T. C.
DOKUZ EYLÜL UNIVERSITY
INSTITUTE OF EDUCATIONAL SCIENCES
DEPARTMENT OF FOREIGN LANGUAGES TEACHING
ENGLISH LANGUAGE TEACHING PROGRAMME
MA THESIS

THE EFFECTIVENESS OF COMPUTER-ASSISTED INSTRUCTION ON VOCABULARY ACHIEVEMENT

Tutku BAŞÖZ

İzmir
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Supervisor

Assoc. Prof. Dr. Feryal ÇUBUKÇU

İzmir

2013

YEMİN

Yüksek lisans tezi olarak sunduğum "*The Effectiveness of Computer Assisted Instruction on Vocabulary Achievement*" adlı çalışmamın, tarafımdan bilimsel ahlak ve geleneklere aykırı düşecek bir yardıma başvurulmaksızın yazıldığını ve yararlandığım eserlerin kaynakçada gösterilenlerden oluştuğunu, bunlara atıf yapılarak yararlanmış olduğumu belirtir ve bunu onurumla doğrularım.

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Dedicated to my beloved parents,
for their endless love, support and encouragement...

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES AND IMAGES

ÖZET

Bilgisayar destekli dil öğrenimi son yıllarda dil öğreniminde ve öğretiminde oldukça ön plana çıkmıştır. Bilgisayar destekli sözcük öğretimi, bilgisayar destekli dil öğreniminin en yaygın kullanım alanlarından biridir. Bu çalışmanın amacı, bilgisayar destekli öğretimin öğrencilerin sözcük başarıları üzerindeki etkisini araştırmaktır. Çalışma, bilgisayar destekli öğretimi ve iletişimsel dil öğretimi yöntemlerini sözcük başarısına olan etkileri açısından birbirleri ile karşılaştırmıştır. Bu çalışma, ayrıca, öğrencilerin bilgisayar destekli dil öğrenimine ilişkin algılarını da incelemiştir. Yarı-deneysel olan bu çalışmanın katılımcıları, 2012-2013 Eğitim Öğretim Yılı Bahar Yarıyılı'nda Balıkesir Üniversitesi İngilizce Öğretmenliği Programı'nda öğrenim gören 52 birinci sınıf öğrencisidir. Deney sürecinden önce öğrenciler bilgisayar destekli öğretim grubu ve iletişimsel öğretim grubu olmak üzere rastgele iki gruba ayrılmıştır ve her iki gruba bir ön-test uygulanmıştır. Ön-test sonrasında, bilgisayar destekli öğretim grubu bilgisayar laboratuvarında bir Moodle (Esnek Nesne Yönelimli Dinamik Öğrenme Ortamı) aracılığıyla öğretmen gözetiminde 20 hedef sözcük üzerinde bireysel olarak çalışırken, aynı sözcükler iletişimsel öğretim grubuna iletişimsel bir sınıf ortamında öğretmenleri tarafından öğretilmiştir. Deney sürecinden hemen sonra, her iki gruba son-test uygulanmıştır. Aynı test, sözcüklerin kalıcılığı ölçmek için deney sürecinden 5 hafta sonra geciktirilmiş son-test olarak her iki gruba bir kez daha uygulanmıştır. Bilgisayar destekli öğretim grubuna ayrıca *Bilgisayar Destekli Dil Öğrenimine Yönelik Tutum Anketi* uygulanmıştır. Araştırma sonuçları, her iki grubun da deney sonrasında belli oranda sözcük kazanımlarının olduğunu, fakat gruplar arasında sözcük kazanımları açısından anlamlı bir farklılık olmadığını ortaya çıkarmıştır. Ayrıca, araştırma sonuçları İngilizce Öğretmenliği Programı birinci sınıf öğrencilerinin bilgisayar destekli dil öğrenimine yönelik olumlu bir tutum sergilediklerini göstermiştir. Bu çalışmadan elde edilen sonuçlardan yola çıkarak, bilgisayar destekli öğretimin inanılanın aksine sözcük öğrenimiyle ilgili olarak öğrencilere her zaman daha iyi öğrenme deneyimleri sunmayacağı sonucu çıkarılabilir.

Anahtar kelimeler: Bilgisayar destekli dil öğrenimi, bilgisayar destekli sözcük öğretimi, sözcük başarısı, iletişimsel dil öğretimi.

ABSTRACT

In recent years, computer assisted language learning has come to the forefront of language learning and teaching. Computer assisted vocabulary instruction has been considered to be one of the most common applications of CALL. The purpose of this study is to investigate the effectiveness of computer assisted instruction on students' vocabulary achievement. The study compares computer assisted instruction with communicative language teaching in terms of their effects on vocabulary achievement. Additionally, the study explores student perceptions of CALL. The subjects of this quasi-experimental study consisted of 52 freshmen studying in the ELT Department of Balıkesir University in the spring semester of 2012-2013 academic years. Before the experiment, the students were randomly assigned to one of the groups; Computer Assisted Instruction or Communicative Language Teaching and they were given a pre-test. Following the pre-test, the CAVI group studied 20 target words by using a Moodle in a computer laboratory whereas the CLT group was instructed the same words by their teacher in a communicative classroom atmosphere. Both groups were given the post-test immediately after the experiment. The same test was also used as the delayed post-test which was administered to the freshmen five weeks after the experiment in order to test the retention. *The Attitudes towards CALL Questionnaire* was also administered to the CAVI group. The results revealed that both CAVI and CLT groups had some kind of vocabulary gain as a result of the treatments. However, there was no significant difference between the groups in vocabulary gains. Moreover, the results of the present study indicated that the freshmen had positive attitudes towards the use of CALL. Based on the findings of the study, it can be concluded that computer assisted instruction may not always offer better learning experience to students with respect to vocabulary learning contrary to what is believed.

Keywords: Computer assisted language learning, computer assisted vocabulary instruction, vocabulary achievement, communicative language teaching.

CHAPTER I
INTRODUCTION

1.1 Background of the Problem

Computers have tremendously affected not only the way people live but also the way people do their jobs. A few decades ago, it was very hard to imagine that computers would be so widespread, available and practical. Today, almost every aspect of our lives involves the use of computers. One of the uses of computers in education is Computer Assisted Language Learning (CALL). Over the past decade, Computer Assisted Language Learning has increasingly become an important part of the language-learning process. In general, CALL may be defined as the use of computers in language instruction. Schofield (1995) defines Computer Assisted Language Learning as any kind of language learning or teaching activity done by using computers.

It is a fact that use of CALL and web-based environments are appropriate to the alternative methodologies of modern foreign language instruction. Use of a variety of educational technologies both improves the quality of education and strengthens learning environment in a way to enable students to learn a foreign language effectively. Computer Assisted Language Learning helps students improve their language skills rapidly and helps them study at their own pace and get immediate feedback, corrections, and error analysis. In other words, CALL gives the student the "means to control his or her own learning, to construct meaning, and to evaluate and monitor his or her own performance" (Hanson-Smith, 1997: 5). Jaber (1997) also mentions that with the aid of the computer, students are able to collaborate, to use their critical thinking skills, and to find alternatives to solutions of problems in the student-centered classrooms. Thus, CALL is now an integral part of EFL classrooms and is likely to assume increasing importance as technology improves.

As aforementioned, computers are among the most important and most effective technological aids in language teaching-learning process. Computer assisted vocabulary instruction is one of the sub-fields of Computer Assisted Language Learning. It is a fact that vocabulary, which is the basic material of the language, is of crucial importance in expressing ideas and thoughts when communicating. The following statement about the relationship between grammar and vocabulary demonstrated by the British linguist Wilkins (1976: 111) argues that "without grammar, there are few things we can express; while without vocabulary, there is nothing we can express." Here, Wilkins highlights the importance of vocabulary in communication. Without the mediation of vocabulary, no amount of grammatical or other types of linguistic knowledge can be employed in second language communication or discourse. Moreover, Lewis (1992) suggests that vocabulary acquisition is the main task of second language acquisition and the language skills as listening, speaking, reading, writing and translating all cannot go without vocabulary. In this context, researchers have been interested in Computer Assisted Vocabulary Instruction and tried to find effective ways for language learners to acquire and practise second language vocabulary by using technological aids such as concordancers, electronic dictionaries, computerized exercises, hypertext, glosses, and the Internet. These technological aids offer students enjoyable and innovative vocabulary learning experiences. When properly designed, these tools can be effective mediums of vocabulary instruction. Taking all these into account, it can be assumed that a study which investigates the effectiveness of Computer Assisted Vocabulary Instruction may provide valuable information about the strengths and weaknesses of CALL and necessary improvement can be achieved.

1.2 The Purpose of the Study

The purpose of the study is to investigate whether there is a significant difference in ELT freshman students' vocabulary achievement depending upon the vocabulary teaching through computer-based instruction or through communicative language teaching. This study seeks to determine whether foreign language vocabulary learning would be better for students who study the vocabulary in a

computerized language learning environment compared to students who learn the same vocabulary in a communicative language teaching environment. Additionally, the present study investigates how the CAVI (computer assisted vocabulary instruction) group students perceive the computer assisted vocabulary instruction classes, what their feelings are about the effectiveness of these classes, and strengths and weaknesses of the computer assisted classes.

1.3 Significance of the Study

Up to now, much of research has focused on the relationship between CALL and students' level of success or motivation. Most of the studies (Groot, 2000; Cobb, 1999; Goodfellow, Laurillard, 1994; Hulstijn et al., 1996; Neff, 2006) have indicated that computerized learning environment can be useful for foreign language vocabulary learning. In these studies, the paper-based vocabulary instruction and computer-based vocabulary instruction were compared with respect to their effectiveness on EFL learners' vocabulary achievement. In addition, numerous studies (Cellat, 2008; Cobb, 1999; Groot, 2000; Jafer, 2003; Levine, Frenz & Reves, 2000; Tokaç, 2005) have compared teacher-led instruction and computer instruction in terms of vocabulary acquisition. However, no studies have made a comparison between vocabulary instruction through Computer Assisted Language Learning and vocabulary instruction through Communicative Language Teaching. Thus, this study will contribute to the related literature with respect to effectiveness of Computer-assisted Vocabulary Instruction and will serve to fill a gap in the literature.

Another important point is that language teachers with basic software design skills will benefit from the study as this research may provide useful insights about the strengths and weaknesses of computer assisted vocabulary instruction. Moreover, the materials designed for this study may be a basic model for language teachers. In this respect, this study may provide useful guidelines for language teachers to follow as computer use in language education is becoming more common in Turkey.

Language teachers have huge responsibilities such as presenting language items, helping students practise language items learned earlier, and providing opportunities for students to improve four basic skills (reading, listening, speaking and writing) in the target language. Thus, language teachers have to allocate sufficient time to all phases of the learning process in order to be able to create an optimum language learning environment. As language teachers in Turkey carry a heavy workload, computer use may be an aid for teachers to accelerate learning sessions. As computer programs have the required materials, language teachers need not to prepare vocabulary materials and they may be able to allocate more time for teaching other aspects of the target language. Therefore, this study may suggest useful insights into ways of teaching and learning language with computers.

The present study also emphasizes some basic assumptions related to English Language Teaching and the conclusions are beneficial to develop practical recommendations about CALL in language teaching and learning process. It provides a better understanding of the term "effective computer assisted language learning".

1.4 The Statement of the Problem

Does the computer assisted instruction have an effect on ELT freshmen's vocabulary achievement?

1.5 Research Questions

In this study, the effectiveness of Computer Assisted Vocabulary Instruction is examined in terms of freshmen's vocabulary achievement. The main aim of the study is to investigate whether Computer Assisted Vocabulary Instruction helps students to learn and retain vocabulary more than Communicative Language Teaching. Thus, this study aims to answer the following questions:

1. Does Computer Assisted Instruction have an impact on ELT freshmen's vocabulary achievement?

2. Does Vocabulary Instruction through Communicative Language Teaching have an impact on ELT freshmen's vocabulary achievement?

3. Does the Computer Assisted Instruction group learn more vocabulary than the Communicative Language Teaching group?

4. Does the Computer Assisted Instruction group retain more vocabulary than the Communicative Language Teaching group?

5. What effects does gender have on the vocabulary achievement of the Computer Assisted Instruction group?

6. What effects does gender have on the vocabulary achievement of Communicative Language Teaching group?

7. Does the vocabulary achievement of the Computer Assisted Instruction group differ depending on the frequency of computer use?

8. Does the vocabulary achievement of the Computer Assisted Instruction group differ depending on the type of their high school?

9. What are the ELT freshmen's attitudes towards Computer Assisted Language Learning?

1.6 Assumptions of the Study

This study has the following assumptions:

Firstly, all the subjects who participate in this study are assumed to answer the questions in the vocabulary achievement test voluntarily. Secondly, the findings of the study will shed light on the detailed facts about the effectiveness of computer-assisted vocabulary instruction on Turkish ELT freshmen's vocabulary achievement. To sum up, the study is assumed to have validity and reliability in all aspects.

1.7 Limitations of the Study

As a note on the limitations of the research, the subjects of the study are limited to 52 freshmen studying in the English Language Teaching Department of Balikesir University. Furthermore, the scope of the study is confined to the data collected using a pre-, post- and delayed post-test.

1.8 Definition of Terms

CALL (Computer Assisted Language Learning): Any process in which a learner uses a computer and, as a result, improves his or her language.

CAI (Computer Assisted Instruction): A general term that is used to define the usage of computers to receive instruction in one area.

CAVI (Computer Assisted Vocabulary Instruction): Practices involving the use of computers for vocabulary learning and instruction purposes.

CLT (Communicative Language Teaching): An approach to foreign or second language teaching which emphasizes that the goal of language learning is communicative competence.

Hypermedia: Computer-based applications that combine various forms of media by using hypertext technology in a nonlinear way.

Hypertext: A computer-based system for creating and accessing nonlinear texts and multimedia.

Moodle (Modular Object-Oriented Dynamic Learning Environment): a free and open source e-learning software platform with features and activities designed to engage learners.

CHAPTER II
VOCABULARY

2.1 Introduction

The aim of this chapter is to present a theoretical framework for vocabulary. This section includes a definition of vocabulary, detailed information about what it means to know a word, significance of vocabulary in second language acquisition, some of the techniques to teach vocabulary, and a brief history of vocabulary teaching.

2.2 What is vocabulary?

Vocabulary is one of the crucial elements of a language. It is essential for language acquisition whether the language is first, second or foreign. Celce-Murcia and Rosenweig (1989: 242) states that "vocabulary should be recognized as a central element in language instruction from the beginning stages."

Vocabulary is defined as "all the words that a person knows or uses" in Dictionary of Contemporary English (2005: 1843). It can be defined, roughly, as the knowledge of words and word meanings (E. H. Hiebert & M. L. Kamil, 2004). Our vocabulary is the words we understand, know and use to communicate effectively.

A specific definition comes from Lord (1993: 83) who states that "vocabulary is by far the most sizable and unmanageable component in the learning of any language, whether for a foreign or one's mother tongue because of thousands of different meanings". Hornby (2000) simply defines it as a list of words in a language. While Read (2000: 1) looks at vocabulary from the linguistic perspective and describes it as "building blocks of language, the units of meaning from which the larger structures such as sentences, paragraphs and whole texts are formed", Ur (1996) gives a more pedagogical definition and views vocabulary as the words we teach in foreign language. She also emphasizes that a new item of vocabulary may be

more than a single word: “For example, *post office* and *mother-in-law*, which are made up of two or three words but express a single idea" (Ur, 1996: 60). That's the reason why vocabulary is also described as a lexical item that is closely defined as any words or groups of words with meaning that need to be learned as a whole (Nuttal, 1982: cited in Rahmy, 2007). As all languages are full of short phrases made up of several words or chunks of language, teachers should focus on these as well as the word itself.

Consequently, vocabulary is the group of words that a person or group of people need to start to communicate. Broadly defined, it is the knowledge of words and word meanings. Language can be learned through learning the vocabulary, first.

2.3 What does it mean to know a word?

The question “*What is a word?”* is one of the most difficult questions to answer in vocabulary studies. Dictionaries include various definitions of 'word' as in Oxford Advanced Learner's Dictionary (2007: 1609) “a single unit of language which means something and can be spoken or written" or more technical definition as in Merriam-Webster's Advanced Learner's English Dictionary (2007: 1890): "A speech sound or series of speech sounds that symbolizes and communicates a meaning usually without being divisible into smaller units capable of independent use." Some theorists and researchers have also provided some definitions of ‘word’. Vygotsky (1962: cited in Thornbury, 2002: 1), for instance, defines 'word' as microcosm of human consciousness. It is connected with consciousness as a living cell relates to a whole organism, as an atom relates to the universe. A more detailed linguistic-based definition of 'word' is provided by Miller (1991: 32) who views 'word' as a sound combination of sounds, or its representation in writing or printing, that symbolizes and communicates a meaning and may consist of a single morpheme or of a combination of morphemes whereas Laufer and Nation (1995: 312) give narrower definition of it by stating that "a word is a base form with its inflected and derived forms, i.e., a word family". Words are also not considered to be discrete units in a language; they are described as having strong and complicated features (Schmitt,

2000; Wesche & Paribakht 2000: cited in Tokaç, 2005: 13). In spite of these various definitions of 'word', it is almost impossible to give a clear-cut definition of a word. An entirely satisfactory answer to the question "*What is a word?"* does not exist.

Thornbury (2002: 12) mentions that a word is a more complex phenomenon than at first it might appear. For example;

- words have different functions, some carrying mainly grammatical meaning, while others bear a greater informational load
- the same word can have a variety of forms
- words can be added to, or combined, to form new words
- words can group together to form units that behave as if they were single words
- many words commonly co-occur with other words
- words may look and/or sound the same but have quite different meanings
- one word may have a variety of overlapping meanings
- different words may share similar meanings, or may have opposite meanings
- words can have the same or similar meanings but be used in different situations or for different effects

The question "What does it mean to know a word?" also needs to be clarified. For learners, knowing a word may mean only knowing its meaning and its form. However, word knowledge involves such aspects as written form, spoken form, grammatical patterns, collocations, register, associations and frequency (Nation, 1990; Richards, 1986). In order for learners to say that they master a word, they have to have knowledge about a particular word's pronunciation, spelling, word parts, meaning, grammatical properties, collocations, and contextual factors affecting its appropriate use (Nation, 2001).

It seems logical to assume that the process of acquiring word knowledge might have its own complexities due to the complex nature of it (Schmitt, 2008). Vocabulary knowledge involves knowing a word's meaning, register knowledge, grammatical knowledge (word class and morphology), orthographical knowledge

(spelling) and phonological knowledge (Schmitt, 2000). The word knowledge consists of the aspects of form (spoken and written), word structure, syntactic pattern, meaning (referential, affective, pragmatic), and lexical relations to other words and collocations (Laufer, 1997: 141).

Richards (1985: 178-182) have brought some assumptions to the notion of knowing a word. According to these assumptions, knowing a word:

1) means knowing the degree of probability of encountering that word in speech or print.
2) implies knowing the limitations imposed on the use of the word according to variations of function and situation.
3) means knowing the syntactic behaviour associated with that word.
4) entails knowledge of the underlying form of that word and the derivations that can be made from it.
5) entails knowledge of the network of associations between that word and other words in the language.
6) means knowing the semantic value of a word.
7) means knowing many of the different meanings associated with the word.

Waring (2002: 2) suggests that word knowledge consists of both "the ability to recognize the meaning of the word and the ability in producing it" He also adds that one can recognize a word in a text or conversation but may not necessarily use it appropriately. Similarly, it is proposed by Carter (2001) that knowing a word comprises knowing it actively and productively as well as receptively. It also involves using it communicatively (Oxford & Crookall, 1990: 9). That is to say, knowing a word includes many aspects apart from just the meaning and the form. Nation (1990) emphasizes that one needs to acquire not only the *receptive knowledge* of these aspects of a word but also the *productive knowledge* of them in order to 'know' a word. Ability to distinguish a word is called *receptive knowledge* while the knowledge required for producing words is termed as *productive knowledge*. The

former is generally used in reading and listening whereas the latter is needed for writing and speaking skills (Nation, 1990, 2001; Schmitt, 2000).

Nation (2001: 40-42) presents an indication of the range of aspects of receptive and productive knowledge and use via Table 1 and the accompanying example of underdeveloped:

Table 1

What Is Involved in Knowing a Word (Nation, 2001: 40-42)

FORM	spoken	R P	What does the word sound like? How is the word pronounced?
	written	R P	What does the word look like? How is the word written and spelled?
	word parts	R P	What parts are recognizable in this word? What word parts are needed to express the meaning?
MEANING	form and meaning	R P	What meaning does this word form signal? What word form can be used to express this meaning?
	concept and referents	R P	What is included in the concept? What items can the concept refer to?
	associations	R P	What other words does this make us think of? What other words could we use instead of this one?
USE	grammatical functions	R P	In what patterns does the word occur? In what patterns must we use this word?
	collocations	R P	What words or types of words occur with this one? What words or types of words must we use with this one?
	constraints on use (register, frequency...)	R P	Where, when, and how often would we expect to meet this word? Where, when, and how often can we use this word?

In column 3, R = receptive knowledge, P = productive knowledge.

A concrete example will help us better understand Table 1. From the point of view of *receptive knowledge* and use, knowing the word underdeveloped, for instance, involves:

- being able to recognize the word when it is heard
- being familiar with its written form so that it is recognized when it is met in reading
- recognizing that it is made up of the parts under-, -develop- and -ed and being able to relate these parts to its meaning
- knowing that underdeveloped signals a particular meaning
- knowing what the word means in the particular context in which it has just occurred
- knowing the concept behind the word which will allow understanding in a variety contexts
- knowing that there are related words like overdeveloped, backward and challenged
- being able to recognize that underdeveloped has been used correctly in the sentence in which occurs
- being able to recognize that words such as territories and areas are typical collocations
- knowing that underdeveloped is not an uncommon word and is not a pejorative word

From the point of view of *productive knowledge* and use, on the other hand, knowing the word underdeveloped involves:

- being able to say it with correct pronunciation including stress
- being able to write it with correct spelling
- being able to construct it using the right word parts in their appropriate forms
- being able to produce the word to express the meaning "underdeveloped"
- being able to produce the word in different contexts to express the range of meanings of underdeveloped

- being able to produce synonyms and opposites for underdeveloped
- being able to use the word correctly in an original sentence
- being able to produce words that commonly occur with it
- being able to decide to use or not use the word to suit the degree of formality of the situation (At present developing is more acceptable than underdeveloped which carries a slightly negative meaning)

To put it briefly, *receptive knowledge* of a word involves being able to recognize it when it is heard (what does it sound like?) or when it is seen (what does it look like), being able to recall its meaning when we meet it, and being able to make various associations with other related words. *Productive knowledge* of a word, on the other hand, comprises "knowing how to pronounce the word, how to write and spell it, how to use it in correct grammatical patterns along with the words it usually collocates with and also not using the word too often if it is typically a low frequency word and using it in suitable situations" (Nation, 1990: 32). Knowing the written and spoken form of a word and knowing its dictionary definition are not the same as knowing how to use that word appropriately and understanding it when it is heard or seen in different contexts. Wallace (1982: 27) also lists the abilities required for knowing a word in a target language. Besides mentioning about the same aspects of word knowledge as it is done by Nation (2001: 40-42) in the example of knowing the word "underdeveloped" above, he also adds such aspects as 'recalling it at will' and 'using it at the appropriate level of formality' to the list:

- Recognize it in its spoken or written form;
- Recall it at will;
- Relate it to an appropriate object or concept;
- Use it in the appropriate grammatical form;
- Pronounce it in a recognizable way in speech;
- Spell it correctly in writing;
- Use it with the words it correctly goes with, in the correct collocation;
- Use it at the appropriate level of formality;
- Be aware of its connotations and associations (Wallace, 1982: 27).

Hedge (2000) considers vocabulary knowledge as a scale running from recognition of a word at one end to automatic production at the other end. Learners may know the meaning of a word but this does not necessarily mean that they can use the word to communicate. As aforementioned, recognizing the meaning of a word when heard or seen is only receptive knowledge of that word.

Gairns and Redman (1986) list several aspects of lexis that need to be taken into account when teaching vocabulary from eleven different perspectives:

Table 2

The Aspects of Lexis (Gairns & Redman, 1986: v)

1	Boundaries between conceptual meaning	Knowing not only what lexis refers to, but also where the boundaries are that separate it from words of related meaning (e.g. cup, mug, and bowl).
2	Polysemy	Distinguishing between the various meaning of a single word form with several but closely related meanings (head: of a person, of a pin, of an organization).
3	Homonymy	Distinguishing the various meaning of a single word form which has several meanings which are NOT closely related (e.g. a file: used to put papers in or a tool).
4	Homophony	Understanding words that have the same pronunciation but different spellings and meanings (e.g. flour, flower).
5	Synonymy	Distinguishing between the different shades of meaning that synonymous words have (e.g. extend, increase, expand).
6	Affective meaning	Distinguishing between the attitudinal and emotional factors (denotation and connotation), which depend on the speakers attitude or the situation. Socio-cultural associations of lexical items are another important factor.
7	Style, register, dialect	Being able to distinguish between different levels of formality, the effect of different contexts and topics, as well as differences in geographical variation.

