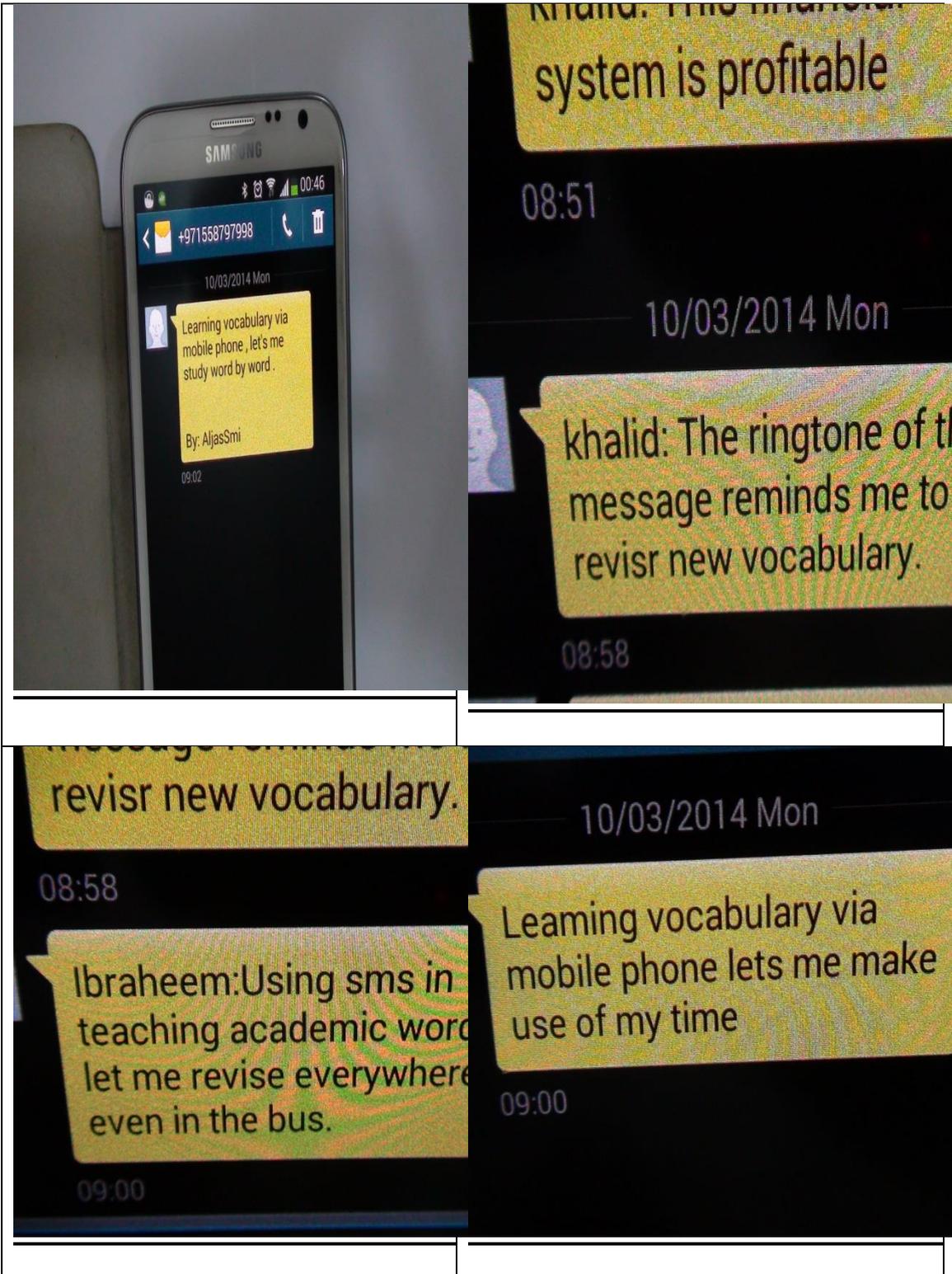
End of the questions

Appendix 6:

Learning SMS
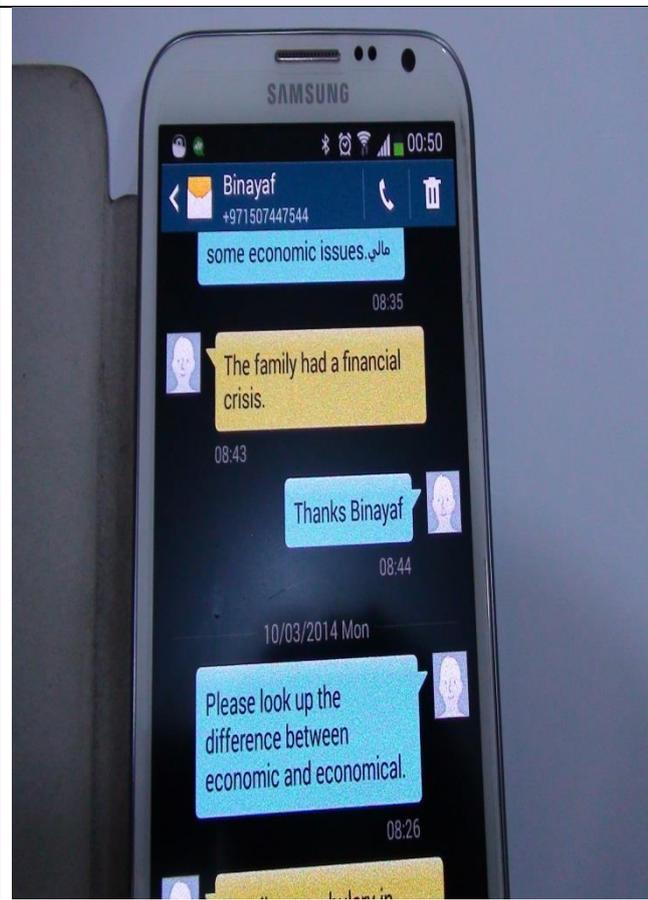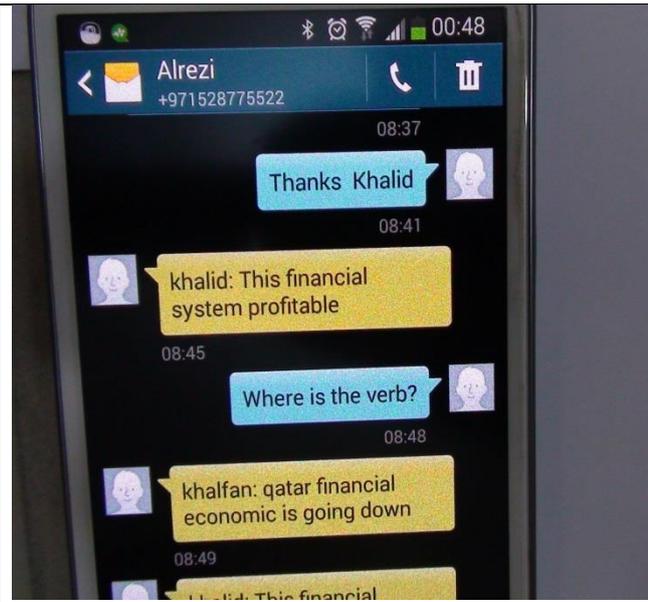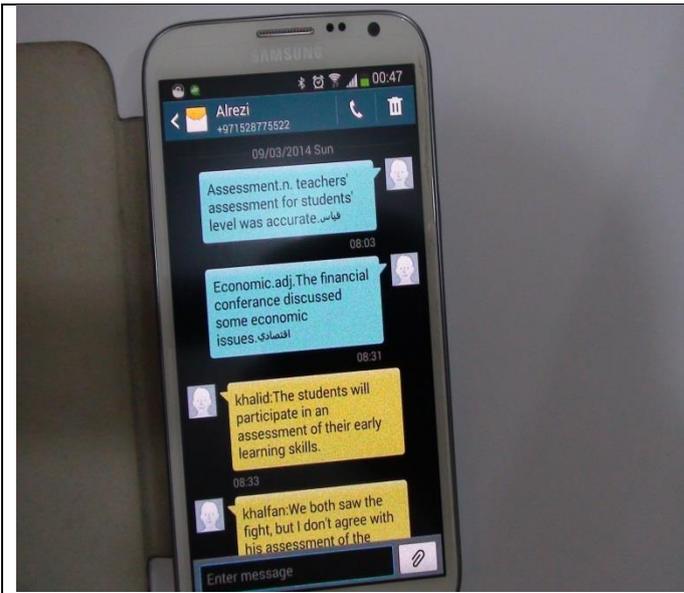
Reporting SMS

Appendix 7:

Immediate Post –Test

Read the following sentences and choose the word that best complete the sentences, from a,b, c, or d

1-About 16% of Americans work in the manufacturing _____.

a- factor   b- sector   c- doctor   d- actor

2-Current _____ trace our first human ancestor to Africa about 5 to 7 million years ago.

a-theories   b- series   c- furies   d-sherries

3-Bananas and coffee together _____ almost 38% of Costa Rica's export earnings.