8	Translation	Awareness of certain differences and similarities between the native and the foreign language (e.g. false cognates).
9	Chunks of language	Multi-word verbs, idioms, strong and weak collocations, lexical phrases.
10	Grammar of vocabulary	Learning the rules that enable students to build up different forms of the word or even different words from that word (e.g. sleep, slept, sleeping; able, unable; disability).
11	Pronunciation	Ability to recognize and reproduce items in speech.

The aspects of lexis presented in Table 2 imply that vocabulary knowledge must contain more than simply including a certain number of words on a word list. Learners must go beyond that and use the items they learnt.

Richards (cited in Carter & McCarty, 1988) brings the characterization of lexical competence down to eight broad assumptions:

1. Native speakers continue to expand their vocabulary in adulthood. Little is known about the average language-user's vocabulary but anything from 20,000-100,000 words could be within a person's receptive vocabulary.
2. Knowing a word means knowing the degree of probability of encountering it and the sorts of words most likely to be found associated with it (frequency and collocability).
3. Knowing a word means knowing its limitations of use according to function and situation.
4. Knowing a word means knowing its syntactic behaviour.
5. Knowing a word means knowing its underlying forms and derivations.
6. Knowing a word means knowing its place in a network of associations with other words in the language.
7. Knowing a word means knowing its semantic value.
8. Knowing a word means knowing its different meanings.

In the light of the answers to the question "What does it mean to know a word?", we can conclude that knowing a word should not be reduced to just recognizing its meaning or form. It involves knowing such aspects as written form, spoken form, grammatical patterns, collocations, register, associations and frequency. Furthermore, knowing a word means being able to produce it for communicative purposes appropriately in the right context (Read, 2000). However, it is not generally possible to learn or acquire all of these aspects at one time (Schmitt, 2000). Knowing a word is a complex and an ongoing process. The more learners are exposed to the word, the better they develop an understanding about its usage in different contexts and thus are able to learn it completely. As Cameron (2001: 74) states, "It is not something that is done and finished with, but a cyclical process of meeting new words and initial learning, followed by meeting these words again and again, each time extending knowledge of what the words mean and how they are used in the foreign language."

2.4 The importance of vocabulary in second language acquisition

Vocabulary, which is one of the basic components of the language, is of the utmost importance in expressing ideas and thoughts. It also plays an essential role in getting meaning from a written or oral text. Without knowledge of the key vocabulary in a text, a learner may have big problems with comprehending the message. Harmer (1993) stresses the crucial importance of vocabulary with the following sentences:

> If language structures make up the skeleton of language, then it is vocabulary that provides the vital organs and the flesh. An ability to manipulate grammatical structure does not have any potential for expressing meaning unless words are used. Although grammatical knowledge allows us to generate sentences, we must have something to say; we must have meanings that we wish to express, and we need to have a store of words that we can select from when we wish to express these meanings. If you want to describe how you feel at this very moment you have to be able to find a word which reflects the complexity of your feelings (153).

Krashen (1989) also underlines the great role of vocabulary in a language by stating "when students travel, they don't carry grammar books, they carry dictionaries" (cited in Lewis 1992: iii). That is to say, most of the meaning in a language is carried by words. The same situation is common to people who visit a foreign country. They prefer to take their dictionaries with them rather than grammar books (Krashen, 1989). According to Read (2000), words in a given language are the most basic units of meaning, and language users form phrases, sentences and larger units of meaning by using words. Dellar & Hocking lay stress on the superiority of vocabulary to grammar: "You will see most improvement if you learn more words and expressions. You can say very little with grammar, but you can say almost anything with words!" (cited in Thornbury, 2002: 13).

Lewis (1998) affirms that vocabulary is the centre of a language and grammar is built around it. He claims that vocabulary should be at the centre of language teaching due to the fact that ‘language consists of grammaticalized lexis, not lexicalized grammar’ (Lewis, 1992). Furthermore, Sinclair (1995) points out that “a lexical mistake often causes misunderstanding while a grammar mistake rarely does” (cited in Lewis, 1997: 16). Miller (1990) also supports this idea and mentions the importance of vocabulary knowledge:

> …..one thing that everybody knows is a language, which is itself a very large chunk of knowledge. The major part of that large chunk of knowledge consists of knowing the words of the language. It is not the speech sounds or the rules for generating grammatical sentences that require the most extensive learning. It is the vocabulary: thousands of words, each with its own sound, its own spelling, its own meaning, its own role and use (5).

It is agreed that vocabulary knowledge has a central position in second language (L2) acquisition. Schmitt (2008) mentions that one point on which students, teachers, material writers, and researchers all agree is that learning vocabulary is an essential part of mastering a second/foreign language. Vocabulary is indispensable for language learners to be able to use the language especially in the early phase of foreign/ second language learning. Being a central element, it links all skills. It is impossible for learners to acquire proficiency in L2 reading, writing, speaking and

listening without sufficient vocabulary knowledge. They can improve their basic skills by learning new words and may finally improve comprehension and production in L2.

The vital role of vocabulary knowledge in communication is emphasized by the well-known British linguist Wilkins (1972: 111) as he states "without grammar very little can be conveyed, without vocabulary *nothing* can be conveyed". Inadequate vocabulary will result in communicational barriers or failures. Without the help of vocabulary, no amount of grammatical or other types of linguistic knowledge can be employed in second language communication. For instance, if learners do not recognize the meaning of keywords, they will be unable to get involved in the conversation even if they know the morphology and syntax. Besides, oral and written communication skills especially understanding and expounding main language skills and using language skills are affected by and depend on vocabulary (Karatay, 2007). Wallace (1982: 9) also verifies the importance of vocabulary in communication:

> Not being able to find the words you need to express yourself is the most frustrating experience in speaking another language. Of course vocabulary is not the whole story: the system of language is also important. Nevertheless, it is possible to have a good knowledge of how the system of a language works and yet not be able to communicate in it; whereas if we have the vocabulary we need it is usually possible to communicate, after a fashion.

We often notice that there is a complete breakdown in communication when learners do not understand the words they hear or read. For a good communication, a speaker should have sufficient vocabulary knowledge. Otherwise, communication will be ceased. Hence, "the acquisition of an adequate vocabulary is essential for successful second language use because, without an extensive vocabulary, we will be unable to use the structures and functions we may have learned for comprehensible communication" (Rivers, 1981: cited in Nunan, 1998: 117). Richards (2000) also supports the idea that vocabulary and lexical units are at the heart of learning and communication. He claims that no amount of grammatical or other type of linguistic knowledge can be employed in communication or discourse without the mediation of

vocabulary. Therefore, "understanding of the nature and significance of vocabulary knowledge in a second language needs to play a much more central role in the knowledge base of language teachers" (Richards, 2000: xi).

Brown (2001: 377) claims that “if we are interested in being communicative, words are among the first priorities.” While it is possible to communicate without grammar, it is unthinkable to do it without the knowledge of vocabulary. McCarthy (1990: viii) clearly displays the significance of vocabulary in second language communication in his own words: "no matter how well the student learns grammar, no matter how successfully the sounds of L2 are mastered, without words to express a wider range of meanings, communication in an L2 just cannot happen in a meaningful way."

Vocabulary is also the foundation for reading comprehension. Learners have to gain a wide knowledge of vocabulary so as to comprehend the message. Often, learners cannot understand an English text well or a native speaker due to insufficient vocabulary knowledge. Consequently, they cannot express themselves clearly. Nattinger (1988) distinguishes between comprehension and production by stating that comprehension requires understanding the words and storing them and also committing them to memory whereas production requires retrieving them from memory and using them in appropriate situations. Thus, our fundamental goal must be strengthening the memory storage.

The relationship between vocabulary and reading comprehension has been acknowledged in research for many years. Most studies (Baumann, Kame‘enui, & Ash, 2003; Becker, 1977; Davis, 1942; Whipple, 1925) show that the extent of students’ vocabulary knowledge relates strongly to their reading comprehension and overall academic success. Research (Barrett and Graves, 1981; Hayes and Tierney, 1982: cited in Heimlich & Pittelman, 1986) also demonstrates that learners need great many words in their vocabularies in order to get meaning from what they read. Daneman (1988) mentions that constructing text meaning depends partly on the success of searching for individual word meanings because words are the building

blocks of connected texts. As a result, vocabulary is the key for comprehension of the target language.

Having rich vocabulary can also have a considerable effect on understanding the grammar of the target language. Knowing the words in a text can have a facilitative effect on learning grammatical rules because learners understand the discourse functions better (Ellis, 1995). Vocabulary knowledge has an important role in making the meaning of grammatical functions more transparent to learners. Cameron (2001: 72) emphasizes the important role of vocabulary in learning the grammar:

> The more we find out about how words work in language and how vocabulary is learnt, stored and used, the more difficult it becomes to uphold the traditional split between vocabulary and grammar. Much important grammatical information is tied into words, and learning words can take students a long way into grammar. This suggests that if we give a high priority to vocabulary development, we are not, thereby, abandoning grammar. Rather, vocabulary learning can serve as a stepping stone to learning and using grammar.

To sum up, vocabulary plays an important role in language teaching as it is needed for every language skill and grammar. The latest developments in language teaching have clearly demonstrated that vocabulary teaching should be part of the syllabus, and taught in a well-planned and regular way (Moras, 2001). "Vocabulary teaching and learning has become central to the theory and practice of English Language Teaching. Learning words is regarded by many as the main task (and obstacle) in learning another language" (Carter & Nunan, 2001: 47). Cameron (2001) also suggests that vocabulary has moved to the centre stage in language teaching in recent years, backed by substantial and increasing research. Therefore, we should keep in mind the words of Lewis (1992: 117) "vocabulary acquisition is the main task of second language acquisition and the language skills as listening, speaking, reading, writing and translating all cannot go without vocabulary" and must give priority to vocabulary teaching.

2.5 Vocabulary Teaching Techniques

A technique is ‘‘a special way of doing something’’ (Longman, 2003: 1703). In teaching, techniques are the specific activities manifested in the classroom that are consistent with a method and therefore are in harmony with an approach as well (Anthony, 1963). They are implementational and are used in a classroom so as to achieve learning objectives.

Various techniques and activities are aimed directly at teaching vocabulary. Learners acquire vocabulary in various ways. While a lot of vocabulary is automatically absorbed through the exposure to lectures, texts or other materials (Harmer, 1993), there are also “pre-planned lesson stages in which learners are taught pre-selected vocabulary items” (Thornbury 2002: 75) in addition to this incidental acquisition. There are many ways to present a new word to the learner. Various kinds of techniques such as translating the word into the native language, making a definition of the word in the target language, using bilingual or monolingual dictionaries, using real objects, mime or gesture, synonyms, antonyms or hyponyms, employing visual aids such as pictures or blackboard drawings, using word networks, dramatization, illustrative sentences, reading the word aloud, writing the word on the board, guessing words from the context, studying lists of words, vocabulary games, puzzles etc. are crucial to teach vocabulary (Gairns & Redman, 1986; Murcia, 1991; Ur, 1996; Gürsoy, 2001, Thornbury, 2002).

In the following section, detailed information about vocabulary teaching techniques will be provided with reference to the aforementioned categorizations. The techniques will be presented under three group titles including visual techniques, verbal techniques, and translation.

2.5.1. Visual Techniques

Some techniques can be used as visual ones. They are mentioned below, in details.

2.5.1.1 Visuals

New vocabulary items can be presented through visuals. Visuals consist of pictures, photographs, posters, flashcards, realia, wall charts, models and blackboard drawings. They are commonly used for conveying meaning and are especially useful for teaching concrete vocabulary (food, clothes, furniture), places, professions, verbs of movement (jumping, swimming, climbing), and descriptions of people (Gairns & Redman, 1986: 73). As visuals appeal to visual memory, they are very beneficial for vocabulary retention. They make learning experience more memorable for learners. They are also easy for teachers to use. Examples of some visuals are shown below:

Image 1: Picture

retrieved July 11, 2012, from http://www.afashionablestitch.com/2012/soul/teacher-teacher/

Image 2: Blackboard Drawings

retrieved July 11, 2012, from http://www.shutterstock.com/pic-33185224/stock-vector-english-lesson- on-a-blackboard-vector-illustration.html

Image 3: Flashcard

retrieved July 11, 2012, from http://www.eslprintables.com/printable.asp?id=35737

Image 4: Poster

retrieved July 11, 2012, from http://www.eslprintables.com/teaching_resources/posters/Rules_in_English_classes_pos_281236/

Flashcards, pictures, wall charts and transparencies projected on to the board or wall and blackboard drawings are easy for teachers to collect from magazines, newspapers and the internet. Visual aids belonging to the following sets: food and drink, clothing, house interiors and furniture, landscapes exteriors, forms of transport, jobs, nationalities, sports, activities, and appearance are beneficial both for presenting new vocabulary items and practising them (Thornbury, 2002).

2.5.1.2. Mime and Gesture

Mimes and gesture are used to supplement other ways of conveying meaning (Gairns & Redman, 1986) Mime is "the use of movements of hands or body and the expressions on face to tell a story or to act something without speaking" (Longman, 2003: 1043). Gesture is "a movement of part of someone's body, especially his/her hands or head, to show what s/he means or how s/he feels" (Longman, 2003: 673).

Demirel (1999:139) mentions about mime and gesture as "one of the ways to teaching vocabulary in another language". They are particularly useful in defining verbs and other concepts involving movement and action. For example, when teaching a verb such as “to jump”, a teacher might build a situation to illustrate it, making use of gesture to reinforce the concept, or s/he may pretend he is singing in order to present the verb 'to sing'. It would also be easy for the teacher to show a “happy face”, to “lock the door”, to “shout”, etc. To conclude, using mime and gesture has big impact on learners' memory. Through mime and gesture, learners can acquire the vocabulary quickly. Thus, teachers can make advantage of using mime and gesture in classroom to explain the meaning of the word in the quickest way.

2.5.2. Verbal Techniques

Verbal techniques include use of illustrative situations (oral or written), use of synonym & antonym, use of definition, exemplification, scales, and collocations. They are presented in details below.

2.5.2.1 Illustrative situations (oral or written)

Illustrative situations are particularly good for presenting abstract items. Teachers generally use this technique to ensure that learners understand new items. They make use of more than one situation or context to check that learners have grasped the concept (Gairns & Redman, 1986). For example, to present the meaning of "curfew" the teacher might use the following context:

> Mary invites her friends Jane and Kate to go out for the night. But Kate says, "Sure, I'll go. But I won't stay out with you the whole night. My mother wants me to go back home. My curfew is 12 a.m."

To find out whether learners understand what "curfew" is, teacher might ask questions like "What is your usual curfew?" etc. With this technique, learners can become closer to their environment. Therefore, learning can be meaningful.

2.5.2.2 Use of Synonym & Antonym

A synonym is "a word with the same meaning as another word in the same language" (Longman, 2003: 1685). For example, 'big' and 'large' are synonyms. It is well-known that synonyms are used as a way of teaching vocabulary in foreign language.

Unfortunately, the use of synonyms does not work with the beginners as it imposes an overloading task on them. When teachers use synonymy with low level students, they inevitably have to compromise and restrict the length and complexity of their explanations. It would, for instance, be appropriate at low levels to tell learners that 'miserable' means 'very sad' (Gairns & Redman, 1986: 23). Teachers may also use synonyms together with concise definitions or explanation in order to enable learners to recognize both similarities and differences between two synonyms.

An antonym is "a word that means the opposite of another word" (Longman, 2003: 54). For example, 'old' has two possible antonyms: 'young' and 'new'. Like

synonyms, antonyms are a technique in conveying meaning of the vocabulary and have useful defining function. A teacher can easily explain an item by contrasting it with its opposite. For example, when the teacher wants to teach 'ugly', s/he might say that it is the opposite of ‘beautiful’. So, students can guess the meaning of 'ugly'.

Different contexts might have different antonyms of the word. For instance, a new item like 'sour' is easily illustrated by contrasting it with 'sweet' which would already be known by intermediate level students. However, it is vital to illustrate the suitable contexts. Sugar is sweet and lemons are sour, but the opposite of ‘sweet wine’ is not ‘sour wine’, and the opposite of ‘sweet tea’ is not ‘sour tea’ (Gairns & Redman, 1986: 75).

Using antonyms can bring greater advantages if teachers can choose appropriate antonyms together with some explanation or definition. This technique not only enriches learners' vocabulary knowledge but also offers a steady understanding about words and their opposites.

2.5.2.3 Use of Definition

Definition is considered as one of the easiest ways to teach vocabulary. In order to clarify the meaning of a word, teachers usually give definitions. The definitions will help learners activate schemas or networks that will in turn help understanding. For example, if children know hospital, mentioning it in the definition of an ambulance will help them construct a meaning and activate scenarios connected with the word; hospital. However, it may be difficult for learners to understand the meaning of a word as definitions may include some words that they do not know. So, to get the best result in conveying meaning of words, definitions should be concise, clear, familiar and easy for learners to understand. Moreover, teachers should ask learners questions to check whether they have understood the definition properly and provide them with many examples of the vocabulary item in sentences.

Gairns & Redman (1986: 74) claims that definition as a vocabulary teaching technique is "inadequate as a means of conveying meaning and that clearly contextualized examples are generally required to clarify the limits of the item". For example, “to go off” in “all the lights went off ” has the sense of “to stop working”, but this would be a misleading definition for a learner and might encourage him to think that “the car went off” was acceptable English. Thus, teachers should use the definition technique together with the others such as examples, visual aids, translations etc.

2.5.2.4 Exemplification

Offering examples of the type involves the use of hyponyms and superordinates. These are useful for teaching the members of such groups as 'vegetables', 'furniture', 'meat' and 'transport' etc. "It is a common procedure to exemplify them e.g. table, chair, bed, and sofa are all furniture" (Gairns & Redman, 1986: 75). Potatoes, onions, lettuce or etc. can be given as examples for the vegetables whereas steak, fish, chicken can be given for meat. In order to make learners understand the meaning of 'fruit', the hyponyms of 'fruit' can be given:

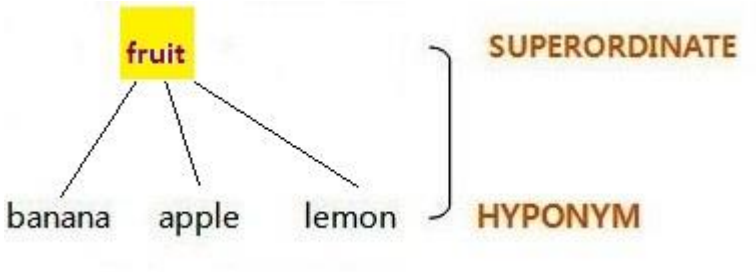

Image 5: Exemplification

retrieved July 11, 2012, from http://turiya.egloos.com/2564502

In this example, “fruit” is the superordinate term while “lemon”, “banana”, and “apple” are hyponym terms. As the young learners are keener on learning concrete nouns, this technique will help them to learn the new concrete words more easily by grouping them under some sub-headings. Offering examples that guide learners to guess the meaning correctly is also useful for learners to foster independence, deal

with lexis and expand their vocabulary. In this way, learners will have a wide vocabulary as they have a chance to acquire new words with their examples, at the same time.

2.5.2.5 Scales

Scales are usually used after students have learnt two contrasting or related gradable items. Using scales is a useful way of revising and feeding in new items. If students know 'hot' and 'cold', for instance, a blackboard thermometer can be a framework for feeding in 'warm' and 'cool' and later 'freezing' and 'boiling'. Similarly, this technique can be used for the teaching of adverbs of frequency (Gairns & Redman, 1986):

Image 6: Scale

retrieved July 11, 2012, from http://tx.english-ch.com/teacher/ackie/level-a/adverbs-of-frequency-a/

This way of teaching helps learners to acquire more words at the same time and learners will have a chance to promote their learning by linking these words to the associated words. Furthermore, this technique enlarges the number of the words that learners have mastered.

2.5.2.6 Collocations

The use of collocations is another verbal technique in vocabulary teaching. "Two words are collocates if they take place with more than chance frequency, such that, when we see one we can make a fairly safe bet that the other is in the neighbourhood" (Thornbury, 2002: 7). For example, 'second-hand' and 'record-player' are collocates and one word of it cannot be changed with a single word (Thornbury, 2002). We talk about heavy rain but not heavy sun, or we say that we make or come to a decision, but we do not do a decision. So, 'heavy rain' and 'make a decision' are often referred to as collocations and we say that 'heavy' collocates with 'rain', or that 'heavy and rain' are collocates of each other (McCarten, 2007: 5). That is to say, the term 'collocation' refers to the way in which two or more words are typically used together.

It is not sufficient for learners to know the meaning of a word unless they know the collocations. They also need to know the words that are used together with that word. 'Do' and 'make', for instance, are two of the most common words which are used in collocations. The verb 'make' has a different meaning in each of the expressions; 'make noise', 'make money', 'make an effort' and 'make a cake'. The verb 'do' has a different meaning in each of the expressions; 'do homework', 'do the dishes', 'do housework', and 'do one's best'. It is useful for learners to learn such verbs in collocations. It is obvious that fluency in the foreign language is determined by automation of collocation. The more the learner is capable of producing the correct collocations, the less hesitation pauses he makes in long sequences of words and consequently the more competent in the language he speaks (Sadeghi, 2010).

2.5.3 Translation

Translation has been the most widely used means of presenting the meaning of a word especially in ESL classrooms. Being one of the oldest techniques, it means giving the meaning of the new word in the mother tongue. "Translation has the advantage of being the most direct route to a word's meaning- assuming that there is

a close match between the target word and its L1 equivalent." (Thornbury, 2002: 77). It requires no preparation; it is quick, efficient and very economical. Moreover, "it can save valuable time that might be otherwise be spent on a tortuous and largely unsuccessful explanation in the target language, and it can be a very quick way to dispose of low frequency items that may worry learners" (Gairns & Redman, 1986: 75). Translation can also be used by teachers to check frequently whether learners have understood. Then, they can organize their teaching process accordingly (Harmer, 1993).

There are some arguments against this technique. Gairns & Redman (1986: 76) points out that "If teachers rely too heavily on the use of translation and deliver most explanations in the mother tongue, their students are surely losing some of the essential spirit and atmosphere of being in a language learning classroom." If students continue to use the mother tongue as a framework on which to attach L2 items, they will not develop the necessary framework to take account of sense relations between different items in the target language (Gairns & Redman, 1986). Another disadvantage is that the translation of a new word takes away from the child any need or motivation to think about the meaning of the new word or to keep it in mind. Besides, this technique is not possible with the classes where there are learners from different nationalities. In brief, used sensibly, translation can be a useful technique to convey meaning as it saves time and allows teachers to check correct comprehension when it is necessary.

All in all, there is not one best technique for teaching vocabulary. Any of these techniques can be used in presenting new words. However, the techniques, either verbal or visual, are appropriate for a particular situation, level and vocabulary. The best way would be to combine them and use several together.

2.6 A Brief History of Vocabulary Teaching

Vocabulary teaching plays a vital role in the process of language acquisition whether the language is first, second or foreign. However, when we have examined

vocabulary from teaching aspect, we can clearly see that vocabulary has been neglected and considered to have a secondary status compared to grammar (Allen, 1983). During much of the twentieth century, language teaching programs gave little attention to techniques for vocabulary teaching and were designed to teach basically the grammar. Pronunciation and grammar were given more emphasis than vocabulary in language teaching. Allen (1983) mentions that teachers are sometimes told that they should not teach any words before the learners master the grammar and the sound system of the language. Thus, language teachers give little attention to techniques for helping students learn vocabulary. Nation (1990) explains the reason why vocabulary teaching has been ignored in the past as follows:

> Its neglect is in part due to a special significance on syntax, especially coming from the movement named *Structuralism* which affected the whole linguistic world between the years 1950-60s. Although the shift to generative (transformational) linguistics in the 1960s brought about revolutionary changes in linguistic theory, triggered by Chomsky (1957) it did little changes to challenge the idea that the role of lexis was secondary to that of grammar (75).

As Nation states, there was not much concentration on vocabulary teaching before 1970s, and vocabulary was treated as a part of grammar or the other skills. Vocabulary teaching was under the influence of Structuralism, which was based on teaching syntactic patterns with limited vocabulary.

1. Many people felt that grammar should be emphasized more than vocabulary, because vocabulary was already being given too much time in language classrooms.

2. Specialists in methodology feared students would make mistakes in sentence construction if too many words were learned before the basic grammar had been mastered. Consequently, teachers were led to believe it was best not to teach much vocabulary.

3. Some people who gave advice to teachers seemed to be saying that word meanings can be learned only through experience, that they cannot be adequately taught in a classroom. As a result, little attention was directed to techniques for vocabulary teaching.

However, toward the end of the twentieth century, a revival of attention to vocabulary teaching is noticeable. Since 1970s, vocabulary has gained much importance due to the effect of the Communicative Approach and the Natural Approach emphasizing the importance of receptive vocabulary growth during the early stages of language learning (Balcı & Çakır, 2011). Wilkins (1972; 1974) who is an early pioneer of the Communicative Approach, suggests that learning vocabulary is as important as learning grammar. For him, near native speaking levels can be distinguished by whether learners can use collocations well. During this period, language teachers begin to expect students to master the vocabulary of the language as well as its grammatical features. The notion that the place of vocabulary is as important as the place of grammar in language teaching and learning became prevalent. Celce- Murcia (1999: 242) mentions that "both grammar and vocabulary should be taught in the ESL classroom without sacrificing one for the other". Terrel (1982) proposes the Natural Approach, which depends on the hypotheses of Krashen and considers the word knowledge as an important factor in foreign/second language teaching context. In 1982, Wallace indicates the crucial role of presenting vocabulary in situations and contexts. In 1983, Allen writes a book that includes the presentation and exemplification of practical techniques in the teaching of vocabulary. Later on, in 1986, Gairns and Redman provide a practical guide for teachers on how to select, organize and teach vocabulary to all levels of students and discuss the linguistic and psychological theories relevant to vocabulary learning. From the late 1980s on, vocabulary is an area that has attracted researchers' great attention within the mainstream of second language acquisition (Nation, 1990). Researchers realize that many of learners' difficulties are the results of an inadequate vocabulary, and even when they are at higher levels of language competence and performance, they still feel in need of learning vocabulary (Laufer, 1986). In 1997, Sokmen presents the current trends in teaching second language vocabulary. He also demonstrates that current research would propose that it is worthwhile to add explicit vocabulary to the usual inferring activities in language classrooms. In the same year, Coady and Huckin (1997) suggest that there is an agreement among vocabulary specialists that lexical competence is at the very heart of communicative competence, the ability to

communicate successfully and appropriately. Sheenan (2004) also points out that we cannot use structures correctly if we do not have enough vocabulary knowledge:

> Vocabulary has been the neglected Cinderella of language teaching; preference has always been, and still is, given to the two sisters Grammar and More Grammar. Many English language teachers like to stress grammar over vocabulary because grammar is a finite system, whereas vocabulary is not. However, the argument in favour of placing greater weight on vocabulary is strong. Evidence from the field of corpus linguistics shows clearly that it is lexical competence, not the learning of grammatical structures, that must be the priority for language learners because lexical competence is at the heart of communicative competence (3).

The importance given to vocabulary within the curriculum has differed much over the years. There have been many various approaches and methods to language learning, each having different premises of vocabulary. In some methods, vocabulary has been given too much emphasis whereas it has been neglected in other methods. In the following section, the place of teaching vocabulary in well-known methods and approaches will be presented along with the basic information about each method or approach:

2.6.1 The Grammar Translation Method (GTM)

The Grammar Translation Method (GTM) which was first used in the teaching of the classical languages, Latin and Greek, dominated European and foreign language teaching from the 1840s to the 1940s (Richards & Rodgers, 2001). Its leading proponents were Johann Seidenstücker, Karl Plötz, H. S. Ollendorf, and Johann Meidinger. The main goal of this method was to help students read and appreciate foreign language literature. Through the study of grammar of the target language, students would become more familiar with the grammar of their native language and this familiarity would help them speak and write their native language better (Freeman, 1984). It was a language study that approaches the language first through detailed analysis of its grammar rules, followed by application of this knowledge to the task of translating sentences and texts into and out of the target language. Reading and writing were the major focus while little or no attention was paid to speaking or listening. The emphasis was on grammar rules and accuracy.

Grammar was taught deductively. The students' native language was the medium of instruction (Richards & Rodgers, 2001).

In terms of vocabulary;

- The Grammar Translation Method ignored vocabulary and minimized it to bilingual word lists. According to that method, vocabulary teaching was not as important as grammar (Richards & Rodgers, 2001).
- Learners memorized native language equivalents for foreign language vocabulary words (Freeman, 1984).
- Direct vocabulary instruction was included only when a word illustrated a grammatical rule (Kelly, 1969).
- New vocabulary items were used as a tool for developing the knowledge of grammar (Zimmerman, 1997).
- Bilingual dictionaries were used as reference tools during the period of GTM methodology (Kelly, 1969).
- GTM required learners to be exposed to a wide literary vocabulary that was selected according to its ability to illustrate grammatical rules (Rivers, 1981).
- The negligence of speaking and listening skills made learners acquire and use new words of the target language only through reading and writing (Freeman, 1984).

The Grammar Translation Method received many objections and criticism even though it was used well into the twentieth century as the primary method for foreign language instruction in Europe and the United States. The main objection came from Thomas Prendergast in the mid-1800s. He criticized outdated vocabulary lists used in this method. Another objection to the method was the disregard of realistic, oral language (Zimmerman, 1997). Toward the mid-nineteenth century, opposition to the

Grammar Translation Method gradually developed in several European countries, which resulted in the need of other methods.

2.6.2 The Direct Method (DM)

The Direct Method (DM) became popular toward the end of the nineteenth century as the Grammar Translation Method was not very effective in preparing students to use the target language communicatively. The Direct Method, the most widely known of the natural methods, was introduced by its primary advocates (Sauveur and Berlitz) in France and Germany in the early 1920s. The method was considered as the first language teaching method to have caught the attention of teachers and language teaching specialists. It also offered a methodology that moved language teaching into a new epoch (Richards & Rodgers, 2001). The main goal of this method was to teach students how to communicate in the target language. In order to do this successfully, students should learn to think in the target language. As a fundamental rule, translation was not allowed in this method. Indeed, "the Direct Method received its name from the fact that meaning is to be connected *directly* with the target language, without going through the process of translating into the students' native language" (Freeman, 1984: 18). So, classroom instruction was conducted in the target language. Correct pronunciation and grammar were emphasized. Both speech and listening comprehension received attention. Oral communication was seen as basic. Grammar was taught inductively and an explicit grammar rule was never given (Freeman, 1984).

When we examine the method in terms of vocabulary, we see that:

- Considered as the core of language, vocabulary was emphasized over grammar (Freeman, 1984).
- Only everyday vocabulary and sentences were taught (Richards & Rodgers, 2001).

- Concrete vocabulary was explained with labeled pictures and demonstration, while abstract vocabulary was taught through the associating of ideas (Rivers, 1983; Richards & Rodgers, 2001).
- Objects were also used to demonstrate meaning and the term *realia* or *realien* appeared to have been adopted with this method (Kelly, 1969).
- Learning of new words was through establishing associations with L2 rather than establishing associations with the L1 (Richards & Rodgers, 2001).

The Direct Method was quite successful in private language schools where paying clients had high motivation and the use of native-speaking teachers was the norm. Notwithstanding, it was difficult to implement it in public secondary school education (Howatt, 1984). It was considered to have several disadvantages. First of all, it called for teachers who were native speakers or who had native-like fluency in the foreign language. Second, it was dependent on the teacher's skill to a great extent rather than on a textbook. But not all teachers were adept at adhering to the principles of the method (Richards & Rodgers, 2001). Finally, many traditionalists criticized it for being trivial. They pointed out that "strict adherence to Direct Method principles was often counterproductive, since teachers were required to go to great lengths to avoid using the native language, when sometimes a simple explanation in the native language would have been a more efficient route to comprehension." (Richards & Rodgers, 2001: 13). Due to the aforementioned limitations, the Direct Method was considered inefficient, which led to the development of new methods.

2.6.3 The Audiolingual Method (ALM)

The Audiolingual Method (ALM) was developed by American structural linguists such as Leonard Bloomfield in the United States during World War II. At that time, governmental and institutional support was available for the teaching of foreign languages since there was a need for people to learn foreign languages rapidly for military purposes. The combination of structural linguistic theory, contrastive analysis, aural-oral procedures, and behaviourist psychology led to the

Audiolingual Method (Richards & Rodgers, 2001). According to the Audiolingual method, also known as Army Method, most problems experienced by foreign language learners were related to the conflict of different structural systems. Having considered language learning as a habit formation, this method put emphasis on pronunciation and intensive oral drilling of basic sentence patterns (Zimmerman, 1997). The primary aim of this method was to enable students to use the target language communicatively. Thus, students needed to overlearn the target language, to learn to use it automatically without stopping to think. Students were taught grammatical points through examples and repetitive drills. The structures of the language were emphasized over all the other areas. Grammar was induced from the examples given; explicit grammar rules were not given. As for skills, the oral/aural skills received most of the attention. Pronunciation was taught when students were working in language laboratories on discriminating between members of minimal pairs (Freeman, 1984).

In terms of vocabulary, the method was based on the following premises:

- New vocabulary that was presented through dialogues was limited since the emphasis was placed on the acquisition of the patterns of the language (Freeman, 1984).
- Vocabulary was minimized until all common structures had been learned (Richards & Rodgers, 2001).
- Vocabulary learning was kept to a minimum (especially in the initial stages) and new words were introduced and selected according to their simplicity and familiarity to make the grammar practice possible (Zimmerman, 1997).
- Vocabulary was studied only in context (Richards & Rodgers, 2001).
- New words were taught through the drills, but only enough words to make the drills possible (Zimmerman, 1997).

- One reason that vocabulary was "restricted" under Audiolingual Approach is that it emphasized the phonological aspects of language learning (Takefuta & Takefuta, 1996).

In the 1960s, the theoretical underpinnings of the Audiolingual Method were questioned by linguists such as Noam Chomsky, who pointed out the limitations of structural linguistics. The relevance of behaviourist psychology to language learning was also questioned. Moreover, it was suggested that parrot-like memorization prevented learners' creativity and caused lack of motivation (Richards & Rodgers, 2001). Therefore, the Audio-lingual method lost its scientific credibility and led new methods to appear.

2.6.4 The Total Physical Response (TPR)

Developed by James Asher, The Total Physical Response (TPR) was built around the coordination of speech and action. It attempts to teach language through physical (motor) activity (Richards & Rodgers, 2001). In fact, this method was developed so as to reduce the stress people feel when studying foreign languages. As Asher suggested, to base foreign language learning upon the way children learn their native language would reduce the anxiety people suffered from. He also claimed that speech directed to young children includes mainly of commands, which children respond to physically before they begin to produce verbal responses. So, game-like movements to commands would reduce learner stress, create a positive mood in the learner, and facilitate learning (Freeman, 1984). The Total Physical Response was based on a grammar-based view of language. Asher stated that "most of the grammatical structure of the target language and hundreds of vocabulary items can be learned from the skillful use of the imperative by the instructor" (1977: 4). Grammar was embedded within imperatives. The spoken language was emphasized over written language. After learning to respond to some oral commands, students could learn to read and write them (Freeman, 1984).

When we look at the Total Physical Response Method in terms of vocabulary, we see that:

- Grammatical structures and vocabulary were emphasized over other language areas (Freeman, 1984).
- TPR required special attention to meaning rather than to the form of items. Pictures, realias and word charts were used as supporting materials. The objects in the immediate environment were introduced in order to make the learners acquire new words as they did in their native tongue (Richards & Rodgers, 2001).
- Imperatives were single words and multi-word chunks (Freeman, 1984).

TPR received criticism from several linguists despite the popularity it enjoyed in the 1970s and 1980s. One criticism of TPR was that "it is fine at the beginning of language training (perhaps the initial month or two) but then what?" (Asher, 1993: 10). TPR was also thought to be very teacher-centered. "Although it might reduce the stress for the learners, it put them in a very passive role in which they could not make their own choices or develop creativity" (Knight, 2001: 154). Another reason for questioning the effectiveness of the method was that TPR entirely excludes any focus on grammar or students' output. It gave priority to receptive skills, mainly listening, at the expense of productive skills (Cameron, 2001: 107). Lastly, it was criticized for being time consuming. Learning a single vocabulary item, for example, would require the demand or imperative of the teacher, the students' demonstration, and teacher's feedback. It usually involved the whole class participating in learning one single item (Richards & Rodgers, 2001).

2.6.5 The Silent Way

In the early 1960s, the idea that learning a language means forming a set of habits was seriously changed. According to cognitive psychologists and transformational-generative linguists, language must be considered as a product of rule formation rather than habit formation. They believed that "language acquisition

must be a procedure whereby people use their own thinking processes, or cognition, to discover the rules of the language they are acquiring" (Freeman, 1984: 51). Thus, The Silent Way devised by Caleb Gattegno, is predicated on the idea that the teacher should be silent as much as possible in the classroom but the learner should be encouraged to produce as much language as possible (Richards & Rodgers, 2001). The method belongs to a tradition that considers learning as a problem-solving, creative, discovering activity, in which the learner is a principal actor rather than a bench-bound listener (Bruner, 1966). Gattegno argues that learning is facilitated if the learner discovers or creates rather than remembers and repeats what is to be learned. The general objectives of this method are to enable students to build up near-native fluency in the target language, to have a correct pronunciation, and to have mastery of the prosodic elements of the target language (Richards & Rodgers, 2001). Pronunciation is emphasized and it is important for students to acquire the melody of the language (Freeman, 1984). The rods and the colour-coded pronunciation charts provide physical foci for student learning and also created memorable images to facilitate student recall (Richards & Rodgers, 2001).

In terms of vocabulary, this method was based on the following principles:

- Vocabulary was regarded as a central dimension of language learning and the choice of vocabulary as crucial (Richards & Rodgers, 2001).
- There were techniques for using pictures and Cuisenaire-rod stories to help students master large numbers of vocabulary items while having fun. Students could absorb large amounts of “content vocabulary” (shoe, tree, run, tired, etc.) and immediately put these words to use in sentences (Gattegno, 1972).
- The most important vocabulary for the learner dealt with the most functional and versatile words of the language, many of which may not have direct equivalents in the learner's native language. To Gattegno, this "functional vocabulary provided a key to comprehending the 'spirit' of the language" (Richards & Rodgers, 2001: 82).

The critics argued that there was an apparent lack of real communication in the Silent Way even if it encouraged discovery learning and problem solving. Another shortcoming was that it was difficult to take the approach beyond the very basics of the language, with only highly motivated learners being able to generate real communication from the rigid structures illustrated by the rods. The method was also criticized for being limited to relatively small groups of learners.

2.6.6 Community Language Learning (CLL)

Developed by Charles A. Curran and his associates, Community Language Learning was a method which took its principles from Counseling Learning approach. "It drew on the counseling metaphor to redefine the roles of the teacher (the counselor) and learners (the clients) in the language classroom." (Richards & Rodgers, 2001: 90). Curran suggested that a way to handle the fears of students was for teachers to become "language counselors" (Richards & Rodgers, 2001: 95). By understanding students' fears and being sensitive to them, language counselor could help students overcome their negative feelings and turn them into positive energy to further their learning. Being among the humanistic techniques, CLL reflected the "whole person" containing the emotions and feelings as well as linguistic knowledge and behavioral skills.

According to Whole Person Learning, teachers considered not only their students' feelings and intellect, but also had some understanding of the relationship among students' physical reactions, their instinctive protective reactions and their desire to learn (Freeman, 1984: 51).

In CLL, particular grammatical points, pronunciation patterns, and vocabulary were emphasized. As for skills, the most important ones were understanding and speaking the language. Reading and writing were also studied based upon what the students had understood. CLL highlighted vocabulary based on the language the students had generated. In other words, vocabulary was largely determined by learners (Freeman, 1984).

CLL was generally criticized for the lack of a syllabus. This made the goals of the method unclear and evaluation difficult to accomplish. Besides, the focus on fluency rather than accuracy was perceived to lead to inadequate control of the grammatical system of the target language. Another concern was that whether teachers should attempt counseling without special training was debatable.

2.6.7 Suggestopedia

Suggestopedia was the name of a method developed by the Bulgarian psychiatrist-educator Georgi Lozanov in the late 1970s. Also known as Desuggestopedia, Suggestopedia put forward the idea that students' feeling of being unsuccessful should be eliminated in order to help them overcome barriers to learning. The limitations they think they have should be "desuggested" (Freeman, 1984). Suggestopedia had such striking characteristics as decoration, furniture, and arrangement of the classroom, the use of music, and the authoritative behaviour of the teacher. The goal of the method was to help students to develop advanced conversational proficiency quickly. This goal was achieved by desuggesting the psychological barriers learners brought with them to the learning environment (Richards & Rodgers, 2001). "It was believed that students would learn best if their conscious attention was focused not on the language forms, but on using the language." (Freeman, 1984: 83). Using the language communicatively was stressed. Students also read and wrote the target language through dialogs and imaginative compositions.

Let's look at this method in terms of vocabulary;

- Vocabulary was emphasized. Claims about the success of the method often concentrated on the large number of words that can be acquired (Freeman, 1984).
- Suggestopedia was based on student mastery of prodigious lists of vocabulary pairs (Richards & Rodgers, 2001).

- Easy chairs, soft lighting, and music in the classroom were all used for vocabulary teaching (Freeman, 1984).
- As peripheral learning was an important aspect of Suggestopedia, learning of new words was also through the materials found in the classroom, and the students learned the words unconsciously.

Krashen (1982) mentioned about the excellent results achieved by Suggestopedia, telling that students tended to score higher on vocabulary tests and were "vastly superior" in communicative terms. However, the method received criticism like other methods did. Baur (1984: 294) claimed that “the students only received input by listening, reading and musical-emotional backing, while other important factors of language acquisition were being neglected". Moreover, several other features of the method, like the 'nonconscious' acquisition of language, or bringing the learner into a child-like state were criticized. It was also difficult to create a suitable environment for applying this method and it required efficient and courageous teachers.

2.6.8 Whole Language

Whole Language was developed in the 1980s by a group of U.S. educators concerned with reading and writing in the native language. It was not a teaching method but an approach to learning that saw language as a whole entity (Richards & Rodgers, 2001). The Whole Language movement argued that language should be taught as a 'whole'. "If language was not kept whole, it wasn't language anymore." (Rigg, 1991: 522) This approach placed great emphasis on learning to read and write naturally with a focus on real communication and reading and writing for pleasure. Whole language was thought to be “authentic, personalized, self-directed, collaborative, and pluralistic." Such characteristics were believed to focus learner attention and to motivate mastery (Richards & Rodgers, 2001: 109).

When we examine Whole Language approach in terms of vocabulary, we see that it aims at teaching children to read by recognizing words as whole pieces of language. Proponents of the whole language philosophy (Kenneth Goodman, Frank Smith, Carolyn Burke, Jerome Harste, Yetta Goodman, Dorothy Watson, Regie Routman, Steven Krashen, and Richard Allington) believed that language should not be broken down into letters and combinations of letters and "decoded." Instead, they believed that language was a complete system of making meaning, with words functioning in relation to each other in context (Moats, 2007). Furthermore, whole language was said to be "literature-based" since students were expected to learn vocabulary by reading them as teachers read stories aloud. After they had read them enough times, they would recognize them as a whole and be able to read themselves. Thanks to the exposure to interesting stories, young students would develop an appreciation of literature. In this approach, word recognition accuracy was considered less important than meaning accuracy; therefore, there was an emphasis on comprehension as the ultimate goal of reading.

The Whole Language movement included two cognitive skills of reading; sub-lexical reading and lexical reading. Sub-lexical reading involved teaching reading by associating characters or groups of characters with sounds whereas lexical reading consisted of acquiring words or phrases without attention to the characters or groups of characters that compose them (Sanabria et al., 2009).

Advantages claimed for Whole Language were that it focused on experiences and activities that were relevant to learners' lives and needs, that it utilized from authentic materials, and that it could be used to facilitate the development of all aspects of a second language (Richards & Rodgers, 2001). However, the Whole Language Approach was criticized by many conservatives who preferred the phonics method (Ghate, 2005). Whole Language proposals were seen as anti-direct teaching, anti-skills, and anti-materials, assuming that authentic texts were sufficient to support second language learning (Aaron, 1991).

2.6.9 Multiple Intelligences (MI)

Multiple Intelligences which was a learner-based philosophy that characterized human intelligence as having multiple dimensions that must be acknowledged and developed in education, was originated by Dr. Howard Gardner, a Harvard University researcher of cognitive development in 1980s. The theory of Multiple Intelligences suggested that there were a number of distinct forms of intelligence that each individual possessed in varying degrees (Gardner, 1983). In other words, all humans had these intelligences, but they differed in the strengths and combinations of intelligences. Besides, these intelligence types required different teaching styles for foreign language vocabulary.

Gardner (1993) introduced the nine different kinds of intelligence which were listed and described as follows:

1. **Verbal / Linguistic Intelligence** is the capacity that makes people use lexical and grammatical items effectively and express themselves both in speech and writing as well as understanding what they hear and see (Gardner, 1993). It consists of all language skills "speaking, reading, writing, listening and understanding (Lazear, 2000). This type of intelligence allows people to understand the meanings of the words and the syntactic structures of sentences. They have an ability to acquire vocabulary quickly. They also use words to memorize concepts. Lazear (2000: 31) described the linguistic intelligence "as the capacity to grasp word meanings in a given context and knowing how to shift both meaning and context by rearranging words". Sample activities proposed for linguistic students include word building games, vocabulary activities, memorizing, using word processors, group discussions, completing worksheets, giving presentations, listening to lectures, reading, storytelling, and journal keeping (Berman, 1998) .

2. **Logical / Mathematical Intelligence** is the capacity that makes people calculate measure, use logic, solve math and science problems, and affect the social

sciences and humanities (Gardner, 1993). It involves categorization, classification, inference, generalization, and calculation (Armstrong, 1994). Logical/Mathematical Intelligence enables people to develop the ability to recognize familiar objects in pictures and visualize and imagine these objects when they are not actually physically present. They also acquire abstract verbal symbols that stand for concepts developed as a result of one's experience with the real world. (Lazear, 2000). Logic puzzles, logical-sequential presentations, problem solving, guided discovery, science thinking, creating codes, and calculation are the language learning activities for this kind of intelligence (Berman, 1998).

3. **Visual / Spatial Intelligence** is the capacity that makes people discover the visual-spatial world accurately and learn to speak with visual symbols (Gardner, 1993). It contains sensitivity to colour, line, shape, form and relations that exist between these elements and the ability to visualize, to graphically represent visual or spatial ideas, and to orient oneself appropriately in a spatial situation (Armstrong, 1994). For those students who use their spatial intelligence, charts, maps, diagrams, videos, slides, movies, art and other pictures, imaginative storytelling, graphic organizers, telescopes, microscopes, visualization, photography, using mind maps, painting or collage, student drawings can be used in the classroom (Christison, 1997). Vocabulary trees are also a great example of using visual intelligence to improve vocabulary skills. A student with strong visual/spatial intelligence may respond well to organizing vocabulary using a mind- map or spidersgram.

4. **Musical Intelligence** is the capacity which provides people expressing and transforming their feelings, thoughts, and knowledge in musical forms (Gardner, 1993). It allows students to recognize, create, reproduce, and reflect on music. Musical intelligence involves sensitivity to rhythm, pitch or melody, and timbre or tone colour of a musical piece (Armstrong, 1994). Yavuz and Aydınoğlu (2004) claims that a learner with strong musical intelligence is good at picking up sounds, noticing stressed syllables and identifying diverse intonation patterns and

that s/he can learn a language more easily in an environment where there is music and where songs are utilized. Playing recorded music, playing live music, music appreciation, student-made instruments, singing, group singing, and Jazz Chants are considered as the MI activities designed to develop the musical intelligence (Christison, 1997). To teach vocabulary, jazz chants or raps can be used.

5. **Bodily / Kinesthetic Intelligence** is the capacity that makes people produce and transform things by means of their hands and that makes them use body to express ideas and feelings with great skill (Gardner, 1993). It consists of such physical skills as coordination, balance, dexterity, strength, flexibility, and speed (Armstrong, 1994). This kind of intelligence is related to physical movement that includes drama, mime, dance, gesture, facial expressions, role-play, body language, physical exercise, and physical games (Lazear, 2000). Total Physical Response techniques can be employed for this type of intelligence. Circle dancing, brain gym, relaxation exercises, mime, field trips, hands-on activities, role plays and creative movement are the activities easy to apply in classes (Christison, 1997).

6. **Interpersonal Intelligence** is the ability to detect and respond appropriately to the moods, motivations and desires of others (Gardner, 1993). Students with highly interpersonal intelligence work well with people, enter into their inner world and understand their viewpoints (Lazear, 2000). They learn best in an environment where pair work and group work activities are available and where language is used for real exchanges (Yavuz & Aydınoğlu, 2004). Sample activities proposed for linguistic students include cooperative groups, peer teaching, group brainstorming, board games, and pair work (Christison, 1997).

7. **Intrapersonal Intelligence** is the ability to be self-aware and understand their inner world, feelings, values, beliefs, and thinking processes (Gardner, 1993). It includes having an accurate picture of oneself and self-discipline, self-understanding and self-esteem (Armstrong, 1994). Learners with strong

intrapersonal intelligence learn best if they work on their own. Independent student work, individualized projects, options for homework, personal journal keeping, self-teaching/programmed instruction, reflective learning, and goal setting are the basic language learning activities for this kind of intelligence (Christison, 1997).

8. **Naturalistic Intelligence** is the ability to discern patterns in nature. It enables human beings to recognize, categorize and draw upon certain features of the environment. It "combines a description of the core ability with a characterization of the role that many cultures value" (Gardner, 1999: 48). It is also the ability to discriminate among living things and sensitivity to other features of the natural world. “Naturalists” have greater sensitivity to nature and their place within it, the ability to nurture and grow things, and greater ease in caring for, taming and interacting with animals. They must connect a new experience with prior knowledge to truly learn something new. They learn best when the subject involves collecting and analyzing, or is closely related to something prominent in nature (Gardner, 1999).

9. **Existential Intelligence** is the ability be sensitive to, or have the capacity for, conceptualizing or tackling deeper or larger questions about human existence, such as the meaning of life, why are we born, why do we die, what is consciousness, or how did we get here (Gardner, 1999). Learners with strong existential intelligence "exhibit the proclivity to pose and ponder questions about life, death, and ultimate realities" (Gardner 1999: 72). They are interested in understanding religious and spiritual ideals. They have a strong understanding of things that are not visual to the eye but through faith and belief.