a- substitutes   b- constitute   c-institute   d- restitute

4-One can _____ some important conclusions using the results of a proper set of experiments.

a-drive   b- strive   c-dive   d-derive

5-He doesn't have enough _____ to support his theories just yet

a- Confidence   b- relevance   c-evidence   d-incidence

6-Our response to the controversial social _____ of our time will determine our future.

a-Issues   b- tissues   c- reissue   d-sue

7. The music which the world _____ with Argentina is the music of the tango.

a- identity   b-identifies   c- identic   d- indent

8. It will take a least a month to _____ your application for a visa.

a- multiprocess   b- postprocess   c- process   d-reprocess

9. Many people seem to _____ that Canadians are just the same as Americans.

a-assume   b- reassume   c- spume   d-consume

10. Earthquakes _____ in the world about once every hour.

a- concur   b-cur   c-incur   d-occur

11. One's values should be viewed in the _____ of one's culture.

a- context   b-hypertext   c-plaintext   d-pretext

12. Every Christmas, she works hard to _____ food and blankets to the homeless.

a- attribute   b-contribute   c-distribute   d-tribute

13. The diet of brown bears _____ depending on what foods are available in that particular season or habitat.

a- varies   b- actuaries   c- adversaries   d- salaries

14. Oman's economy is based on petroleum, which accounts for 99 percent of _____ revenues.

a-airport   b- carport   c-comport   d-export

15. Studies show that women are much less likely than men to occupy positions of _____ at work.

a-anteriority   b-authority   c-exteriority   d- interiority

16. Visas are not _____ for Americans who plan to stay in England for less than three months.

a- acquired   b-enquired   c- inquired   d-required

17. Our family _____ was lower than usual last year because my wife quit work in August to have our baby.

a-income   b- outcome   c-overcome   d- forthcome

18. Huang and van Naerssen have found that reading outside class is the most _____ predictor of speaking ability in a second language.

a- applicant   b- significant   c- supplicant   d- radiant

19. She invests a certain_____ of her earnings in the stock market each month.

a- advantage   b-anecdotage   c-cartage   d- percentage

20. The _____ of weeding the garden was too much for his weak back.

a- arbour   b- clamour   c-harbour   d-labour

Appendix 8:

Delayed post-test

I-Word meaning

A. <u>Read the sentences and choose the best answer that complete the sentences.</u>

1-_____ of water is vital to all plant and animal life.
a- Achievement   b- Availability   c- Environment

2. We need to find a more _____ way to manufacture our products because our profit margin is too low.
a- significant   b- annual   c- economical

3. Warmer than average weather was the deciding _____ in our decision to postpone our ski trip.
 a- factor   b- physical   c- internal

4. Interest in the planet Mars has greatly increased since _____ of water raised the possibility that life in some form may have evolved there.
 a- document   b- indications   c- economy

5. Music downloaders are questioning the _____ of file sharing, claiming the law is unclear on the matter.
 a- illegality   b- task   c- project

B. <u>Read the sentences and choose the word or phrase that best matches the meaning of the target word.</u>

<u>Use context clues to determine the correct meaning.</u>

6. Meetings will be held **periodically** for the members of the project to discuss their progress.

a- technologically   b- surrounding   c-occasionally

7. Jane Goodall's **research** into chimpanzees has greatly increased our knowledge of these animals.
a- investigation   b- journal   c-potential

8-You must **respond** to our offer within 30 days or it will be withdrawn.
a- affect   b- reply   c- select

9. The DNA of chimpanzees shows a remarkable **similarity** to that of humans.
a- sponsorship   b- likeness   c- commission

10. At the end of a research project, the researcher is normally faced with lots of observations which need to be **analysed**.
a- planed   b- resident   c-examined

II Word families

C. Complete each sentence using the words in the table. Be sure to use the correct form of each word.

definition	involve	assessment	consistence	estimation

11. We will use the first week of classes to _____ your speaking ability.

12. The test will _____ of a series of true or false questions and two essay questions.

13. Nick's job as a salesman _____ a lot of travelling around the province.

14. His _____ for the renovations to our house was $2,250.

15. It can be quite difficult to clearly _____ abstract ideas such as love or friendship.

D. Complete each sentence using the words in the table to form a paragraph about Oman.

finance	police	Constitutes	economy	export

Oman is a Gulf country, that lies on the gulf of Oman. Omani aboriginal population__16_a large and an important part of the country. The Omani ___17_is largely based on petroleum. Petroleum accounts for 99 percent of __18__ revenues. The government has announced a special program to help ___19__ new small businesses. It is the __20__ of our government that no one should be without food or shelter.