Gardner's Multiple Intelligences attracted controversy and criticism on several subjects. One criticism included the notion that MI theory was not empirical. Gottfredson (2004), for example, argued that Gardner's theory derived rather more strongly from his own intuitions and reasoning than from a comprehensive and full grounding in empirical research. Collins (1998: 95) wrote that "evidence for the

specifics of Gardner's theory is weak, and there is no firm research showing that its practical applications have been effective." Another criticism was that the domains are to a large extent expressions of the condition of the general processes. The domains may vary because of their constitutional differences but also differences in individual preferences and inclinations. Furthermore, their functioning influences the operation of the general processes. Therefore, one cannot specify the intelligence of an individual or design effective interventions programs unless both the general processes and the domains of interest are evaluated (Demetriou et al., 2002). While there have been some significant questions and issues around Howard Gardner's notion of multiple intelligences, it is still useful in education. It has helped a significant number of educators to question their work and to encourage them to look beyond the narrow confines of the dominant discourses of skilling, curriculum, and testing (Smith, 2002).

2.6.10 Neurolinguistic Programming (NLP)

Neurolinguistic Programming (NLP) is a training philosophy and set of training techniques first developed by Grindler (a professor of linguistics) and Bandler (a student of psychology) in the mid-1970s as an alternative form of therapy (Richards & Rodgers, 2001). The following lines from Revell & Norman describe Neurolinguistic Programming:

> NLP is... a collection of techniques, patterns, and strategies for assisting effective communication, personal growth and change, and learning. It is based on a series of underlying assumptions about how the mind works and how people act and interact (Revell & Norman 1997: 14).

In NLP, *neuro* describes beliefs about the brain and how it functions. *Linguistic* has nothing to do with the field of linguistics but refers to a theory of communication, one that tries to explain both verbal and nonverbal information processing. *Programming* refers to observable patterns of thought and behaviour (Richards & Rodgers, 2001). According to Revell & Norman (1997:14),

> The *neuro* part of NLP is concerned with how we experience the world through our five senses and represent it in our minds through our neurological processes. The *linguistic* part of NLP is concerned with the way the language we use shapes, as well as reflects, our experience of the world. The *programming* part of NLP is concerned with training ourselves to think, speak, and act in new and positive ways in order to release our potential and reach those heights of achievement which we previously only dreamt of.

NLP can be applied to the teaching of all aspects of language. In learning vocabulary, for instance, the number of the senses activated during vocabulary instruction is in direct correlation with the success in learning the new words. The words are introduced with their mental associations in order to activate different senses in learning and retrieving words of the target language (Revell & Norman, 1997).

NLP offers a set of humanistic principles that provide either a new justification for well-known techniques from the communicative or humanistic repertoire or a different interpretation of the role of the teacher and the learner which is in harmony with many learner-centered views. That is why NLP appeals to many teachers (Richards & Rodgers, 2001). However, Sanghera (2005) states that NLP is criticized for being simply a half-baked conflation of pop psychology and pseudoscience that uses jargon to disguise the fact that it is based on a set of banal, if not incorrect, presuppositions. Witkowski (2010: 19) characterizes NLP as pseudo-scientific stating that "NLP represents pseudoscientific rubbish, which should be mothballed forever." He also states that at the neuronal level NLP provides no explanation at all and has nothing in common with academic linguistics or programming. Similarly, experimental psychologist Corballis (1999: 41) in his critique of lateralization of brain function states that "NLP is a thoroughly fake title, designed to give the impression of scientific respectability".

2.6.11 The Lexical Approach

Among the approaches and methods in language teaching, The Lexical Approach is the only method whose origin is based on the exclusive need to teach

vocabulary. It gave primary importance to the learning of target language vocabulary to master the foreign language. Introduced by Lewis (1993), it was derived from the belief that the building blocks of language learning and communication are not grammar, functions, notions, or some other unit of planning and teaching but lexis, that is, words and word combinations (Richards & Rodgers, 2001). The most remarkable point of the approach was the focus on lexical chunks rather than studying words as single, isolated items. Lewis (1997: 7) defined the underlying idea of the Lexical Approach as follows:

> The standard view divides language into grammar (structure) and vocabulary (words); the Lexical Approach challenges this fundamental view of language. Instead the Lexical Approach argues that language consists of chunks which, when combined, produce continuous coherent text (Lewis, 1997: 7).

The Lexical Approach does not view vocabulary as superior to grammar; it accepts that both grammar and vocabulary involve chunks and argues that language learning should emphasize these chunks. It is based on the idea that an important part of language learning is the ability to produce lexical phrases as unanalyzed wholes, or 'chunks', and that these chunks become the raw data by which learner begins to perceive patterns, morphology, and those other features of language traditionally thought of as 'grammar' (Lewis, 1993: 95). Therefore, that is the reason why the Lexical Approach is different from the other grammar-based approaches which study vocabulary via lists without contextual support (Lewis, 1997) and why it brings quite a new perspective to vocabulary teaching area in foreign/second language environment.

The lexical approach consists of some fundamental key principles which shape the language learning/teaching environment. The key principles listed by Lewis (1993: vi-vii) are presented in Table 3 below:

Table 3

The Key Principles of the Lexical Approach

Characteristics of the Lexical Approach	
Grammar	Language consists of grammaticalized lexis, not lexicalized grammar.
	Grammar as structure is subordinate to lexis.
	Grammar as a receptive skill, involving the perception of similarity and difference, is prioritized.
Vocabulary	The grammar/vocabulary dichotomy is invalid; much language consists of multi-word 'chunks'.
	Collocation is integrated as an organizing principle within syllabuses.
Listening	Among receptive skills, listening is particularly given enhanced status.
Speaking	The primary of speech over writing is recognized.
	Communicative power precedes and is the basis, not the product, of grammatical competence.
Reading	As a receptive skill, reading is not given much emphasis.
Writing	Writing is acknowledged as a secondary endowment, with a radically different grammar from that of the spoken language.

The principle 'the grammaticalized lexis, not lexicalized grammar' means that it is not the grammar on the core but the lexis because one cannot produce a sentence without vocabulary. Lexical phrase (lexis) is the main tool of the Lexical Approach. Lexical phrases, which play a major role in this approach, are the basic unit of the language teaching/learning process. Although grammar is necessary to combine chunks, if language learners do not have sufficient vocabulary knowledge, grammatical knowledge alone will not provide them with a meaningful situation or context (Lewis, 1997: 190). Schmitt (2000) makes a valuable contribution to a learning theory for the Lexical Approach by stating that it is much more efficient for the brain to recall a chunk of language as if it were one piece of information because the mind is able to store large amounts of information in long term memory but its

short term capacity is much more limited, when producing language in speech for example. Our teaching, therefore, would center on these lexical chunks and the ways they can be pieced together, along with the ways they vary and the situations in which they occur (Nattinger, 1980).

Lewis (1997) puts stress on the fact that neither grammar nor vocabulary is superior. He argues that language can be acquired through prefabricated multi-word chunks with no difference between grammar structures or lexical items. Another principle of the Lexical Approach is concerned with collocational component. According to Lewis (1997), being able to use a word entails mastering its collocational range and restrictions on that range. Hence, activities should be extended through increasing learners' collocational competence with the vocabulary they have already had. The Lexical Approach accepts grammar as a crucial receptive skill to be studied. Learners have the grammar of a word, which means building up different forms of a word or coming up with different words from that word. Studying the grammar of vocabulary will help learners overcome the difficulties they encounter while understanding the new words in an easier way (Lewis, 1997). Listening is also considered as a receptive skill and great emphasis is given to it due to the fact that it helps learners' understanding and it enhances their pronunciation way (Lewis, 1997).

All in all, the Lexical Approach is based on lexical phrases which are the core elements of the languages. Lexis and input are important and vocabulary is the main tool for language learners in the Lexical Approach. It remains to be convincingly demonstrated how a lexical theory of language and language learning can be applied at the levels of design and procedure in language teaching, suggesting that the implementation of the Lexical Approach is expected to be useful for language learners (Richards & Rodgers, 2001).

2.6.12 Competency-Based Language Teaching (CBLT)

Competency-Based Language Teaching is an application of the principles of Competency-Based Education to language teaching. Widely adopted by the end of the 1970s, Competency-Based Education (CBE) refers to an educational movement that focuses on the outcomes or outputs of learning. It focuses on what 'the learners are expected to do with the language' (Richards & Rodgers, 2001: 141). The focus on how the students can use the language instead of their knowledge about the language is central to this approach. Schenck (1978: vi; cited in Richards& Rodgers, 2001) describes the characteristics of CBE as follows:

> Competency-based education has much in common with such approaches to learning as performance-based instruction, mastery learning and individualized instruction. It is outcome-based and is adaptive to the changing needs of students, teachers and the community. ...Thus CBE is based on a set of outcomes that are derived from an analysis of tasks typically required of students in life role situations.

Docking (1994: 15) notes that "competency-based approaches to teaching and assessment offer teachers an opportunity to revitalize their education and training programs". The clear specification of expected outcomes and the continuous feedback that competency-based assessment can offer, make the quality of assessment improve and enable the quality of teaching and student learning to be enhanced.

The major basis of CBLT is the functional and interactional perspective on the nature of language. It attempts to teach language in relation to the social contexts in which it is used. Thus, language is regarded as a medium of interaction and communication between people who want to achieve specific goals and purposes. CBLT is also predicated on the notion of communicative competence and seeks to develop functional communication skills in learners. In this sense, we can say that CBLT shares some features with Communicative Language Teaching. The learning activities used in CBLT are systematically designed activities to reach a certain competence. They are real-world tasks which “may be related to any domain of life”

but especially to survival-oriented and work-related situations in a new environment (Richards & Rodgers, 2001: 144).

With reference to language learning, CBLT entails using all the grammar, vocabulary, punctuation and pronunciation to communicate effectively in real time listening, speaking, reading and writing situations. Moreover, it involves knowing what to do, where, when and with whom; or, being linguistically, communicatively and sociolinguistically competent with the learned language. Teaching vocabulary is most effective when they are also integrated into activities that use the target item meaningfully for a communicative purpose. The teaching of pronunciation, vocabulary and grammar is accuracy- oriented while focus on the holistic categories of topic, situations, notions, and functions is fluency-oriented (Nkwetisama, 2012).

CBLT is not without its critics. Tollefson (1986), for instance, argues that it is very difficult to develop lists of competencies for every specific situation and that many areas in which people need certain competencies are impossible to operationalize. Other researchers have pointed out that dividing activities up into sets of competencies is a reductionist approach, and that the sum of the parts does not equal the complexity of the whole. In spite of these criticisms, CBLT appears to be gaining popularity in the whole world. Rylatt and Lohan (1997: 18) suggest that “the business of improving learning competencies and skills will remain one of the world’s fastest growing industries and priorities in the future".

2.6.13 Communicative Language Teaching (CLT)

The origins of CLT are to be found in the changes in the British language teaching tradition dating from the late 1960s. Chomsky (1957) showed that the current standard structural theories of language were incapable of accounting for the fundamental characteristic of language- the creativity and uniqueness of individual sentences. His work "Syntactic Structures" (1957) was a revolutionary reminder of the creativity of language and a challenge to the behaviorist view of language as a set of habits. Many British applied linguists (e.g., Wilkins, Widdowson, Firth, and

Halliday) also emphasized another fundamental dimension of language that was inadequately addressed in approaches to language teaching at that time- the functional and communicative potential of language. According to them, the primary focus in language teaching must be on communicative proficiency rather than on mere mastery of structures. Therefore, the focus in language teaching changed to communicative proficiency rather than the command of structures. This shift has been manifested in what came to be referred to as the Communicative Approach, or simply Communicative Language Teaching (Richards & Rodgers, 2001).

Communicative Language Teaching mainly strives to make communicative competence the goal of language teaching and aims to develop procedures for the teaching of the four basic language skills that recognize the interdependence of language and communication. Hymes (1972: cited in Zimmerman, 1997: 12) defines "communicative competence" as the internalized knowledge of the situational appropriateness of language. As Littlewood (1981: 1) states, "One of the most characteristic features of communicative language teaching is that it pays systematic attention to functional as well as structural aspects of language." Some of the characteristics of CLT are as follows:

- Language is a system for the expression of meaning.
- The primary function of language is to allow interaction and communication.
- The structure of language reflects its functional and communicative uses.
- The primary units of language are not merely its grammatical and structural features, but categories of functional and communicative meaning as exemplified in discourse (Richards & Rodgers, 2001).

According to CLT, learners must develop skills and strategies for using language to communicate meanings as effectively as possible in concrete situations. (Littlewood, l981: 75). CLT makes use of real-life situations that necessitate communication. The teacher sets up a situation that students are likely to encounter in real life. As the communicative activities are close and relevant to their daily life,

CLT promotes learners' communicative competence and stimulates their inner motivation. CLT also prompts the development of learners' spirit of team cooperation by means of the communicative activities and cultivates learners' individuality by expressing their different views and ideas freely in the conversational interactions between them (Xia, 2010).

Communicative Language Teaching is also effective in vocabulary teaching and learning in many aspects:

- In the CLT classroom much vocabulary is taught in authentic contexts rather than in the form of wordlist of isolated words. Vocabulary teaching focuses on developing communicative proficiency rather than commanding the forms of the target language.
- CLT makes learners acquire vocabulary knowledge naturally, rather than learning intentionally. Moreover, the modified target language input which is obtained from conversational interactions between the teacher and learners enables them to get better understanding of vocabulary knowledge.

To put it briefly, Communicative Language Teaching which marks the beginning of a major paradigm shift within language teaching in the twentieth century, lays emphasis on learning target language through communicative activities. Instead of an explicit focus on language itself, there has been an emphasis on learners' expressing their own meanings through language. The learner must distinguish between the forms which he has mastered as part of his linguistic competence, and the communicative functions that they perform. Based on many modern linguistic theories, the general principles of CLT are today widely accepted around the world.

2.6.14 The Natural Approach

The Natural Approach is similar to other communicative approaches being developed during that period. Yet it is based on its own set of hypotheses (Krashen &

Terrell, 1983). Designed by Krashen and Terrell, the Natural Approach aims to "enable a beginning student to reach acceptable levels of oral communicative ability in the language classroom" (Krashen & Terrell, 1983: 131). It is based on a theoretical model consisting of five hypotheses: (1) the Acquisition-Learning Hypothesis (the distinction between "natural" acquisition as seen in L1 and the formal learning that emphasizes conscious rules and error correction); (2) the Natural Order Hypothesis (that grammatical structures tend to be naturally acquired in a somewhat predictable order without artificial sequencing of input); (3) the Monitor Hypothesis (that conscious learning has the limited function of "monitoring" or editing language performance); (4) the Input Hypothesis (that language is acquired when input is in an interesting and relevant context that is slightly above one's current level of competence; and (5) the Affective Filter Hypothesis (that attitudinal factors are related to language acquisition; acquirers with a "low affective filter"- an optimal attitude- will be more receptive and more likely to interact with confidence). The Natural Approach highlights comprehensible and meaningful input rather than grammatically correct production (Zimmerman, 1997).

Vocabulary, as a bearer of meaning, is regarded by the Natural Approach as essential for the language acquisition process. The vital importance of vocabulary is stated by Krashen & Terrell (1983: 155) as follows:

> Acquisition depends crucially on the input being comprehensible. And comprehensibility is dependent directly on the ability to recognize the meaning of key elements in the utterance. Thus, acquisition will not take place without comprehension of vocabulary.

As the recommended teaching method for vocabulary, the Natural Approach suggests that interesting and relevant vocabulary input should be provided to language learners to help them achieve the mastery of language and gain a general insight into the nature of language acquisition. Krashen's pedagogical suggestions include free voluntary reading of one's own interest since this enhances incidental learning of vocabulary. He claims that reading is the most efficient means by which to acquire new vocabulary (Krashen, 1989; 1993).

In the Natural Approach, a focus on comprehension and meaningful communication as well as the provision of the right kinds of comprehensible input constitutes the necessary conditions for successful second/foreign language acquisition. Originality of this approach lies not in the techniques it employs but in their use in a method that emphasizes comprehensible and meaningful practice activities, rather than production of grammatically perfect utterances and sentences (Richards & Rodgers, 2001).

2.6.15 Cooperative Language Learning (CLL)

Cooperative Language Learning is part of a more general instructional approach also known as Collaborative Learning (CL). It is predicated on the idea that teaching should make maximum use of cooperative activities involving pairs and small groups of learners in the classroom (Richards & Rodgers, 2001). Olsen & Kagan (1992: 8) has defined Cooperative Learning as follows:

> Cooperative learning is group learning activity organized so that learning is dependent on the socially structured exchange of information between learners in groups and in which each learner is held accountable for his or her own learning and is motivated to increase the learning of others.

According to Cooperative Language Learning, learning occurs best in heterogeneous groups, when all students work collaboratively and cooperatively for one common goal. It objects to the idea that students have to work competitively against one another. On the contrary, it rather supports the idea Vygotsky claimed in his Sociocultural Theory, which suggests that "Interaction not only facilitates language learning but is a causative force in acquisition." (Saville-Troike, 2006: 111). Due to the fact that CLL is an approach developed to foster cooperation rather than competition, to develop critical thinking skills, and to develop communicative competence through socially structured interaction activities can be considered as the overall objectives of CLL (Richards & Rodgers, 2001).

Using different kinds of cooperative activities in presenting new vocabulary helps learners acquire new words and enhance their communication in second/foreign language. Students have the opportunity to use different cooperative learning activities to improve their vocabulary. During these activities, the students learn from each other. Therefore, teachers should create a collaborative environment where the students enjoy the learning.

CLL is not without faults either regarding its practice. Its use with learners of different proficiency levels is questioned. It is asserted that some groups of students may obtain more benefits from it than others. Besides, CLL places considerable demands on teachers, who may have difficulty adapting to the new roles required of them (Richards & Rodgers, 2001).

2.6.16 Content-Based Instruction (CBI)

Content-Based Instruction (CBI) is "an approach to second language teaching in which teaching is organized around the content or information that students will acquire, rather than around a linguistic or other type of syllabus" (Richards & Rodgers, 2001: 204). It refers to a teaching method that emphasizes learning *about something* rather than learning *about language* (Davies, 2003).

The core principles of CBI are as follows (Richards & Rodgers, 2001: 209):

- People learn vocabulary more successfully when they use the language as a means of acquiring information rather than as an end in itself.
- People learn a second language most successfully when the information they are acquiring is perceived as interesting, useful, and leading to a desired goal.
- Some content areas are more useful as a basis for language learning than others.
- Students learn best when instruction addresses students' needs.
- Teaching builds on the previous experience of the learners.

CBI sees language use as involving several skills together. In a content-based classroom, learners are often involved in activities that link the skills, because this is how the skills are generally involved in the real world. So, learners might read and take notes, listen and write a summary, or respond orally to things they have read or written. Grammar is regarded as a component of other skills rather than as a separate dimension of language. Vocabulary can be easily acquired with contextual cues. The focus of teaching is how meaning and information are communicated and constructed through texts and discourse. So, language is text- and discourse-based for this approach. In addition, CBI assumes that language is purposeful and is used for specific purposes. "The purpose may be academic, vocational, social, or recreational but that it gives direction, shape, and ultimately meaning to discourse and texts" (Richards & Rodgers, 2001: 209). Stoller (1997) proposes that activity types employed in CBI are language skills improvement, vocabulary building, discourse organization, communicative interaction, study skills and synthesis of content materials and grammar.

Content-based approaches in language teaching are criticized because most language teachers, who have been trained to teach language as a skill rather than to teach a content subject, may be insufficiently grounded to teach subject matter in which they have not been trained. However, "CBI is based on a set of broad principles that can be applied in various ways and is widely used as the basis for various kinds of successful language programs" (Richards & Rodgers, 2001: 209).

2.6.17 Task-Based Language Teaching (TBLT)

Task-Based Language Teaching is an approach to teaching a second/foreign language that seeks to engage learners in interactionally authentic language use by having them perform a series of tasks. "It is based on the use of tasks as the core unit of planning and instruction in language teaching" (Richards & Rodgers, 2001: 209). The concept of 'task' has become an important element in syllabus design, classroom teaching and learner assessment. It has also influenced educational policy-making in both ESL and EFL settings (Nunan, 1989).

The proponents of Task-Based Language Teaching (Willis, 1996; Long, 1996; Skehan, 1998; Ellis, 2003) propose the notion of 'task' as a central unit of planning and teaching. Here is a definition of a pedagogical task provided by Richards & Rodgers. (1986: 289):

> ... an activity or action which is carried out as the result of processing or understanding language. For example, drawing a map while listening to a tape, listening to an instruction and performing a command may be referred to as tasks. Tasks may or may not involve the production of language. A task usually requires the teacher to specify what will be regarded as successful completion of the task. The use of a variety of different kinds of tasks in language teaching is said to make language teaching more communicative... since it provides a purpose for a classroom activity which goes beyond the practice of language for its own sake.

Task-based Language Teaching aims to both enable learners (1) to acquire new linguistic knowledge and (2) to employ their existing knowledge. It is based on the following principles and practices:

- A needs-based approach to content selection
- An emphasis on learning to communicate through interaction in the target language.
- The introduction of authentic texts into the learning situation.
- The provision of opportunities for learners to focus not only on language but also on the learning process itself.
- An enhancement of the learner's own personal experiences as important contributing elements to classroom learning.
- The linking of classroom language learning with language use outside the classroom. (Nunan, 1989: 1).

Task-based language teaching provides an alternative approach to focusing on language. It has the key benefit of allowing students some degree of choice in terms

of what language they learn while working on tasks. However, it does not mean that grammar and vocabulary are totally ignored. TBLT proposes that lexical units are central in language use and language learning. In TBLT, "vocabulary is used to include the consideration of lexical phrases, sentence stems, prefabricated routines, and collocations, and not only words as significant units of linguistic lexical analysis and language pedagogy" (Richards & Rodgers, 2001: 209). One of its proponents, Skehan (1996b: 21-22), for instance, suggests that "many linguists and psycholinguists have argued that native language speech processing is very frequently lexical in nature although much of language teaching has operated under the assumption that language is essentially structural". So, it is clear that TBLT stresses the importance of vocabulary in second language learning.

As seen above, vocabulary instruction has changed remarkably from the past to the present, and seems to advance more with the innovations to come in the course of time. As a result, much has changed and the information that has been gathered from these studies has shed light on today's vocabulary learning/teaching processes. Vocabulary has gained a prominent place recently whereas it was not even accepted as a skill in the past. As Seal (cited in Celce- Murcia, Marianne, 1991: 308) states, "now, after a period of relative neglect, language teachers and researchers are waking up to the realization that vocabulary is an important area worthy of effort and investigation." Today, its role is respected by many language specialists, teachers and learners. In many projects concerning vocabulary, linguists and researchers (Meara, 1982; Carter, 1987) have been interested in the questions such as; 'what is vocabulary?', 'what does it mean to know a word?', 'what vocabulary should be learned?', 'how should vocabulary be learned?', 'what does a second language learner's mental lexicon look like and how is it different from the mental lexicon of a monolingual native speaker?'

CHAPTER III
COMPUTER ASSISTED LANGUAGE LEARNING (CALL)

3.1 Computer Assisted Language Learning (Historical Background)

In this section, some definitions of CALL will be given first, and then the history of CALL, its developmental stages and major theoretical approaches to CALL will be discussed.

3.1.1 An Introduction to CALL

In broad terms, Computer Assisted Language Learning (CALL) may be defined as "the search for and study of applications on the computer in language teaching and learning" (Levy, 1997: 1). It is often regarded as the use of computers as an aid for presenting the language material. Another definition of CALL that accommodates its changing nature is "any process in which a learner uses a computer and, as a result, improves his or her language (Beatty, 2003: 7). In fact, CALL is the expression agreed upon at the 1983 Teachers of English to Speakers of Other Languages (TESOL) convention in a meeting of all interested participants. The term is widely used to refer to "the area of technology and second language teaching and learning" (Chapelle, 2001: 3). CALL has come to include "issues of materials design, technologies, pedagogical theories and modes of instruction" (Beatty, 2003: 7). It is now used routinely in a variety of instructional situations. Language teachers are increasingly supposed to possess CALL expertise that involves both practical skills and a complete understanding of information technology theory. As a result, it is becoming more and more essential for teachers to be familiar with CALL applications within the classroom. They need to design, implement, and evaluate CALL activities in their classrooms (Fotos & Browne, 2004). Moreover, CALL is perceived as the most innovative area in the practice of foreign/second language items. Since the initial introduction of computers into the field of second/foreign language education, many researchers have naturally tried to evaluate the effectiveness of this new medium and its applications on language learning (Davies, 2002; Jones, 2001; Levy, 1997).

3.1.2 A Brief History of CALL

Levy (1997) divides the history of CALL into three periods; CALL in the 1960s and 1970s, CALL in the 1980s, and CALL in the 1990s whereas Warschauer & Kern (2000) divide this period into three main phases: behaviouristic CALL, communicative CALL, and integrative CALL. Another categorization in the stages of computer use in language teaching and learning comes from Warschauer (2000) again as structural approaches to CALL, cognitive approaches to CALL and socio-cognitive approaches to CALL.

Levy's 1960s and 1970s period consists of the PLATO and TICCIT projects. CALL may be considered to have begun with the PLATO (Programmed Logic for Automatic Teaching Operations) Project which was launched at the University of Illinois in 1960 (Levy, 1997). "The project was designed so as to provide interactive self-paced instruction for large numbers of students." (Smith & Sherwood, 1976: 344). Hart (1981) claims that the role of the PLATO is to satisfy the need for more mechanical types of vocabulary and grammar drill, thereby freeing class time for more expressive activities. Much of PLATO's first language learning work was done in teaching Russian using a grammar translation method. The focus was on translation of scientific documents. The system also provided learners with grammar explanations, vocabulary drills, other drills, translation tests at various intervals, rudimentary spelling and grammar-checkers (Ahmad et al., 1985; Levy, 1997). It also supported communication between users in the form of notes files and 'talk', a kind of restricted email system. Thanks to the 'talk' facility, written communication took place between users who were signed on to the system (Chapelle & Jamieson, 1984: 14). The PLATO project forms the backbone of CALL.

The other project, TICCIT, stands for "Time-Shared, Interactive, Computer Controlled Information Television". It was initiated in 1971 at Brigham Young University. This system combines television technology with the computer and has the capacity to combine text, audio, and video. It is regarded as the first example of multimedia CAI (computer assisted instruction). A specific instructional framework

which dictates the actual form of the hardware, software, and courseware, is built into the system and this distinguishes the project from the PLATO project (Levy, 1997). Furthermore, a central tenet of the TICCIT system is learner control. Learner control goes beyond the simple selection of content, to include choice over the presentational form (Merrill, 1980b). According to Levy (1997: 18), "TICCIT has its own in-built instructional system and it remains one of the very few computer systems to be devised solely around a specific theory of teaching or learning." Both PLATO and TICCIT were developed in the era of Audiolingualism and they both proved themselves capable of adapting to more recent approaches to language teaching (Levy, 1997).

The early 1980s saw a boom in computer assisted language learning due to the introduction of the microcomputer. Teacher-programmers often preferred learning a high-level programming language such as BASIC (Beginners All Purpose Symbolic Institution Code) to design materials from scratch while other language teachers chose to produce CALL materials using authoring programs such as Storyboard (Levy, 1997). Written by John Higgins, Storyboard is "a text-reconstruction program for the microcomputer where the aim is to reconstruct a text, word by word, using textual clues such as the title, introductory material, and textual clues within the text" (Levy, 1997: 24). The program also gives teachers and students the opportunity to write their own texts. Last (1989) refers to programs like Storyboard as first-generation CALL. Text reconstruction, alongside gap-filling, text manipulation, and simulation form the basis for many CALL activities created by language teacher-programmers at this time (Last, 1989; Scarborough, 1988; cited in Levy, 1997: 26).

In 1983, The Athena Language Learning Project (ALLP) was established by the Massachusetts Institute of Technology as an eight-year research program to explore the innovative uses of computer in education (Levy, 1997). The project aimed at creating an experimental system for building multimedia learning environments. Another focus was the creation of communication-based prototypes for beginning and intermediate courses in French, German, Spanish, Russian, and English as a Second Language (Morgenstern, 1986). As Levy (1997: 26) states, "The

Athena Language Learning Project is conceived within the communicative approach to language learning".

One of the most striking and far-reaching technological developments in the 1990s is the Internet, the worldwide 'network of networks' (Levy, 1997: 31). After being linked to a local network or the worldwide web in the 1990s, computers became the vehicle for a growing number of multimedia tools specifically designed for use in the foreign language–learning process. During the 1990s, the efficiency of computer use for enhancing language learning became a major issue (Garrett, 2009). New software and fast access to the Internet made computers available in almost all public and private schools as well as homes. Three projects appeared during this period: The International Email Tandem Network, The CAMILLE (Computer-Aided Multimedia Interactive Language Learning), and the Oral Language Archive (OLA). The International Email Tandem Network, begun in 1993 by Helmut Brammerts, is an example of language learning by computer mediated communication using the Internet (Brammerts, 1995). The Tandem Network links universities from around the world and enables students to learn languages in tandem via email on a reciprocal basis. The network also includes a bilingual forum where participants can take part in discussions and ask each other for advice in either language, and a database where users can both access and add teaching and learning materials themselves (Levy, 1997). The CAMILLE project focuses on providing beginner courses in Dutch and Spanish, and advanced courses for French and English. This project combines a 'communicative competence' approach to language acquisition with an interactive multimedia environment (Ingraham & Emery, 1993: 26; Ingraham, 1993: 48; Ingraham et al., 1994; cited in Levy, 1997: 34). In 1994, The Oral Language Archive was initiated at Carnegie Mellon University. The objective of the project was "to establish a collection of digitized sound recordings for foreign language learning that is accessible from around the world via the Internet" (Levy, 1997: 37).

In the 2000s, the wide use of the Internet, fast and affordable processors, developments of DVDs, video conferencing, and satellite systems can be considered as important developments. Broadband becomes more widely available, opening up

new possibilities for delivering audio and video materials via the Web. The appearance of blogs and podcasts causes new applications for language teachers and learners because computers are available in many public and private schools, universities and homes for educational and personal use. Today CALL and web-based environments are suitable for the alternative methodologies of modern foreign language instruction. Thanks to CALL, students improve their language skills rapidly, study at their own pace and get immediate feedback. As Hanson-Smith (1997: 7) states, "CALL gives the student the means to control his or her own learning, to construct meaning, and to evaluate and monitor his or her own performance".

3.1.3 The Three Phases of Development of CALL

The development of CALL can be roughly divided into three distinct phases: Behaviouristic CALL, Communicative CALL, and Integrative CALL (Warschauer, 1996; Moras, 2001). Each stage illustrates the development of different ways in which the computer has been used in language learning/teaching and corresponds to a certain level of technology as well as a certain pedagogical approach. Table 3 designed by Warschauer (2004: 11) shows the three stages of CALL from the pedagogical perspective:

Table 4
The Three Stages of CALL (Warschauer, 2004: 11)

Stage	1960s-1970s: Behaviouristic CALL	1970s-1980s: Communicative CALL	1990s till the present: Integrative CALL
Technology	Mainframe	Pcs	Multimedia and Internet
English Teaching Paradigm	Grammar-Translation & Audio-Lingual	Communicative Language Teaching	Content-Based, ESP/EAP
View of Language	Structural (a formal structural system)	Cognitive (a mentally - constructed system)	Socio-cognitive (developed in social interaction)
Principal Use Of Computers	Drill and Practice	Communicative Exercises	Authentic Discourse
Principal Objective	Accuracy	And Fluency	And Agency

Warschauer (2004: 11) illustrates the history of CALL Timeline as in Table 4. It is clear in the table that the path of computer assisted language learning is quite similar to what language teaching itself has followed to the present day. As technology shifts from the mainframe to the personal computer, the roles of computers in language classroom also shift from as a "tutor" to a "stimulative" resource and a "tool.

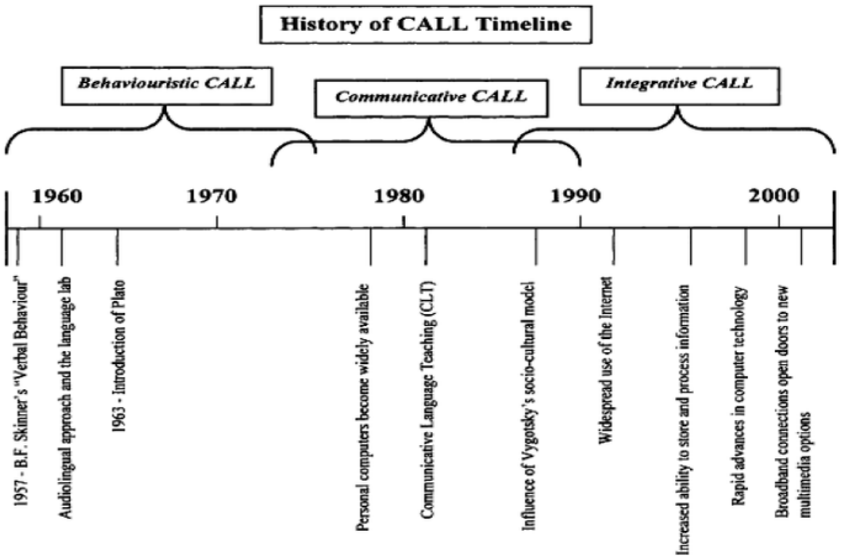

Figure 1: The History of CALL Timeline (Braul, 2006: 25)

The first phase of CALL has been termed behaviouristic CALL (Kern & Warschauer, 2000; Warschauer, 1996a). Behavioristic CALL was implemented in the 1960s and 1970s when the Audio-Lingual Method was very popular. This was also the time when the PLATO project was initiated. Fotos & Browne (2004) suggests that CALL is predicated on the idea of 'computer as tutor' and involves repetitive language drills referred to as drill-and-practice. Behavioristic CALL provides learners merely with worksheets on computer screens rather than on paper. The computer is used as a mechanical tutor, presenting material and feedback on an individualized basis, allowing students to proceed at their own pace and freeing up class time for other activities (Warschauer & Kern, 2000). The well-known tutorial

system, PLATO, featured extensive drills, grammatical explanations, and translation tests at various intervals (Ahmad et al., 1985).

By the end of the 1970s, behaviorist approaches to language learning were challenged by communicative approaches based on meaning-focused language use rather than formal instruction (Richards & Rodgers, 2001). Communicative CALL, as clear by the name, emerges in the era of communication and communicative software in which content is the focus and grammar is believed to be taught implicitly. Communicative use of the language rather than mastery of isolated forms is emphasized. Computers are used as a tool (e.g., word processors, spelling and grammar checkers, and concordances). They are used to stimulate discussion, writing or critical thinking. Warschauer and Healey (1998: 13) argue that "the focus is not on what students do with the machine, but rather with each other while working at the computer." Students are encouraged to generate original utterances rather than just manipulate prefabricated language. That is to say, production of language is encouraged. The target language is used exclusively (Phillips, 1987; Underwood, 1984). Different from the Behaviouristic CALL, the Communicative CALL software presents skill practice in a non-drill format by using language games, reading and writing practice, text reconstruction, cloze tests, and puzzles (Fotos & Browne, 2004).

The last and the current stage of computer assisted language learning is Integrative CALL which arose in the mid 1990s (Fotos & Browne, 2004). Based on multimedia computers and the Internet, Integrative CALL aims at teaching language skills in an integrated fashion and shifting the dynamic from learners' interaction with computers to interaction with humans via the computer (Akcaoğlu, 2008). Wertsch (1985) claims that much of the theory underlying integrative CALL is derived from the Vygotskyan sociocultural model of language learning in which interaction is regarded as essential for the creation of meaning. Therefore, person-to-person interaction is an important feature of many current CALL activities. Warschauer (1996b) suggests that Integrative CALL shifts to a perspective which seeks both to integrate various skills of language use (e.g.,

listening, speaking, reading, and writing) and also integrate technology more fully into the language teaching/learning process. Students learn to use a variety of technological tools as an ongoing process of language learning and use, rather than visiting the computer lab on a weekly basis for isolated exercises (Yang, 2010). Such language learning offers learners a more authentic learning environment. Integrative CALL is considered as the movement away from language learning software and CD-ROMs to Web-based activities that allow learners flexible, self-paced access to information (Felix, 1998, 1999; Lin & Hsieh, 2001; Schcolnik, 2002; Warschauer, 1999). Hence, both teachers and students view computers and CALL as means to Web-based communication for meaningful purpose rather than merely as a tool for language learning (Fotos & Browne, 2004).

3.2 The Roles of Computers in CALL Applications

The role of computers has been widely discussed in general and in relation to CALL (Weizenbaum, 1984; Brierly & Kemble, 1991). Being an essential issue, the role of computer is the basis for the computer's widespread acceptance and use (Levy, 1997). Table 5 (adapted from Levy, 1997: 188) indicates the different taxonomies of the role for the computer in CALL.

Table 5
The Role of the Computer in CALL (Levy, 1997: 188)

Taylor (1980)	Higgins (1983)	Wyatt (1984)	Phillips (1987)	Kern (2006)
Tutor	Magister	Instructor	Expert System	Tutor
Tool	Pedagogue	Facilitator	Prosthetic	Tool
Tutee		Collaborator	Games	Medium

Taylor (1980) proposes that computer has three roles in CALL applications which are tutor, tool and tutee. Being the most common role of computers in language learning, tutor role of the computer is intended to emulate or replace the teacher in some way. In the tutor’s role, computers provide instruction, feedback, and

testing in vocabulary, grammar etc (Levy, 1997). In other words, they usually perform the tutors' role in computer assisted instruction (CAI) programs. The function of the computer as a tool is to enhance or improve the efficiency of the work of the teacher or student (Levy, 1997). As Taylor (1980: 8) states, "use of the computer in tool mode may teach the user something during use, but any such teaching is most likely accidental and not the result of a design to teach." In the tool role, computers provide access to visual or audio materials relevant to the language. Spelling and grammar checkers, online dictionaries, and concordances for corpus analysis are also available making it possible for learners to understand and use the language. The last role of computers in CALL applications is the tutee role in which students learn by programming (tutoring) the computer. The basic premise underpinning the tutee mode of computer use is that "in teaching the computer, the student learns more deeply and learns more about the process of learning than he or she does from being tutored by software written by others" (Taylor, 1980: 9). Using the computer as a tutee qualitatively changes the learning experience and the role of teachers within school. However, it does not downgrade the role of the teachers (Taylor, 1980). Kern (2006) also suggests taxonomy of roles for the computer similar to Taylor's taxonomy; a tutor, a tool and a medium role. In the medium role, which is the new one, computers provide a medium for interpersonal communication, distance learning or community participation. In other words, computers serve a medium of communication. They are mostly used to exchange cultural features by using language.

Higgins (1983) proposes two roles of computers; the magister role and the role of pedagogue. "As magister, the computer presents a body of knowledge to the student and chooses the order in which things happen, what is to be learned and what kind of activity will be carried out" (Higgins, 1983: 4). That is to say, the computer has the control. The pedagogue role, on the other hand, is the computer as 'slave' and it becomes 'a task setter, an opponent in a game, an environment, a conversational partner, a tool' (Higgins, 1983: 4).

Wyatt's taxonomy of role for the computer in CALL; instructor, collaborator, and facilitator, is consistent with Taylor's roles of tutor, tutee, and tool respectively (Wyatt, 1984c). However, Wyatt's definition of collaborative is not as restrictive as Taylor's definition of the tutee in the sense that the student does not have to learn to program the computer. Instead, the sense of the initiative being taken by the student is maintained (Levy, 1997).

Phillips (1987) suggests three models for the role of computer in CALL: the games model, the expert system model, and the prosthetic model. The expert system model and the prosthetic model fit comfortably within the tutor and tool categories elaborated by Taylor (1980) and Kern (2006) above. Phillips (1987) claims that the expert system model is closest to the tutor role of the computer. He also likens this model to the magister role of the computer described by Higgins (1983). The prosthetic model focuses attention on the role of computer as compensating for human limitations (Philips, 1987). As for Phillips' games model, it is believed to be the result of a reaction against tutorial CALL. "Such software have the characteristic features of a game with such elements as competition, either against the computer or between two or more players, a scoring system, and the notion of winning and losing" (Levy, 1997: 187).

In the light of the categorizations above, we can say that the computer may have different roles according to its function in CALL applications. Taylor (1980) mentions three roles for computer which are tutor, tool and tutee while Kern (2006) adds a medium role for computer in addition to tutor and tool roles described by Taylor (1980). Higgins (1983) suggests only two roles of computers; the magister role and the role of pedagogue. Wyatt's taxonomy of role for the computer consists of instructor, collaborator, and facilitator which map directly onto Taylor's roles of tutor, tutee, and tool, respectively. As for Phillips' categorization, three models; the games model, the expert systems model, and the prosthetic model come out. In some cases, the fit between taxonomies is clear whereas it is less compatible in others. "The use of the computer as a tool has proved to be one of the most fruitful uses of the computer in CALL." (Levy, 1997: 193).

3.3 Teacher & Learners' Roles in CALL Instruction

Teachers and learners have different roles in a CALL environment when compared to a traditional classroom environment (Huang and Liu, 2000; Sandholtz, Ringstaff and Dwyer, 1990; Tsai, 2005). This section explores teacher and learner roles in CALL instruction.

Teacher's role differs in CALL applications. Huang and Liu (2000) state that teacher's role in CALL is altered from an expert to a facilitator or a director. Although the teacher's role is mostly that of a knowledge transmitter, the teacher's role in a CALL environment is a facilitator as students learn by themselves without depending on teacher- instruction (Tsai, 2005). Chao (1999) and Howie (1989) mention that the role of the teacher in a computer-centered classroom is that of monitor. The teacher monitors students during laboratory sessions and guides them any time they need because it is easy to follow their progress and determine their needs while they are working with computers. Moreover, the teacher may be seen as a technician who solves technical problems related to passwords, printing, and software. It is noted by Levy (1997) that the teacher may have a minimal role or can be excluded altogether, if the CALL materials have been regarded as a self-contained, tutorial package. The teacher may play an essential role in the delivery of the materials (Levy, 1997). The tool role of the computer is likely to place greater demands on teacher such as preparing for the computer's use, task setting, and learner training, monitoring and guiding students, and solving software problems. Teachers are the ones who decide in what degree they will benefit from computers and choose the type of materials that will be employed throughout the lesson. They are responsible for choosing the right CALL programs that will improve students' higher-order cognitive skills and understanding of the language use (Opp-Beckman, 1999).

A number of research studies (Brierley & Kemble, 1991; Dhaif, 1989; Howie, 1989; Kenning & Kenning, 1983; Levy, 1997; Robinson, 1991) support the idea that computers cannot serve as a substitute for a teacher or a curriculum. CALL should be

considered an integral part of instruction and teachers as an integral part of CALL. It is the teacher who guides the students directly (Robinson, 1991). So, computers can be considered as a complement to what teachers do in classrooms.

Learners' roles take another direction in CALL applications in comparison with the traditional classrooms. One of the benefits that computer brings to language learning is a greater learner autonomy. Learners may make progress in learner autonomy through individual study. It is the learner who can best perceive how CALL works for his learning. Recent CALL collections emphasize learner centredness and learner-driven CALL (Jung & Vanderplank, 1994: viii). In a learner-centered environment, learners control their own learning individually and use language at their own pace (McDonough, 1995; Oxford and Crookall, 1990). The philosophy of CALL also puts a strong emphasis on student-centred materials that allow learners to work on their own. Liaw (2001) states that CALL applications trigger learner-centered environments as CALL promotes learners' responsibility.

To sum up, three main components of Computer Assisted Language Learning (CALL) classroom -the learner, the teacher, and the computer- are complementary to each other. Each component has its own characteristics and stories of roles they play in the CALL classroom (Son, 2002). "For the integration of CALL into a specific language teaching environment, it is crucial to look at the ways in which these components work as a team and how they contribute to the implementation of CALL activities" (Son, 2002: 239).

3.4 Advantages of CALL Applications

There are many advantages of CALL in language classrooms. In this section, the advantages of CALL listed by various researchers will be described first and then the studies discussing positive effects of CALL will be presented. The studies primarily focus on writing, grammar, reading, vocabulary, general attitudes, and effects of CALL in other educational subjects.

Jones (1983) suggests that the computer is potentially an invaluable aid to teachers because of its ability to provide students with individual and instant feedback. The computer can relieve teachers of the burden of constant remedial work, and of the unenviable task of trying to make such work interesting and motivating. Hope, Taylor & Pusack (1984: 30) state that the computer allows one-to-one interaction:

> The amount of control over events is shared fairly equally between student and machine: the computer asks the question and has the answers; the student decides when to turn it on and off, which material to work on, and how fast to go. Students have rarely such power over their teachers. Teachers rarely seem as patient.

Ahmad, Corbett, Rogers and Sussex (1985) divide the advantages of the computer into three types: those which are part of its inherent nature, those which benefit the teacher, and those which benefit the learner. There are many inherent advantages of the computer. First of all, the computer offers a much wider range of activities than other technological aids. Secondly, it can offer interactive learning. In other words, it can conduct a two-way learning session with the student. Thirdly, it can deliver to the student feedback, at more frequent intervals than would be possible for a human teacher in all but individual tuition sessions. Moreover, it can repeat an activity with none of the errors which easily arise from repetition by humans. Lastly, students can come at any time and spend as long as is needed to gain full benefit from the material provided that a computer is available. From the point of view of the teacher, the computer offers several advantages. The computer can handle question and answer routines, simulated dialogues, hypothesis testing and many other types of exercise. It can choose questions in sequence or at random from the list of questions supplied by the teacher. Furthermore, when the student has completed the session, it can record the results, errors, success rates, the time spent, and provides much more information for the teacher to view later. Thus, the teacher is able to revise and refine the materials at any stage. All these factors free the teacher from some constraints imposed by heavy teaching schedules. Thanks to CALL, creative and imaginative teaching in which teacher-student contact is essential occurs. For the student too, the computer offers many advantages. The first one is the computer's flexibility of time which allows the student the choice of when

to study particular topics and how long to spend on them. Distance teaching is also possible by computer. A student in Turkey, for instance, could use CALL materials on a computer physically located, for instance, in Australia. He can take courses at a distance via telephone lines or special land-lines. In addition, each student has the computer's full attention and can work at the speed best suited to the individual. Each of them can receive appropriate feedback from the computer almost instantaneously (Ahmad et al., 1985).

Chapel and Jamieson (1986) mention the three advantages of CALL; individualization, record keeping and answer judging. Individualization implies that learners have the opportunities to work with the instructed language on their own. Record keeping means that the computer collects the data that flows between the student and the computer while interacting. The last one, answer judging, suggests that the computer informs the students about the correctness of their answers to the question that the computer has asked and the computer also gives meaningful explanation about why the answer is wrong.

According to Dhaif (1989), the first advantage of computers in language learning is that language learning atmosphere becomes more interesting with computers. The second one is the immediate feedback which enables self-correction. The next one is that CALL can present a wide choice of type of activities in language teaching. Finally, it gives learners opportunities to develop general computer literacy.

Horwitz (1995) suggests that the advantages of CALL consist of effective factors such as lack of anxiety, risk-taking and motivation, all of which are considered to be influential factors in language classrooms. Brown (1997) lists the advantages of CALL as giving immediate feedback, allowing students to work at their own pace, and causing less frustration among students. In the same year, Stokes (1997) states that students can get detailed feedback and hints which lead the students to think. To Warschauer and Healey (1998), the main benefits of adding computer components to language instruction are:

1. Multimodal practice with feedback
2. Individualization in a large class
3. Pair and small group work on projects, either collaboratively or competitively
4. The fun factor
5. Variety in the resources available and learning styles used
6. Exploratory learning with large amounts of language data
7. Skill-building in computer use

Similarly, Yanpar (1999) lists the advantages of CALL as follows:

1. CALL gives students the chance to learn at their own pace.
2. It leads to active participation.
3. It enhances the quality of teaching methods.
4. The students have the chance to see their own progress.
5. It gives students the chance to repeat and practise after school hours

Lee (2000: 1) puts forward the reasons why we should apply computer technology in second language instruction. The reasons for using CALL include: (a) experiential learning, (b) motivation, (c) enhance student achievement, (d) authentic materials for study, (e) greater interaction, (f) individualization, (g) independence from a single source of information, and (h) global understanding. Garcia and Arias (2000: 457) list such advantages of using CALL as increased motivation of the students, individualization of learning process, immediate feedback, non-linear access to the information, and the introduction of new exercise types in the classroom. Similar to Winter (2002: 26) and Lee (2000: 1), Wang (2007: 3) summarizes the benefits of computers in language learning classrooms as follows:

1. CALL programs could offer second language learners more independence from classrooms

2. Language learners have the option to study at anytime and anywhere

3. CALL programs can be wonderful stimuli for second language learning

4. Computer can promote learning interaction between learners and teachers

5. Computers can help classroom teaching with a variety of materials and approaches

In the light of the aforementioned advantages of CALL described by various researchers (Jones, 1983; Hope, Taylor & Pusack, 1984; Ahmad et al., 1985; Chapel & Jamieson, 1986; Dhaif, 1989; Horwitz, 1995; Brown, 1997; Stokes, 1997; Warschauer & Healey, 1998; Yanpar, 1999; Lee, 2000; Garcia & Arias, 2000; Winter, 2002; Wang, 2007), we can summarize the advantages of CALL under seven titles; affective factors, learner autonomy, interaction, memorable learning, immediate feedback, practice experience, and various materials. To start with, affective factors consist of lack of anxiety, risk-taking and motivation and these factors are considered to be influential factors in language classrooms (Horwitz, 1995). According to Krashen (1982: 32), "students with low anxiety, high motivation and self-confidence could get better achievement in learning process." Huang and Liu (2000) suggest that CALL provides all these affective contributions for language learners. It can reduce a learner's anxiety. In fact, CALL activities provide the learners with a sense of control and with a reinforcement of its negative and positive immediate feedback. These perceptions, in turn, lead students to acquire more self-confidence in learning (Lee, 2000; McGreal, 1988). Making mistakes and being the object of ridicule which are the most common fears learners have in the classroom can be prevented by CALL activities because most CALL programs offer a relaxed atmosphere which conforms to the shy learners' need (Brett, 1997). Robertson et al. (1987) observe that the students who join computer assisted language learning programs also have significantly higher self-esteem ratings than regular students. Other affective factor considered to be influential in CALL classrooms is motivation.

As computer technology reduces learner stress and anxiety via fun games and communicative activities, it promotes second language learners' motivation. The studies (Egbert et al., 2002; Levy, 1997; Kramsch and Andersen, 1999) have demonstrated that CALL has a potential to increase motivation as it usually offers students the opportunity to learn language items at their own pace and attractive graphics, games, animation and high interaction. Promoting learner autonomy which is a desirable goal in language learning is the second advantage of CALL. Along with providing above-mentioned affective factors for language learners, computers also provide learners with the opportunity to go further at their own pace. Hence, learners become more autonomous (Wang, 2007; Benson, 2001; Dickinson, 1995). According to Dörnyei (1997), a learner who has responsibilities of his/her own learning and studying independently also contributes to intrinsic motivation (Dörnyei, 1997). In other words, the learner becomes eager to learn the other language items. "Technology together with meaningful tasks and interactional purposes promotes a positive second language learning environment, stressing the importance of learner autonomy" (Chavez, 1990: cited in Liu, Moore, Graham and Lee, 2003: 258). Learners can learn according to their pace and review what they have learned easily (Ying, 2002). This is the most widely benefit of CALL in educational settings as it provides a learner-centered environment.

The other benefit of CALL is that it offers one to one interaction with the learner. When a learner studies using a computer, the computer processes the learner response and gives verbal or written responses. So, there is a high interactivity between the learner and computer (Brett, 1997). It also provides an interaction between learners and teachers while helping classroom teaching with a variety of materials. By sending e-mail and joining newsgroups, second language learners can also communicate with people they have never met before. It is especially useful for shy or inhibited learners to benefit from the individualized technology-learning environment (Warschauer, 2004).

Memorable learning is the other impressive feature of CALL. It is well-known that many concepts are abstract and difficult to express in language teaching area.

However, computer programs can compensate for this disadvantage by presenting language items through a mixture of multi-sensory materials such as text, graphics, audio and video. This kind of input helps students to learn and retain language items better (Chen, 2004).

The next advantage of CALL is that it provides learners with immediate feedback. As we know, feedback is of great importance to the language learning process in general (Black & William, 1998). By observing and checking learners' learning progress, teachers help them achieve their second language acquisition. CALL provides instant feedback to each individual learner whereas it may not be possible to provide immediate feedback to each individual learner in the traditional classroom (Nikova, 2002). Interactive self-checking exercises, for instance, provide learners with an opportunity to examine their output.

CALL also offers practice experience for learners. It is a fact that learning is about making sense of information, extracting meaning and relating information to everyday life. Learners understand the world through reinterpreting knowledge (Ormrod, 1999). Thus, we can say that practice experience is vital for learning. Computer technology combined with the Internet allows learners to extend their personal view, thought and experience. Second language learners can develop thinking skills and choose what to explore themselves (Lee, 2000).

As the last advantage, we can show the various authentic materials provided by CALL. Learners can get these materials either at school or from home via the Internet. Furthermore, they can access these materials at any time they need and can gain full benefit from these materials. Computer technology provides the interdisciplinary and multicultural learning opportunities for learners to carry out their independent studies. In brief, CALL provides many advantages in language classes.

Numerous experimental studies on efficacy of CALL have been conducted in Turkey and in the world. These studies mainly focus on the effectiveness of CALL in writing, grammar, reading, listening, speaking, pronunciation, vocabulary. This section discusses the positive effects of CALL whereas the next section focuses on the disadvantages of CALL along with the presentation of the studies which mention negative effects of CALL on language learning/teaching processes.

3.4.1 Studies on the Positive Effects of Computer Assisted Language Learning

The first study which discusses positive effects of CALL is Rosenbaum's study (1968). The participants of the study were students of German. In the study, one group took a conventional Audiolingual course supplemented with language-laboratory exercises while computer assisted instruction work replaced the language laboratory for the other group. The class work was aimed primarily at Audiolingual learning. The results of the study indicated that the computer assisted instruction group performed approximately as well on the listening/speaking skills as the non-CAI group, which had done language laboratory exercises. This demonstrated the ineffectiveness of the language laboratory. As for reading and writing skills, the CAI group significantly outperformed the non-CAI group as this was what they had been practicing in CAI (Rosenbaum, 1968).

The second study was conducted by Kulik & Kulik (1991) who surveyed more than 500 studies comparing learners who received computer-assisted instruction with the learners who received traditional instruction. The studies covered learners of all age levels — from kindergarten pupils to adult students. The researchers concluded that learners tend to learn more and in less time with computer assisted learning. Beauvois (1992), on the other hand, investigated the effects of computer assisted classroom discussion. She aimed at describing how computer assisted classroom discussion provides a unique environment for student-student and student-teacher interaction in an experimental networked laboratory established by the English Department at the University of Texas, Austin. She used a local area network (LAN) to create computer assisted network discussion. Thanks to the computer-assisted

discussions, students could send messages in their foreign language to other computer users in the lab and could start discussion. Beauvois (1992: 456) explains his ideas about LAN as follows;

> The use of LAN to produce synchronous, real-time discussion show that in this networked computer classroom, typically reticent students, i.e., women, minority students, and anxious or shy learners tend to participate in the discussion more readily and more often than in the regular classroom. The computer does not transmit accent or skin colours, no one is put on the spot to respond, and these elements seem to create a relatively nonthreatening atmosphere in the classroom. … On the network, the instructor becomes more of a guide and facilitator than a purveyor of right answers.

In the third study, Russel & Haney (1997) examined the effect of taking open-ended tests on computers and on paper for students with different levels of computer skill using items from the Massachusetts Comprehensive Assessment System and the National Assessment of Educational Progress for 287 eighth graders. The result of the study suggested that computer version significantly affected the test taker's performance (Russel & Haney, 1997). Two years later, Gillespie & McKee (1999) exposed learners from undergraduate and graduate studies to their own CALL software. The results revealed that CALL enhanced student performance and skills considerably. In the same year, Lambacher (1999) also investigated the effects of CALL by using software designed for pronunciation training in teaching English to forty primary school Japanese learners. The findings of the study showed that students improved their perception and production of English consonants because they reviewed as many times as they could and they got immediate feedback. In another study, Hauck, Mclain, & Youngs (1999) examined the effect of CALL on four skills. 33 French students took part in the study. According to the results, students in experimental group (CALL group) performed equally well as the control group in listening and speaking and better at reading and writing (Hauck, Mclain, & Youngs, 1999).

Another study discussing the use of CALL was conducted by Pawling in 1999. The purpose of her study was to evaluate the feasibility and effectiveness of a CD-ROM as a tool for research-based language learning. 11 sixth graders learning English vocabulary through an application called Directions 2000 (a multimedia dictionary) participated in the study. The results revealed that learners assimilated vocabulary through playing the modal sentences as many times as required. Pawling stressed the benefits of a CD-ROM as follows:

> CD-ROM is potentially a liberating instrument for teachers and learners alike in that it has the special facility of incorporating practice in all four language skills mentioned above in a multimedia package using video, text, photograph and sound. There is much evidence; not least teachers' own experience, to suggest that computer-based learning is very motivating for children (Pawling, 1999: 164).

In the study of Ying (2002), the participants included thirty-two junior students majoring in Foreign Trade English at the School of Foreign Languages of Suzhou University. The results showed that network-assisted environments provided learners with autonomous training and learning. Frigaard (2002), on the other hand, investigated whether participation in a computer lab would improve high school students' performance on Spanish vocabulary, grammar, and listening comprehension. Students participated in classroom and computer lab activities. Analysis of student data (including student surveys) throughout five units demonstrated that the computer lab was a beneficial tool. Some of the students' favorite lab-based activities were a web site and a grammar tutor. Favorite classroom activities, on the other hand, included flashcards and games. Most students felt that having an instructor present in the computer lab increased their learning potential. Nearly all of the students enjoyed having a regularly scheduled lab period. Most students believed that the lab improved their listening skills and made class more interesting. Students stated that they preferred to learn vocabulary and grammar in the classroom, while they learned listening skills better in the computer lab (Frigaard, 2002).

Kılıçkaya (2007) aimed at exploring the effect of CALL on the undergraduate students' achievement on the Test of English as a Foreign Language (TOEFL). The participants in the quasi-experimental study consisted of 34 sophomore students in the Department of Foreign Language Education in Middle East Technical University. The experimental group was taught using computer-assisted instruction in a language laboratory whereas the other class was taught using a traditional method of instruction in a traditional classroom setting. The training lasted for 8 weeks and the same instructor met the groups three hours each week. During the first week a pre-test was given to both groups. A post-test was given at the end of the study as well. The experimental group participants were also interviewed in regard to CALL. The results showed that there was no statistically significant difference between the control and experimental group in overall scores and in the structure section. Nevertheless, statistically significant differences were found in the reading and listening sections. The results of the interviews indicated that the participants in the experimental group had positive attitudes towards CALL. Furthermore, it was suggested by the participants that computer-assisted language learning should be incorporated into the regular classes, rather than being scheduled separately (Kılıçkaya, 2007).

Focusing on a different point, Zhang, Gao, Ring, Gail & Zhang (2007) examined the influence of online discussion forums on student achievement in reading, writing, grammar, vocabulary, and critical thinking in English as Second Language (ESL) instruction. 54 senior high school Chinese students took part in this study and they were divided into three groups. The data collection instruments were achievement post-tests, perception surveys, and procedural interviews. The results showed that online discussion forums did not improve students' performance in reading, grammar, or vocabulary, but could influence students' writing skills and provoke critical thinking in face-to-face discussions. This study also found that instructor interventions had an impact on students' attitudes toward online discussions and promoted critical thinking in online discussions.

The next study was carried out by Sagarra & Zapata (2008) who examined the effect of an online workbook on the attitudes of beginning second language learners toward this pedagogical tool over two consecutive semesters. 245 L2 learners between 18 and 25 years old participated in the study. They were studying at a large public North American university. The treatment consisted of four hours of classroom instruction and one set of online homework per week, during two consecutive semesters. A survey administered after eight months of exposure to the workbook was employed to measure students' attitudes toward the electronic workbook. The qualitative data of the survey was compared to quantitative data from two different language assessment tests. The results of these assessment tests showed a significant increase in grammar scores. These results were consistent with the positive findings of student perceptions about the online workbook obtained in this and previous studies, emphasizing its benefits in terms of accessibility of the material, user-friendliness, and instant error feedback. More importantly, most students praised the usefulness of the online workbook for language learning, particularly in the areas of grammar and vocabulary acquisition. In spite of participants' mostly positive attitudes, the survey also revealed some negative aspects of the use of the online workbook, such as the amount of time needed to complete the online exercises.

In a recent study, Macaruso & Rodman (2011) attempted to investigate whether computer-assisted instruction can be beneficial to kindergartners who were English language learners enrolled in bilingual classes in Ennis, Texas, a rural school district. Comparisons were made between a treatment group given the support of computer assisted instruction and a control group receiving the same classroom instruction without structured computer assisted support. Differences in pre-test and post-test scores indicated significantly greater gains for the treatment group compared to the control group. The most significant difference between groups occurred in the area of phonological awareness. Significant differences favouring the treatment group were also found in sight word recognition. The findings of the study showed that English language learners benefited from intensive practice in basic reading skills as provided by computer assisted instruction support.

3.4.2 Students' Attitudes towards Computer Assisted Language Learning

The issue on students' attitudes towards the use of CALL was another research subject. Askar, Yavuz & Köksal (1992) conducted a study on students' perception of computer assisted instruction environment and their attitudes towards computer-assisted learning at the University of Hacettepe, Turkey. The participants of the study consisted of 137 fifth grade students from two private elementary schools and they received computer assisted instruction for one month. Two scales were used to assess the participants' perceptions and attitudes. The findings of the study showed that all assessed perceptions of both the computer assisted and traditional environments were in favour of CALL. Students reported developments in concentration and self-evaluation while studying in a computer assisted class. One of the researchers, Askar, summarized their study in one sentence: "Computer assisted instruction is a better and more comfortable way of learning than are traditional methods" (Askar, Yavuz & Köksal, 1992: 133).

Another study examining students' attitudes towards CALL is Arkın's study (2003). He investigated how teachers perceive the incorporation and use of computer technology resources in language teaching through investigation of teachers' attitudes and approaches to using an online supplementary resource in vocabulary instruction in an EFL context. The purpose of the study was to explore the factors that affect teachers' use or non- use of the online program for teaching purposes. The study also investigated whether and to what extent opportunities, facilities, and training provided to teachers contribute to their acceptance and use of these resources. The data were collected through questionnaires distributed to 97 teachers in an English-medium university. Based on the results of the questionnaires, a stratified 111 sample of 12 teachers were selected for follow-up interviews. The questionnaire results revealed statistically significant differences between the teachers who had undergone computer technology training and those who hadn't undergone computer technology training in terms of their attitudes toward computers and the use of computer technology resources in language teaching. Follow- up interviews were used to determine whether positive attitudes or interests led people to undergo training or the

reverse. The responses supported both cases for different individuals. The results of the study also indicated that simply introducing computer technology resources does not guarantee teachers' use of these in practice. The provision of training is seen as a key factor in both changing attitudes and encouraging teachers in incorporating technology into their instruction.

Similarly, the study of Önsoy (2004) probed how students and teachers perceive use of computer technology resources in language learning and teaching by examining the attitudes of students and teachers towards computers and the use of computer-assisted language learning (CALL), the similarities and differences between their attitudes and factors that affect students and teachers' use of CALL program at the Preparatory School of Celal Bayar University. The data collection instruments consisted of questionnaires distributed to 191 students and 22 teachers in a 30 % English-medium university and interviews conducted with four teachers based on the results of the questionnaires. The results of the findings gathered from students' questionnaires revealed statistically significant differences in terms of students' level. The findings showed no difference between the attitudes of students and teachers towards computers and the use of computers in language instruction in general. The results also demonstrated that training of students and teachers and an effective curriculum in order to use computer technology in educational settings are required.

In another study applied in EFL context in Turkey, Küçük (2009) investigated university preparatory school students' and teachers' perceptions of CALL environment. The sample group included 308 students and 50 teachers from Zonguldak Karaelmas University Preparatory School. Data were collected from the participants via two Effective CALL Questionnaires (ECALLQ) developed by the researcher. Both inferential and descriptive statistics were used to analyze the data. MANOVA was used to investigate whether there were significant differences among students' CALL environment perceptions with respect to certain background variables. Descriptive statistics were used to analyze students' and teachers' perceptions of computer's role and teacher's role in CALL environment and to

analyze all participants' responses to the open-ended questions. The results of the study showed that students perceive the computer's role with respect to (1) language skills, (2) overall effect of computer and (3) motivation; teacher's role with respect to teacher assistance, teacher guidance and teacher presence; students' expectations from the teacher with respect to (a) laboratory activities guided by the teacher and (b) overall guidance. According to the students' perceptions, language skills, teacher assistance and lab activities guided by the teacher were considered to be the most effective dimensions. Descriptive statistics, on the other hand, demonstrated that both students and teachers are undecided about the effectiveness of CALL, and they believed that teachers were effective in CALL environment.

Namlıca (2010), on the other hand, attempted to examine the English teachers' perceptions of Computer Assisted Language Learning in Turkish state schools in Çanakkale. His study also aimed at exploring the relationship between teachers' perceptions and some variables such as gender, educational background, teaching experience and type of school in this respect. The study was conducted at the state schools in Çanakkale, Biga, Bayramiç and Çan. The participants of the study included English Language teachers who have been working in different type of schools (Primary School, High School, Anatolian and Science High Schools, Vocational High Schools). They also have different educational backgrounds and differ in their years of language teaching experience. A questionnaire and the open-ended interview questions were designed to identify the teachers' perceptions towards CALL. The data were analyzed by SPSS (Statistical Package for Social Sciences). According to the results, the majority of the teachers (55.4%) were not aware of the concept of CALL, and the most preferred definition of the term 'CALL' was that CALL is students' learning a language using computers in the presence of teacher, which implies that CALL facilitates students' language study in the presence of teacher. The findings also indicated that there was no significant relation between the teachers' years of teaching experience and their perceptions of CALL and also between the educational background of the teachers and their perceptions of CALL. The findings also revealed that there was no significant difference between the teachers' gender and their perceptions of CALL. There were significant relations

among the teachers' perceptions of CALL in terms of relevant items involving their preference of attending self-paid overseas CALL conferences, taking part in CALL projects before, preference on attending self-paid CALL courses offered by computer schools, having learnt about CALL as one of the subjects in teacher training programme and also the type of the school that the teachers work.

Investigating some factors affecting the motivation level of the preparatory school students in using a web-based computer assisted language-learning course, Genç & Aydın (2010) conducted their study with the participation of 126 English-as-a-foreign-language learners at a preparatory school of a state university. The data were gathered through a questionnaire interrogating the participants about their, age, gender, grades, compulsory and voluntary states, types of their high school, parents' educational background, the time period of the participants' language learning process, the experience towards computer use and the degree of importance of learning English, and a scale measuring the motivation level of learners towards the lesson and how useful they spent in the CALL laboratory. Following the data analyses, it was found that a considerable number of EFL learners did not seem to be strongly motivated toward the process although most of them had a high level of motivation for computer use in an EFL learning process. Another result was that the more they believe that English is important, the more they feel motivated toward computer use in EFL learning. Finally, age, gender, grades, compulsory and optional status, types of high school, parents' educational background, the period of the participant's language-learning process, and the experience toward computer use had no effects on the learners' motivational levels.

In a recent study, Pardo- Ballester (2012) conducted a two-year empirical study of intermediate level learners' perceptions of the use of a web-based multimedia program with authentic video clips and its effectiveness as a language-learning tool. According the students, the learned culture and vocabulary enhanced their listening skills. A pre-test/post-test design evaluated the long-term gains in listening and speaking performances. Results of the study demonstrated a significant gain in listening and speaking (Pardo- Ballester, 2012). As we see, most studies have based

their findings on qualitative and research-based studies while discussing the efficacy of CALL. In the light of the aforementioned experimental studies, it can be said that CALL is effective in the teaching and learning of language skills. It provides many advantages in language classes.

3.5 Disadvantages of CALL Applications

It is a well-known fact that computer technology has become a new trend in global second language learning/teaching process. However, along with the benefits to the language learning and teaching process, computers clearly have some disadvantages. In this section, the disadvantages of CALL listed by various researchers will be described first and then the studies discussing negative effects of CALL will be presented in the chronological order.

To begin with, Kenning and Kenning (1983) found reading from a screen rather than from a printed text tiring and regarded it as a limitation of CALL. The study of McKnight & Richardson (1988) also revealed that learners became tired by reading a text from computer screens in a short time. Moreover, learners sometimes may concentrate only on the features of the computer program rather than the target language items. Therefore, the purpose of language instruction may not be completely fulfilled. This usually happens when the focus of the application is not made clear in advance.

Secondly, computers alone cannot handle unexpected situations because of technological barriers whereas teachers can cope with the situation when encountered. Ahmad, Corbett, Rogers & Sussex (1985) suggest that computers can be used only for limited types of teaching and that computer cannot deal with ambiguity and cannot make open-ended dialogues with the students. Furthermore, computers are not appropriate for all the activities that are held in the classrooms (Kenning & Kenning, 1983) as most of the software programs and the computer laboratories are designed for students to work individually. This situation makes pair or group work very difficult in computer laboratories.

Thirdly, it is essential that both teachers and learners need training to learn to use computers before they apply computer technology to assist second language teaching/ learning in order not to make the teaching-learning process a failure (Wang, 2007). No learner can utilize computer if they lack necessary technical knowledge about the use of computer technology. Similarly, if teachers do not have sufficient technological training to guide their students exploring computer and its assisted language learning programs, CALL will turn into a disadvantage in classes. Hence, the benefits of CALL for those teachers and learners who are not familiar with computer may become non-existent (Roblyer, 2003).

The other point to emphasize is that there are some restrictions involved in the use of computers in language classrooms. According to Wang (2007), the most common restriction includes the financial problems to afford the necessary computer program and finding high quality CALL software. He adds that continual updates to keep up make the problem more serious. Lee (2000) also states that the barriers to the practice of Computer-Assisted Language Learning can be classified in the following common categories (a) financial barriers, (b) availability of computer hardware and software, (c) technical and theoretical knowledge, and (d) acceptance of the technology. Expensive hardware and software also becomes the big problems for schools. They may increase educational costs and harm the equity of education (Gips, DiMattia, & Gips, 2004).

3.5.1 Studies on the Negative Effects of Computer Assisted Language Learning

As stated above, some studies discussing negative effects of CALL have been conducted in Turkey and in the world. As an example, Curtin, Dawson, Provenzano & Cooper (1976) used the PLATO system to teach a reading-translation course in Russian, and found that there was no significant difference in the performance of PLATO and non-PLATO students. Although the CALL students were more likely to include the highest grades, they were also more susceptible to deferral and dropout. Curtin attributed this feature to the insufficient classroom contact.

Comparing the difference between the computer assisted instruction and traditional instruction, Macleod, Dewhurst & Norris (2000) conducted their study with 62 students of undergraduate Physiotherapy studying Human and they did equally well. Allum (2002) stated that "…CALL does indeed deliver as effectively as conventional means in a range of language learning tasks" (147). Clark (1985c) (cited in Allum, 2002) also proposed that when methodology is kept consistent, there is no difference in results between computer-based instruction and teacher-led instruction.

In another study, Muir-Herzig (2004) investigated the technology use of teachers from a Northwest Ohio High School. According to the results, teachers' technology use, students' technology use and overall technology use had no significant positive effect on the grades and attendance of at- risk students. Technology use among the teachers was low in this sample.

Focusing on a different point, Ngu & Rethinasamy (2006) assessed the effectiveness of using a CALL lesson over a conventional lesson to facilitate learning of English prepositions at Bario, Malaysia. CALL was developed by the Ministry of Education, Malaysia as support material to enhance learning of English prepositions. Both the conventional and the CALL lessons were matched with the same content except for the medium in which the lesson was being delivered. Students were provided with computers to go through the CALL lesson in a self-regulated manner; while a teacher taught the conventional lesson in a classroom. Test results indicate that students who received the conventional lesson outperformed those who went through the CALL lesson. The Relative Condition Efficiency measurement also showed that the conventional group learned more efficiently than the CALL group. The findings are interpreted from the perspective of cognitive load required in processing the presentation mode of the learning materials.

Likewise, Tokaç (2005) aimed to determine whether the learning of foreign language vocabulary would be better for students who study and revise the vocabulary instruction material in a computer environment compared to students

who learn and revise the same vocabulary instruction material in a classroom environment with their teachers. Moreover, her study explored the strengths and weaknesses of the computer-assisted vocabulary instruction. The study was conducted with the participation of 76 freshmen who were learning English at Selçuk University of School of Foreign Languages in Konya, Turkey. They were divided into three groups. One group was the control group; other groups were the teacher-led vocabulary instruction group and the computer-assisted vocabulary instruction group. The teacher-led group learned and revised the target words using spaced repetition via teacher instruction, the computer group learned and revised the target words using spaced repetition via computers, and the control group learned the target words via teacher instruction while they revised vocabulary massively at one time and did not use spaced repetition. In order to investigate possible different effects of the teacher-led vocabulary instruction and computer-assisted vocabulary instruction in their vocabulary gains, the subjects took a vocabulary retention test as a pre- and a post-treatment test. In order to investigate the possible strengths and the weaknesses of the computer- assisted vocabulary instruction, a questionnaire was also given. According to the results, neither computer group nor the teacher group showed significantly more vocabulary gains. Thus, computer assisted vocabulary instruction was found to be as effective as teacher-led vocabulary instruction. As for the strengths and the weaknesses of computer assisted vocabulary instruction, inclusion of visual elements in multimedia annotations was perceived as the most effective feature of computer assisted vocabulary instruction. Weaknesses of computer assisted vocabulary instruction included the inefficacy of computer-provided feedback and the students' ineffective use of time.

Another study was conducted by Erkuş (2008) who tried to explore if the use of single-player computer games has positive effects on learning a new set of vocabulary. Another purpose of the study was to get feedback from students at upper-intermediate level about their ideas whether computer games improve their vocabulary knowledge or not. The participants consisted of 70 students randomly selected from different engineering departments, half of whom covered reading / writing lesson at Yıldız Technical University in İstanbul, Turkey as the control group

and half of whom did not as the experiment group. The intervention lasted for 15 weeks. While an introspective questionnaire and pre-test were given at the beginning of the term, a retrospective questionnaire and post-test were applied at the end of the term. The pre- and post-tests were analyzed via SPSS 12.0 program and pattern-coding (Miles & Huberman, 1994) was used to interpret the answers of the open-ended questions and to reach more well-grounded conclusions. According to the results of the study, single-player computer games did not have a meaningful efficiency on vocabulary learning. However, the students thought that single-player computer games have a positive effect on learning a new set of vocabulary.

The next study applied in EFL context in Turkey was the study of Kılıçkaya (2009) which attempted to explore the effect of an undergraduate-level CALL course on pre-service English teachers' practice teaching. Content analysis techniques were employed to examine the resulting responses to the interview questions and the lesson plans for the effects of the course. Findings of the analyses revealed that the participants benefited from the topics discussed in the course and half of them tried to make use of the call tools in their practice teaching. Moreover, they stated that they were willing to use these tools in their future career; however, they faced some problems such as lack of equipment, support and modelling. Thus, it was concluded from the study that teacher educators and the faculties need to take a serious and wary approach to the implementation of CALL as it requires close attention, critically selected software, teachers' and learners' positive attitudes and training and commitment (Kılıçkaya, 2009).

Different from the other studies, the study of Yardım (2011) investigated the effect of computer-assisted storytelling and teacher-led storytelling on vocabulary learning of fifth graders. The study was carried out with 60 fifth graders at Siirt Sancaklar Primary School in Siirt, Turkey. There were 30 students equally in computer assisted and teacher-led groups. The vocabulary items aimed to teach through computer assisted and teacher-led storytelling selected by taking syllabus of fourth and fifth classes into consideration. The target vocabulary was 25 in total and the story-based activities were the same for both groups except for the way they were

applied. Before the implementation, a pre-test of target vocabulary was applied. In experimental group, computer-assisted storytelling along with story-based activities was carried out whereas in control group, storytelling and story-based activities were implemented by means of teacher. After the three-week-implementation, post-test of the target vocabulary was applied to students in both experimental and control groups in order to identify the effect of implementations on vocabulary learning of students. The results of the study showed that there was a significant difference between two groups' success. Teacher-led group did better than computer assisted group (Yardım, 2011).

Lastly, Oberg (2011) compared the effectiveness of a CALL- Based Approach and a Card-Based Approach to Vocabulary Acquisition and Retention. The participants of the study consisted of 71 first-year Japanese university students comprising two classes. They studied a practice set of ten vocabulary items using both of the two methods. Later, a treatment set of ten different items using only one of the methods to which the students were randomly assigned. A "t" test done on the groups' vocabulary pre-test scores indicated no significant difference between the two groups in terms of knowledge of the items at the outset of the experiment. The analysis of the post treatment data showed no significant difference between the groups. Finally, a post treatment survey revealed a slight preference for the CALL method among the students (Oberg, 2011).

To conclude, considering the suggestions made by the researchers above, we can say that the disadvantages of CALL consist of high cost of equipment and software, lack of CALL software of high quality, low capacity of the equipments, lack of trained teachers, tiring screen capacity, computer anxiety among students and teachers, and learners' unfamiliarity with computers and their negative attitudes towards computers. Thus, if we try to apply computer technology and CALL programs to enhance our teaching and to help student learning, we should be well aware of what the advantages and disadvantages of CALL are. In this way, we can get its maximum benefits for our second language teaching and learning process.

3.6 Computer Assisted Vocabulary Instruction (CAVI)

The effects of computers in foreign language learning have been discussed by many researchers who attempt to determine whether computer assisted language learning environment is more effective in teaching and learning a second language than the traditional language learning environment. Vocabulary learning/teaching has also been a highly popular subject matter in computer assisted language learning applications since the early history of computer assisted language learning. However, the studies which examine the effects of computer assisted language learning applications on vocabulary learning are only available in small quantities. While some of these studies (Tozcu & Coady, 2004; Eşit, 2007; Nakata, 2008; Kılıçkaya & Krajka, 2010; Lin et al., 2011; Kayaoğlu et al., 2011; Gorjian et al., 2011; Fehr et al., 2012) have examined the effectiveness of a computer assisted vocabulary instruction program to test whether it is efficient or not in vocabulary learning, others (Koçak, 1997; Özdemir, 2001; Tokaç, 2005; Cellat, 2008) have compared teacher-led instruction and computer assisted instruction in terms of vocabulary learning. As the purpose of the present study is to explore the effectiveness of computer-assisted instruction on vocabulary achievement, only the use of computers in vocabulary teaching/learning will be discussed in this section of the literature review.

There are four studies which have attempted to compare computer assisted and teacher-led instruction in terms of vocabulary. First of all, Koçak (1997) aimed at investigating the effectiveness of computer assisted language learning on vocabulary teaching and learning. The subjects of the study were secondary school students, 13-14 years old at Middle East Technical University, Turkey who have been studying English intensively for two years. While the experimental group used the Longman Interactive English Dictionary CD in a computer lab under the instruction of the researcher, the control group had traditional instruction using their textbook in the classroom under the instruction of their teacher. Both groups were given pre-tests and post-tests in respect to 20 vocabulary items practiced in isolation and in context over a two session, four-hour treatment period. The experimental group was also given a questionnaire which measures their attitudes towards using computers as a

part of their courses. The results of the study supported the hypothesis that the experimental group liked working with computers and that they learned and retained more vocabulary than the control group.

Secondly, Özdemir (2001) tried to investigate whether online media tools help or discourage young learners. 48 sixth grade students from Gazi University Private School participated in the study. The experimental group learned six words by using an online multimedia tool which was specially developed by the researcher whereas the control group learned the same words in the classroom with teacher-led instruction. Data collection instruments were pre-test, post-test and interview conducted with the students. Following the implementation session, a cued recall test was given to the students to test their productive vocabulary knowledge. The results of the study showed that online tool was more effective than classroom learning instruction on students' productive vocabulary. It was concluded that the computer assisted vocabulary instruction group could do better in the production test because it triggers students' motivation and students can study individually at their own pace during the application. The researcher suggested that further research should apply the same material for the state school students and with more application sessions.

The third study was conducted by Tokaç (2005) who compared the computer-assisted vocabulary instruction with teacher-led vocabulary instruction. The participants of the study consisted of 76 freshman students who were learning English at Selçuk University School of Foreign Languages in Konya, Turkey. While the computer assisted vocabulary instruction group learned the words with annotations in a computer program, the other group learned the same words in the classroom with a teacher-led instruction. After a treatment session, all participants took a matching test to examine vocabulary achievement. The results of the post-test demonstrated that the teacher-led group had more vocabulary gain than computer assisted vocabulary learning group; however, there was no statistically significant differences between the groups. It was concluded that the students' ineffective use of time in computerized vocabulary learning task and inefficacy of the computer-provided feedback might have led to this result. Thus, a training session about the

computer program before implementing such a research was recommended by the researcher.

Lastly, Cellat (2008) tried to identify whether learning and retaining of foreign language vocabulary would prove to be profitable for students who study vocabulary instruction in a computer environment when compared to students who study the same vocabulary instruction material in a classroom environment under the guidance of their teacher. The sample group of the study included 68 fourth graders who enrolled in Mehmet Akif Ersoy Primary School in Eskişehir. The students were equally assigned to a computer assisted vocabulary instruction group and a teacher-led group. The computer assisted vocabulary instruction group studied target words by using 'Word Bird's Land' CD in a computer lab whereas the teacher-led instruction group was instructed the same words by their teacher in the classroom. Both groups took part in two implementation sessions which were carried out in two subsequent weeks in the first semester of 2007-2008 academic years. Totally, they studied 40 words at the end of the two implementations. After each implementation, both groups were evaluated on recognition or production tests. The same tests were also assigned two weeks and one month after each implementation session in order to determine vocabulary retention. Independent-sample t-test was used to interpret the results of mean scores. The findings of the research indicated that the computer assisted vocabulary instruction group performed better on both immediate and delayed tests when compared to the teacher-led instruction group. The statistical analysis also revealed that while there were significant differences between the computer assisted vocabulary instruction group and teacher-led group in both immediate and delayed recognition post-tests, the only significant difference occurred in the immediate production post-test. On the contrary, there were no significant differences between the groups on delayed production tests. This suggested that students learned more receptive vocabulary than productive vocabulary with the computer assisted vocabulary instruction.

As stated above, there are also some studies which have examined the effectiveness of a computer assisted vocabulary instruction program to test whether it

is efficient or not in vocabulary learning. The study of Tozcu & Coady (2004), for instance, examined the effect of direct vocabulary learning using computer assisted language learning on vocabulary knowledge, reading comprehension, and speed of word recognition. 56 intermediate level students studying English full time for university academic preparation participated in the study. Half were randomly assigned to the treatment group and half to the control group. Both the treatment group and control group subjects were given pre-and post-tests in vocabulary, reading comprehension, and reaction time. The same tests were used as pre-and post-tests. The students in the treatment group studied approximately 2,000 of the highly frequent words in English on the computer for 3 hour per week for 8 weeks while the students in the control group spent the same amount of time reading texts and doing reading comprehension exercises. It was found that the treatment students showed significantly greater gains than the control students even though both groups showed increases in vocabulary gain, and reading comprehension, and a decrease in reaction time for frequent word recognition. The treatment group decreased their reaction time for frequent word recognition as compared to the control group and exhibited significantly better reading comprehension than a control group.

The second study was the study of Eşit (2007) which investigated the effectiveness of an intelligent computer assistant language learning program on Turkish learners' vocabulary learning. The sample group included 42 low intermediate English preparatory class students studying at Izmir Institute of Technology. They were studying English full time for university academic preparation and they were randomly assigned to experimental and control groups. Within the scope of this research, an Intelligent Computer Assistant Language Learning application was developed and used in an English language preparatory class to measure its effects on students' achievement in vocabulary acquisition as well as their attitudes towards such an Intelligent Computer Assistant Language Learning environment. A pre-test- post-test control group design was used in the study. The experimental group members were exposed to reading activities in the computer lab with Your Verbal Zone, i.e. the Intelligent Computer Assistant Language Learning application developed for this research whereas the control group

followed a conventional reading program through traditional techniques, such as the use of monolingual and bilingual dictionaries or guessing word meaning from the context. Both groups used the same reading book but the experimental group saw only the electronic version. The instruments for data collection were the Self-Report Vocabulary Mastery Scale and the Intelligent Computer Assistant Language Learning Attitude Scale. The independent samples t-test was used to study the differences in continuous variables between the experiment and control groups. The improvement in the vocabulary knowledge of the participants was measured as to two different aspects, i.e. morphological knowledge and the knowledge of words' definitions and usage. The results of the study revealed that reading activities with Your Verbal Zone had positive effects on both learners' vocabulary learning and their attitudes towards the use of an Intelligent Computer Assistant Language Learning application in the classroom. It was proved that this study can provide language teachers with necessary knowledge and enthusiasm to incorporate an Intelligent Computer Assistant Language Learning application intended to teach vocabulary in their language classrooms. It was also concluded that the morphological analyzer of Your Verbal Zone had proven to be technologically mature and pedagogically effective.

Thirdly, Nakata (2008) aimed at comparing vocabulary learning with word lists, word cards, and computers in order to determine which material leads to the most superior spaced learning. The participants were 226 Japanese first and second-year students, aged 15-17, studying at a senior high school in Tokyo, Japan. They studied ten English words with one of the three learning materials: lists, cards, and computers. The List group was provided with a word list that had ten English low frequency nouns along with their Japanese translations. The Card group studied with ten individual flash cards, each of which was printed with one of the ten target words on one side and its Japanese translation on the other. The subjects in the computer assisted group, on the other hand, studied the words with computer software programmed by the author. One-way analysis of covariance indicated that the computer assisted group significantly outperformed the List group on the delayed post-test despite the fact that no significant difference existed between the Card

group and the other two. Item analysis using Chi-squares showed that on the delayed post-test, the List group's successful recall rates for four of the ten items were significantly lower than those of the Card or the computer assisted group. Correlational analysis demonstrated that the time invested in learning and the subsequent post-test scores did not correlate significantly for the List and Card groups. Paradoxically, a negative correlation was observed between the computer assisted group's study time and their post-test scores. The lack of meaningful relationships between the study time and subsequent retention may be partially owing to the limited ability of certain learners to learn effectively while using certain materials. A questionnaire given to the participants suggested that, in general, computers were evaluated more favourably than lists or cards. At the same time, learners exhibited large variations in their evaluation of computers, implying the importance of considering individual differences when introducing computer assisted language learning to learners. To sum up, the study has showed the superiority of computers over lists, the limited advantage of word cards over lists, and no statistically significant difference between computers and cards.

The fourth one was carried out by Yan (2010) who attempted to examine the effect of computer assisted language learning on de-contextualized multimedia software vocabulary learning and retention for college level students in Taiwan. 155 college level students took part in the study. The control group was taught in a regular classroom while the experimental group was taught in a computer laboratory. The goal of the course was to learn 300 English words. There were three tests for all three groups: pre-test, post-test 1, and post-test 2. The researcher administered a 40-question multiple choice test based upon the 300 words. The second post-test took place one week after the first post-test. The findings of the study showed that the de-contextualized multimedia vocabulary-learning software program had better learning and retention result than traditional classroom teaching.

The next study was aimed at exploring whether news video in a computer assisted language learning program can foster second language comprehension and incidental acquisition of adjectives, nouns, and verbs. The study, conducted by Lin in

2010, also investigated the relationship between the participants' vocabulary acquisition and their video comprehension. 44 proficient L2 learners and 39 less-proficient learners participated in the study. These Taiwanese university students joined a video-based computer assisted language learning activity and completed follow-up vocabulary and comprehension tests. Quantitative analysis was conducted in terms of two proficiency groups with different English reading and listening abilities. The results suggested that this activity significantly enhanced less-proficient participants' incidental vocabulary acquisition and comprehension. It was found that both proficient and less-proficient groups made significant progress in incidental vocabulary acquisition. Through the activity of viewing video-based lessons, both proficient and less-proficient participants acquired nouns and verbs incidentally better than adjectives. Two proficiency groups of participants' vocabulary acquisition were positively related to their video comprehension.

Comparing the effectiveness of online vocabulary teaching and the traditional methods, Kılıçkaya & Krajka (2010) conducted their study with 38 upper-intermediate students from different departments in a private university in Ankara, Turkey, studying English in order to pass the proficiency exam conducted by their own university. They were aged between 17 and 19 and assigned randomly to experimental and control groups. While the control group students practised vocabulary items in ten reading passages through vocabulary notebooks and cards, the learners in the experimental group practised the same vocabulary items in the passages through an online glossing tool, Word Champ. The effectiveness of the two methods was evaluated via the post-test. The results of the study demonstrated that the learners in the experimental group outperformed the learners in the control group and that the experimental group students better remembered the words studied online, evidenced by a follow-up post-test given 3 months later.

Another study examining the effectiveness of a computer assisted vocabulary instruction program on vocabulary learning was the study of Lin, Chan & Hsiao (2011). They also attempted to probe EFL students' perceptions of learning vocabulary collaboratively with computers. The participants of the study consisted of

91 eighth-graders from three intact classes in a junior high school in Taiwan, assigning one class to learning individually without computers, another to learning collaboratively without computers and the other learning collaboratively with computers. All participants took a pre-test before three sets of vocabulary exercises in three periods. After each set, they took an immediate post-test. A month after the experiment, they also took a delayed post-test. The computer group also completed a questionnaire and six students were interviewed. According to findings, learning collaboratively with computers were not outperformed in vocabulary tests designed for individual study; however, they showed better retention, outperforming the others in the delayed post-test. Another result was that more than 70% of the participants in the computer group reported a positive attitude and anticipation to learning vocabulary in such an environment.

The next study which was applied in EFL context in Turkey was carried out by Kayaoğlu, Akbaş & Ozturk (2011) and explored whether any difference exists between the students having a traditional text-based method and those having computer-based method. The participants were 39 English preparatory class students at pre-intermediate level attending School of Foreign Languages in Karadeniz Technical University in the academic year 2009-2010. Two pre-intermediate classes were randomly selected as the experimental group and control group. In the control group, a text telling the process of the water cycle was given on a paper. In the animation version, on the other hand, they were moving scenes displaying each phase of the water cycle; they could watch the process, hear and see the utterances simultaneously. A pre- test and a post-test were applied to each group. The data were analyzed through t-test. The findings of the study showed that there was an increase in the post-test scores of animation group as compared to the pre-test scores even if there was no statistically significant difference between post-tests of each group. This suggested that using multimedia such as animations contributed to students' achievement in vocabulary learning. Moreover, the teachers' observations and students' opinions indicated that there were relatively positive attitudes towards using such kind of animations in vocabulary learning. The study supported the idea that multimedia applications can be integrated into language classes not as an

alternative way but as an additional way to contribute positively to the atmosphere of class and motivation of students.

Gorjian, Moosavinia, Kavari, Asgari & Hydarei (2011), on the other hand, measured the impact of asynchronous computer assisted language learning approaches on high and low achievers' vocabulary retention and recall of English as foreign language learners. Fifty participants were assigned into two homogeneous groups. Both groups covered eight expository passages. After the students had covered the eight units taught during the treatment time, a vocabulary achievement post-test was administered right after the end of the course. The "t"-tests analyses indicated that the difference between the two groups was significant in terms of retaining vocabulary in immediate post-test (retention) and delayed one (recall). High achievers benefited from the computer assisted language learning approach to learn vocabulary in both retention and recall processes whereas the low achievers gained the chance of learning vocabulary just in retention period. However, their ability to remember vocabulary faded away after the time delayed since low achievers could not keep the recall abilities during the time lapses for more than two weeks.

Lastly, the study of Fehr, Davison, Graves, Sles, Seipel & Sekhran-Sharma (2012) attempted to decide the effects of an individualized, online vocabulary program on picture vocabulary test scores. 43 summer school students entering grades 2–4 from an elementary school of a major Midwestern city took part in this study. These students were randomly assigned to experimental or control conditions. Students who were randomly assigned to the control condition remained in their normal classrooms and received the normal summer school curriculum. Students in the treatment condition received computer-delivered vocabulary instruction on a stratified sample of 100 words selected from 4000 of the most common words in written English. Within one week after all students in the experimental condition had completed the computerized vocabulary lessons, all students in grades 2–4 were administered the paper-and-pencil post-test. Post-test scores indicated that students in the treatment condition outperformed control students. It was concluded that the

computer-adaptive, individualized instruction provided by this vocabulary program addressed a need for efficiency in remediation of vocabulary deficits.

To put it shortly, previous research has generally supported the idea that computer assisted vocabulary instruction facilitates L2 vocabulary acquisition and has provided us with some practical and theoretical insights to understand computer assisted vocabulary instruction (Koçak, 1997; Özdemir, 2001; Tozcu & Coady, 2004; Eşit, 2007; Nakata, 2008; Cellat, 2008; Kılıçkaya & Krajka, 2010; Lin et al., 2011; Kayaoğlu et al., 2011; Gorjian et al., 2011; Fehr et al., 2012). Nevertheless, there are also some studies which have revealed that computer assisted vocabulary instruction is not more effective than teacher instruction (Tokaç, 2005; Cellat, 2008). At this point, the question as to whether or not the programs for computer assisted vocabulary instruction are effective may remain unanswered. Therefore, more research should be conducted to provide learners with rich and effective vocabulary learning experiences in a computer environment.

CHAPTER IV
METHODOLOGY

4.1 Introduction

The present study compares the effectiveness of computer assisted vocabulary instruction with vocabulary instruction through communicative language teaching. The main aim of the study is to explore the effectiveness of computer assisted vocabulary instruction in terms of freshmen's vocabulary achievement. Additionally, the study investigates how the CAVI (computer assisted vocabulary instruction) group students perceived the computer assisted vocabulary instruction classes, what their feelings were about the effectiveness of these classes, and strengths and weaknesses of the classes.

This study aims to answer the following research questions:

1. Does Computer Assisted Instruction have an impact on ELT freshman students' vocabulary achievement?

2. Does Vocabulary Instruction through Communicative Language Teaching have an impact on ELT freshmen's vocabulary achievement?

3. Does the Computer Assisted Instruction group learn more vocabulary than the Communicative Language Teaching group?

4. Does the Computer Assisted Instruction group retain more vocabulary than the Communicative Language Teaching group?

5. What effects does gender have on the vocabulary achievement of the Computer Assisted Instruction group?

6. What effects does gender have on the vocabulary achievement of Communicative Language Teaching group?

7. Does the vocabulary achievement of the Computer Assisted Instruction group differ depending on the frequency of computer use?

8. Does the vocabulary achievement of the Computer-assisted Instruction group differ depending on the type of their high school?

9. What are the ELT freshmen's attitudes towards Computer Assisted Language Learning?

This chapter briefly introduces the methodology of the present study by presenting the rationale for an experimental study. It describes research design, participants, data collection instruments, data collection procedures and data analysis procedures.

4.2 Research Design

Quasi-experimental study designs – also called control group design – involve at least two treatment groups and they are considered to be closer to true-experimental ones (Büyüköztürk et al., 2009). While the experimental (treatment) group is treated in a different way from the control (non-treatment) group, the two groups receive the same pre-, post- and delayed post-test. Nunan (1992) states that studies which are organized around a pre- and post-test, experiment and control groups, and in which subjects are not randomly assigned are called quasi-experimental designs. Lacking random selection of participants and having treatment groups constructed from intact classes, this study employs a quasi experimental study. The pre-, post- and delayed post-test results of the two groups are compared to each other to find out any differences between groups.

4.3 Participants

The present study was conducted with the participation of 52 freshmen studying in the English Language Teaching Department of Balıkesir University, Turkey in the spring semester of 2012-2013 academic years. All the participants were considered advanced Turkish learners of English as they had to take the placement test of Foreign Language Examination (YDS) which is administered once every year by the Measurement, Selection and Placement Centre of Turkey (ÖSYM),

to study at the ELT Department. All students were native speakers of Turkish aged between 18 and 24.

A total number of 52 students attended the course "Lexical Competence" for four weeks. They were also familiar with basic computer skills as they had already attended the course "Computer I" before. The freshmen were randomly assigned to one of the groups; Computer Assisted Vocabulary Instruction (CAVI) or Vocabulary Instruction through Communicative Language Teaching (CLT). There were 6 male and 20 female students in the CAVI group whereas there were 9 male and 17 female students in the CLT group. Both groups studied same words but with different types of instructions as indicated in Table 6.

Table 6
The Distribution of the Participants

Groups	Type of Instruction	Number of Students	Female	Male
Experiment	CAVI	26	20	6
Control	CLT	26	17	9

4.4 Data Collection Instruments

This section presents the data collection instruments used in the study. The instruments consisted of the free and open source e-learning software platform (www.elt-moodle.com), testing materials and a questionnaire.

4.4.1 The Free and Open Source E-Learning Software Platform

The installation process of the Moodle (Modular Object-Oriented Dynamic Learning Environment) used in this study was carried out by an IT (Information Technology) expert. Later, the content of the software was designed by the researcher based on the lesson plans made in advance (see Appendix B).

Moodle, also known as Learning Management System or Virtual Learning Environment, is a free and open source e-learning software platform with features

and activities designed to engage learners (Winter, 2006). Some of the typical features of Moodle are assignment submission, discussion forum, files download, grading, instant messages, online calendar, online news and announcements, online quiz, feedback and Wiki. It allows teachers to create powerful, flexible and engaging online learning experiences ("Moodle," n.d., para. 4).

The free and open source e-learning software platform (www.elt-moodle.com) enabled the language learners to learn the target vocabulary interactively through a sequence of vocabulary learning activities that enhanced their vocabulary knowledge. The Moodle provided the language learners with the meanings of the target words via hypermedia links embedded into a reading text. This provided the learners an opportunity to see the target words in context. The target words were presented with textual, visual and audio media. When the learners clicked on a highlighted word, they could see the definition of the word, hear the pronunciation of it, see the grammatical form of it such as noun, adjective, verb and see the word in a sentence example. Oxford Advanced Learner's Dictionary was used for dictionary definitions of the words.

The Moodle also provided the learners with computerized multiple choice comprehension questions, matching, fill-in-the-blanks, true-false activities, crossword or word search puzzles, and games. So, the learners were provided with vocabulary practice and recycling opportunities with these types of exercises and games.

4.4.2 Vocabulary Achievement Test

The vocabulary achievement test used in this study was adapted from the vocabulary sections of the book *Q: Skills for Success Reading and Writing* (Caplan & Douglas, 2011). The test included 20 multiple choice questions designed to assess the participants' knowledge of the target vocabulary.

4.4.2.1 Reliability of the Test

"Reliability is defined as the extent to which a questionnaire, test, observation or any measurement procedure produces the same results on repeated trials. In short, it is the stability or consistency of scores over time and across raters" (Miller, 2011: 1). In order to test the reliability of the achievement test, another group of participants from the Department of English Language Teaching at Balıkesir University (150) was chosen. This group was asked to take the test before administering it to the real participant group. The result (0.83) indicated that the test was highly reliable (Özdamar, 2004: 633).

4.4.3 Questionnaire

The questionnaire used in this study was adapted from *The Attitudes towards CALL Questionnaire* designed by Vandewaetere & Desmet (2009). The first part of the questionnaire is concerned with gender, type of high school, computer availability, computer experience in years, and frequency of computer use. The second part of the questionnaire involves an attitude scale containing 27 items in Likert type with degree of five and aims to measure the participants' attitudes towards Computer Assisted Language Learning. The last part of the questionnaire consists of three open-ended questions about the freshmen's opinions about the applications.

The questionnaire was administered to the twenty- six students who learned the target vocabulary in the computer environment. Through the questionnaire, the study explored how the participants perceived the corresponding learning conditions and what they felt about the effectiveness of CALL (See Appendix C for a copy of the questionnaire).

4.4.3.1 The Reliability of the Questionnaire

In order to test the reliability of the questionnaire, another group of participants from Dokuz Eylül University (120) was chosen. This group was asked to complete the questionnaire before administering it to the real participant group. The reliability of the scale was calculated to be 0.80.

To sum up, the data collection instruments consisted of a free and open source e-learning software platform (www.elt-moodle.com), a vocabulary achievement test and a questionnaire. The following table demonstrates the two groups' corresponding treatments and data collection instruments:

Table 7

Treatments and the Data Collection Instruments of the Groups

Groups	N	Environment	Vocabulary Presentation Material	Data Collection Instruments
CAVI Group (Computer Assisted Vocabulary Instruction)	26	Computer Lab	Same material but computer based	• Vocabulary Achievement Test • Computer Assisted Vocabulary Instruction Questionnaire
CLT Group (Communicative Language Teaching)	26	Classroom	Same material but paper based	• Vocabulary Achievement Test

4.5 Procedure of the Study

Necessary permissions were granted from the Ethics Committee of Dokuz Eylül University Institute of Educational Sciences and Balıkesir University before the experiment, and the participants were informed about the confidentiality of their answers, the procedure, and the involvement in the study. The study was conducted in the spring semester of 2012-2013 academic year. The intact class was taught by the researcher herself in Lexical Competence Course in the ELT Department at the Faculty of Education of Balıkesir University with the first year class. Before the experiment, the students were given a pre-test (see Appendix A). They were randomly assigned to one of the groups; Computer Assisted Vocabulary Instruction (experimental group) or Vocabulary Instruction through Communicative Language Teaching (control group).

Following the pre-test, the two groups were taught the target vocabulary (*to relay sth, relevance, to be confined to sth, to acknowledge sth, random, menial, thriving, incentive, leisure, to engage in sth, vulnerability, devastating, to be crucial to/for sth, to consolidate, extinct, to mingle, to form bonds, controversy, to encounter sth/sb, to pop up*) by the researcher in accordance with the lesson plans developed for each group (see Appendix B). The experiment took four weeks for both groups. All students received four class hours of instruction totally at the end of the study. Both groups were given the post-test immediately after the experiment (see Appendix A). The freshmen were given 30 minutes for the vocabulary achievement test. The same test was also used as the delayed post-test which was administered to the freshmen five weeks after the experiment in order to test the retention.

Table 8
Timetable of the Experiment

	Pre-test	Experiment	Post-test	Delayed Post-test
CAVI Group	1st week	4 weeks	5th week	10th week
CLT Group	1st week	4 weeks	5th week	10th week

4.5.1 Procedure for CAVI Group

Before the implementation sessions, CAVI group practised the e-learning software in a 30 minutes orientation session in order to reduce the effect of the freshmen's inexperience in the software. The researcher explained all the icons and buttons in the program.

The next day, the freshmen participated in a CAVI session in the computer lab. They studied the target vocabulary interactively through a sequence of vocabulary learning activities which were planned by the researcher (see Appendix B). The target words were presented with textual, visual and audio media. When they clicked on a highlighted word, they could see the definition of the word, hear the pronunciation of it, see the grammatical form of it such as noun, adjective, verb and see the word in a sentence example. They were also provided with computerized multiple choice comprehension questions, matching, fill-in-the-blanks, true-false activities, crossword or word search puzzles, and games. In other words, they were actively engaged in vocabulary practice thanks to these types of exercises and games. Moreover, they were given computer-based immediate feedback on their answers to questions.

During the sessions, the researcher guided the freshmen to use the software and helped them whenever they had a problem with the software. However, the researcher never interfered with the freshmen's practices and learning pace. They all studied the target vocabulary individually and at their own pace. The procedure was the same in the other implementation sessions in which the freshmen studied the target words.

At the end of the study, the pre-test was conducted as the post-test to measure the success level of the students. *The Attitudes towards CALL Questionnaire* was also administered to the CAVI Group. As CAVI applications have offered a different learning experience, the aim of the questionnaire was to explore how the participants perceived the corresponding learning conditions and what they felt about the

effectiveness of CALL. Furthermore, three open-ended questions were asked to CAVI group in order to explore their opinions about the applications: The first question was whether they liked studying vocabulary by CAVI or not and the reason(s) of it. The second question was whether they would like to study other skills (reading, writing, listening, speaking and grammar) by CAVI or not. The last one was whether they had difficulty in using the software or not.

4.5.2 Procedure for CLT Group

The CLT group received classroom applications in each implementation session. The instruction consisted of the same reading texts, words, definitions, example sentences, exercises, and games as those designed for the CAVI group. The researcher followed the lesson plans which were prepared to teach the target vocabulary (see Appendix B). During the classroom applications, the teacher fostered a communicative atmosphere through the classroom activities such as games, pair-works, and discussions.

The procedure was the same in the other sessions in which the freshmen studied the target vocabulary. First, vocabulary items were presented by the teacher through the use of a variety of vocabulary teaching techniques such as making a definition of the word in the target language, using real objects, mime or gesture, synonyms, antonyms or hyponyms, employing visual aids such as pictures or board drawings, using word networks, dramatization, illustrative sentences, guessing words from the context, vocabulary games, puzzles etc. Then the freshmen practised the words with several activities. After each activity, the teacher checked the answers of the students and made any necessary corrections. During the sessions, the freshmen were required to follow the teacher's instruction. Thus, they had to regulate their own learning pace according to the teacher. At the end of the study, the pre-test was conducted as the post-test to measure the success level of the students.

4.6 Data Analysis Procedure

As aforementioned, quantitative and qualitative data collection instruments were employed in the study. The quantitative data were collected from the vocabulary achievement test which was used as the pre-test before the experiment, as the post-test immediately after the experiment and as the delayed post-test 5 weeks after the post-test. The data were analysed by SPSS 16.0 (Statistical Package for the Social Sciences) program on the computer. First, the scores of pre and post-tests were compared for each group. Then, the results of post-tests for both groups were compared through T-test. Finally, the mean scores of delayed post-test for both groups were compared.

Regarding the qualitative data, the questionnaire was administered to the CAVI Group. The data obtained from the questionnaires were analysed descriptively using the SPSS 16.0 (Statistical Package for the Social Sciences) software.

CHAPTER V
RESULTS

5.1 Introduction

This chapter presents the findings of the statistical analysis of the data collected through the four-week implementation. It first introduces the research questions and then aims to answer these questions in relevance to the collected data. Each research question is presented individually in conjunction with the relevant data and findings. Moreover, the discussion concerning the similarities and the differences between previous studies and the present study are presented.

5.2 Research Question 1

Does Computer Assisted Instruction have an impact on ELT freshmen's vocabulary achievement?

5.2.1 The Results of the Pre - test

Table 9 shows the results of the pre-test for both groups. The mean score of the pre-test for the experiment group is .571 while the control group's mean score of the pre-test is computed as .573. The mean scores of both groups demonstrated that the groups were similar concerning their target vocabulary knowledge levels before the experiment (see Table 9).

Table 9

The Comparison of the Pre-test Scores of the Two Groups

Groups	N	Means	Std. Dev.	-t-	-p-
CAVI	26	.571	.090	.082	.935
CLT	26	.573	.077		

Close mean scores (.571 and .573) between the two groups indicated that the participants' target vocabulary knowledge were almost the same before the

experiment. Thus, statistical analysis showed no statistically significant difference between the groups according to the results of pre-test (p= .935>0.05) which is higher than 0.05.

The pre-test was administered as the post-test to the same groups after the vocabulary teaching process. The aim was to compare the groups' improvement in their vocabulary knowledge. The pre-test and post-test results of the experiment and control groups were compared through paired-samples t-test. The statistical findings regarding the experiment group are presented as follows (see Table 10):

Table 10

The Comparison of Pre- and Post-test Scores of the CAVI Group

Tests	N	Means	Std. Dev.	-t-	-p-
Pre-test	26	.571	.090	40.995	.000
Post-test	26	.957	.054		

According to Table 10, the mean scores of the CAVI group's pre-test were calculated as .571 and post-test as .957. The paired-samples t-test analysis of the pre- and post-test for the CAVI group was computed as .000 at the 0.05 level of significance. This shows that there was a significant difference before and after the experiment in the CAVI group (p<0.05). In other words, the group's vocabulary knowledge increased after the experiment when we consider the mean scores.

5.3 Research Question 2

Does Vocabulary Instruction through Communicative Language Teaching have an impact on ELT freshmen's vocabulary achievement?

In order to discover whether the CLT group's target vocabulary knowledge increased after the experiment, the pre- and post-test scores of the CLT group were compared (see Table 11).

Table 11

The Comparison of Pre- and Post-test Scores of the CLT Group

Tests	N	Means	Std. Dev.	-t-	-p-
Pre-test	26	.573	.077	43.571	.000
Post-test	26	.925	.075		

As seen above, the mean scores of the CLT group was calculated as .573 for pre-test, and as .925 for post-test. The result of the analysis indicated that there was a significant difference between the pre- and post-test scores of the CLT group ($p<0.05$) in terms of their target vocabulary knowledge. That is to say, Communicative Language Teaching helped the students to develop their vocabulary knowledge.

5.4 Research Question 3

Does the Computer Assisted Instruction group learn more vocabulary than the Communicative Language Teaching group?

In order to find out whether CAVI group learned more vocabulary than the CLT group, both groups were compared according to their post-test scores. Table 12 shows the results of post-test for both groups. The mean score for the CAVI group (.957) is almost the same as the one for the CLT group (.925).

Table 12

The Comparison of Post-test Results of the CAVI and CLT Groups

Groups	N	Means	Std. Dev.	-t-	-p-
CAVI	26	.957	.054	1.799	.079
CLT	26	.925	.075		

The value of .079 ($p>0.05$) shows that there is no significant difference between the post-test scores of the experiment and control groups. Therefore, it can be said that both instruction types (CAVI and CLT) are successful in teaching vocabulary but their effects do not have any significant difference.

5.5 Research Question 4

Does the Computer Assisted Instruction group retain more vocabulary than the Communicative Language Teaching group?

5.5.1 Post-test and Delayed Post-test Difference

The vocabulary achievement test which was used as the pre- and post-test was applied to both groups five weeks after the post-test in order to test the freshmen's retention level of vocabulary taught through two different vocabulary instruction types. The statistical results regarding the comparison of post-test and delayed post-test scores of the CAVI group are displayed in the table below:

Table 13

The Comparison of Post- and Delayed Post-test Scores of the CAVI Group

Tests	N	Means	Std. Dev.	-t-	-p-
Post-test	26	.957	.054	1.742	.094
Del. Post-test	26	.936	.072		

It is clear from the table above that the mean scores of the CAVI group's post-test was calculated as .957 while delayed post-test score was .936. Although there seemed a difference between mean scores, the paired samples t-test results indicated that the significance value was .094 at the 0.05 level of significance which did not mean a statistically significant difference between the post-test and delayed post-test in the CAVI group. That is to say, computer assisted instruction seemed effective in vocabulary retention.

As for the CLT Group, the statistical results regarding the comparison of post-test and delayed post-test scores are displayed in the Table 14:

Table 14

The Comparison of Post- and Delayed Post-test Scores of the CLT Group

Tests	N	Means	Std. Dev.	-t-	-p-
Post-test	26	.925	.075	.284	.779
Del. Post-test	26	.921	.090		

According to Table 14, the mean scores of the CLT group's post-test was calculated as .925 and delayed post-test as .921. The results of the paired samples t-test analysis of the post- and delayed post-tests for the CLT group showed that the p value was .779 which was above 0.05 level of significance, and it suggested that there was not a statistically significant difference between the post-test and delayed post-test results of the CLT group in terms of retention.

When taken as a whole, it can be concluded that no statistical difference was obtained as a result of analyses. In terms of mean scores, however, both groups seemed to decrease their target vocabulary knowledge after 5 weeks following the treatment. Furthermore, the CAVI group outperformed the CLT group on the post-tests and delayed post-tests, but indeed the difference is not statistically significant enough as shown in tables above ($p > 0.05$).

The mean scores of the two groups were compared through one way analysis of variance (One Way ANOVA). In Table 15, descriptive statistics (mean scores, standard deviation, and standard error values) for the two groups are presented.

Table 15

Descriptive Statistics for the CAVI and the CLT Groups

Tests	Groups	N	Mean	Std. Dev.	Std. Error
Pre-test	CAVI	26	.571	.090	.017
	CLT	26	.573	.077	.015
Post-test	CAVI	26	.957	.054	.010
	CLT	26	.925	.075	.014
Del. Post-test	CAVI	26	.936	.072	.014
	CLT	26	.921	.090	.017

Even though the above-mentioned results indicated that there was no significant difference between the experiment and control groups in terms of their target vocabulary knowledge and retention levels, ANOVA was applied in order to see whether these results were random or not. Table 16 shows the result of ANOVA analysis:

Table 16

The Results of ANOVA

Tests		Sum of Squares	df	Mean Squares	F	p
Pre-test	Between Groups	.000	1	.000	.007	.935
	Within Groups	.357	50	.007		
	Total	.357	51			
Post-test	Between Groups	.014	1	.014	3.236	.079
	Within Groups	.215	50	.004		
	Total	.229	51			
Del. Post-test	Between Groups	.003	1	.003	.454	.503
	Within Groups	.339	50	.007		
	Total	.342	51			

The results of ANOVA analysis revealed the fact that there was no significant difference between the pre-test scores of the two groups before the experiment ($p= .935>0.05$). After the experiment, there was no significant difference between the groups in terms of vocabulary development ($p= .079 >0.05$), either. As for the retention level, the delayed post-test scores still did not show a statistically significant difference between the groups in terms of vocabulary retention ($p= .503>0.05$).

5.6. Research Question 5

What effects does gender have on the vocabulary achievement of the Computer Assisted Instruction group?

This study was also aimed at discovering whether gender played a role in the vocabulary achievement of the freshmen. In order to find out the difference in success levels between male and female students, independent samples t-test was conducted. There were 6 male and 20 female students in the CAVI group whereas there were 9 male and 17 female students in the CLT group. Firstly, the mean scores of the CAVI group in two genders were calculated. Table 17 shows the post-test mean scores and gender differences:

Table 17

The Comparison of Male and Female Students' Post-test Scores in the CAVI Group

Gender	N	Means	Std. Dev.	-t-	-p-
Male	6	.962	.058	.820	.420
Female	20	.941	.053		

According to Table 17, statistically there was no significant difference between genders in terms of vocabulary knowledge level (p=.420>0.05) of the CAVI group even though it seemed that male students were more successful than female students in post-test scores.

5.7 Research Question 6

What effects does gender have on the vocabulary achievement of the Communicative Language Teaching group?

Secondly, the mean scores of the CLT group in two genders were examined in order to determine whether gender played a role in the vocabulary achievement of the Communicative Language Teaching group (see Table 17). Another t-test was conducted to obtain results.

Table 18

The Comparison of Male and Female Students' Post-test Scores in the CLT Group

Gender	N	Means	Std. Dev.	-t-	-p-
Male	10	.895	.059	1.665	.109
Female	16	.943	.079		

Although it seemed that female students were more successful than male students in post-test of the CLT group in terms of means, the difference between genders in terms of vocabulary knowledge level was not statistically significant ($p=.109>0.05$). That is to say, gender did not have a significant impact on the vocabulary achievement of the freshmen in the CLT group.

5.8 Research Question 7

Does the vocabulary achievement of the Computer Assisted Instruction group differ depending on the frequency of computer use?

Another aim of the present study was to discover whether the frequency of computer use played a role in the vocabulary achievement of the freshmen in the CAVI group. The post-test results of the experiment group were compared in terms of the frequency of computer use through One-Way ANOVA. The statistical findings regarding the CAVI group are presented in the table below:

Table 19

Descriptive Statistics for the Frequency of Computer Use in the CAVI Group

Frequency of Computer Use	N	Mean	Std. Dev.
Daily	23	.953	.011
Once a week	1	.950	-
Once a month	2	1.000	.000
Never	-	-	-
Total	26	.957	.054

Table 19 presents the results of One-Way ANOVA analysis which was conducted in order to discover whether the frequency of computer use had a significant impact on vocabulary achievement of the freshmen in the CAVI group (see Table 19).

Table 20

The Comparison of the CAVI Group's Post-test Scores in terms of Frequency of Computer Use

Source		Sum of Squares	df	Mean Squares	F	P
Post-test	Between Groups	.004	2	.002	.644	.534
	Within Groups	.070	23	.003		
	Total	.073	25			

As seen above, statistically there was no significant difference between the CAVI group's vocabulary knowledge levels and frequency of their computer use ($p=.534>0.05$). In other words, frequency of computer use had no effect on vocabulary achievement of the freshmen who had learned vocabulary through Computer Assisted Vocabulary Instruction.

5.9 Research Question 8

Does the vocabulary achievement of the Computer Assisted Instruction group differ depending on the type of their high school?

The present study also aimed at finding out whether the freshmen's high school type affected their vocabulary achievement. In order to answer this research question, the post-test results of the experiment group were compared in terms of their high school types through One-Way ANOVA. Table 20 shows the statistical findings concerning the computer assisted vocabulary instruction group:

Table 21

Descriptive Statistics for the CAVI Group's High School Types

Type of High School	N	Mean	Std. Dev.
General High School	3	.966	.028
Super High School	-	-	-
Anatolian High School	19	.960	.061
Anatolian Teacher Training High School	4	.937	.025
Total	26	.957	.054

Table 21 presents the results of One-Way ANOVA analysis which was conducted in order to find out whether high school type had an effect on vocabulary achievement of the freshmen in the CAVI group (see Table 21).

Table 22

The Comparison of the CAVI Group's Post-test Scores in Terms of Type of High School

Source		Sum of Squares	df	Mean Squares	F	p
Post-test	Between Groups	.002	2	.001	.326	.725
	Within Groups	.071	23	.003		
	Total	.073	25			

It is clear from the table above that there is no significant statistical difference between the CAVI group's vocabulary knowledge levels and their high school types ($p=.725>0.05$). In other words, the type of high school had no significant impact on vocabulary achievement of the freshmen who had learned vocabulary through Computer Assisted Vocabulary Instruction.

5.10 Research Question 9

What are the ELT freshmen's attitudes towards Computer Assisted Language Learning?

The present study also attempted to describe ELT freshmen's attitudes towards Computer Assisted Language Learning. The participants in the CAVI group were asked to complete the CALL questionnaire after the experiment. The questionnaire included a five-point Likert attitude scale containing 27 items and aimed to measure the participants' attitudes towards CALL. In the scale, the items ranked as "Totally disagree", "Disagree", "Undecided", "Agree", and "Totally agree" were graded as 1, 2, 3, 4, and 5 respectively. The data obtained from the questionnaires were analysed descriptively using the SPSS software. Findings were interpreted on the basis of 1.00-1.79 "Totally disagree", 1.80-2.59 "Disagree", 2.60-3.39 "Undecided", 3.40-4.19 "Agree" and 4.20-5.00 "Totally agree". Table 22 shows the findings on the attitudes of the participants towards CALL:

Table 23

Frequency Tables For the Attitudes

Statements	Totally Disagree	Disagree	Undecided	Agree	Totally Agree	Mean
	%(f)	%(f)	% (f)	%(f)	%(f)	
19. Computer- assisted language learning develops my vocabulary knowledge.	-	-	-	38.5(10)	61.5(16)	4.615
6. Computer- assisted language learning gives flexibility to language learning.				53.8(14)	46.2(12)	4.461
15. Computer- assisted language learning develops my listening skills.	3.8(1)	3.8(1)	-	42.3(11)	50.0(13)	4.307
26. In a face- to- face situation (classroom) I often feel anxiety when speaking in the foreign language.	3.8(1)	7.7 (2)	-	38.5 (10)	50.0(13)	4.230
13. The feedback provided by computer gives me enough information on where I went wrong.	-	11.5(3)	-	46.2(12)	42.3(11)	4.192
12. The feedback provided by computer is clear.	-	7.7(2)	3.8 (1)	53.8(14)	34.6(9)	4.153
25. I feel less inhibited when communicating in the foreign language via computer than in face- to- face situation.	3.8(1)	3.8(1)	7.7(2)	46.2(12)	38.5(10)	4.115
24. I have faith in computer- based	-	7.7(2)	3.8(1)	65.4(17)	23.1(6)	4.038

language exercises.						
22. Teacher's proficiency of using computers in language learning largely defines my own attitude to CALL.	3.8(1)	3.8(1)	11.5(3)	46.2(12)	34.6(9)	4.038
2. Computer based language tests can never be as good as paper -and- pencil tests.	-	15.4(4)	7.7(2)	38.5(10)	38.5(10)	4.000
11. I would like to learn foreign language by computer.	-	7.7(2)	11.5(3)	53.8(14)	26.9(7)	4.000
23. I have faith in computer- based language tests.	-	7.7(2)	7.7(2)	61.5(16)	23.1(6)	4.000
3. Computer- assisted language learning is less adequate than the traditional learning.	3.8(1)	11.5(3)	11.5(3)	34.6(9)	38.5(10)	3.923
9. Computer- assisted language learning constitutes a more relaxed and stress-free atmosphere.	3.8(1)	15.4(4)	3.8(1)	38.5(10)	38.5(10)	3.923
21. Teacher's enthusiasm in CALL largely defines my own motivation.	7.7(2)	3.8(1)	7.7(2)	50.0(13)	30.8(8)	3.923
27. For me, it takes longer to start a face to face conversation than a virtual one on computers.	3.8(1)	3.8(1)	19.2(5)	42.3(11)	30.8(8)	3.923
1. Learning a foreign language assisted by computer is not as good as oral practice.	3.8(1)	-	11.5(3)	73.1(19)	11.5(3)	3.884
4. People who learn a language assisted by computer- assisted learning are less proficient than those who learn through traditional methods.	-	23.1(6)	3.8(1)	50.0(13)	23.1(6)	3.730
10. Learning a foreign language assisted by computer enhances your intelligence.	-	15.4(4)	19.2(5)	42.3(11)	23.1(6)	3,730
5. Computer- assisted language learning is a valuable extension of classical learning methods.	3.8(1)	7.7(2)	7.7(2)	76.9(20)	3.8(1)	3.692
14. Computer-assisted language learning develops my reading skills.	3.8(1)	23.1(6)	3.8(1)	50.0(13)	19.2(5)	3.576
20. Teacher's attitude towards CALL largely defines my own attitude.	11.5(3)	7.7(2)	15.4(4)	42.3(11)	23.1(6)	3.576
7. Computer- assisted language learning is as valuable as traditional language learning.	3.8(1)	23.1(6)	7.7(2)	50.0(13)	15.4(4)	3.500
16. Computer- assisted language learning develops my writing skills.	7.7(2)	26.9(7)	15.4(4)	46.2(12)	3.8(1)	3.115
18. Computer- assisted language learning develops my grammar.	3.8(1)	34.6(9)	19.2(5)	38.5(10)	3.8(1)	3.038
8. Computer- assisted language learning can stand alone.	19.2(5)	34.6(9)	7.7(2)	15.4(4)	23.1(6)	2.884
17. Computer- assisted language learning develops my speaking skills	26.9(7)	30.8(8)	23.1(6)	19.2(5)	-	2.346

Items 1, 2, 3, 4 compare studying English via computers with traditional teaching situations in the absence of computers. Items 5-11 are about computer assisted language learning only. Items 12 and 13 attempt to see the freshmen's ideas

about the feedback given by computers. Items 14-19 are a set of statements that request the freshmen's ideas about how they perceive the role of CALL in developing language skills. Items 20-22 investigate the freshmen's attitudes towards teacher's influence in CALL. Items 23 and 24 are addressed to the freshmen to evaluate their perception about computerized testing and exercises. Items 25-27 evaluate how the freshmen feel when they exhibit their language performance.

As seen in Table 22, findings show that the participants' attitudes vary in the statements in the questionnaire. All of the participants totally agree that computer assisted language learning develops their vocabulary knowledge (100%). All freshmen also think that CALL gives flexibility to language learning (100%). Most of them believe that CALL develops their listening skills (92.3%). Additionally, in a face-to-face situation (classroom), most of them (88.5%) often feel anxious when speaking in the foreign language and they state that they feel less inhibited when communicating in the foreign language via computer than in face-to-face situation (84.7%).

Most of the freshmen agree that the feedback provided by computer is clear (88.4%) and think that the feedback gives them enough information on where they went wrong (88.5%). Freshmen also have faith in computer based language exercises (88.5%) and computer based language tests (84.6%). Moreover, they believe that teacher’s proficiency of using computers in language learning largely defines their own attitudes to CALL (80.8%). According to them, teacher's enthusiasm in CALL largely defines their own motivation (80.8%). Most of the freshmen would like to learn foreign language by computer (80.7%). They regard CALL as a valuable extension of classical learning methods (80.7%). They also agree that computer assisted language learning constitutes a more relaxed and stress-free atmosphere (77%). For them, it takes longer to get into a face-to-face conversation than a virtual one on computers (73.1%). The freshmen believe that computer assisted language learning develops their reading skills (69.2%). Moreover, they think that learning a foreign language assisted by computer enhances their intelligence (65.4%). They also regard computer assisted language learning as valuable as traditional language

learning (65.4%) and agree that teacher's attitude towards CALL largely defines their own attitudes (65.4%).

Although the freshmen generally have positive attitudes towards CALL, there are also some statements that they do not agree with. For instance, they do not agree that CALL develops their speaking skills (57.7%). They do not believe that computer- assisted language learning is more adequate than the traditional learning (73.1%). For them, people who learn a language assisted by computer- assisted learning are less proficient than those who learn through traditional methods (73.1%). Lastly, they do not agree that learning a foreign language assisted by computer is as good as oral practice (84.6%).

There were also three open-ended questions in the questionnaire. The open-ended questions were decoded and item analysed through descriptive analysis method (Creswell, 2002) and findings were depicted qualitatively. The first open-ended question asked the freshmen whether they liked studying vocabulary by CAVI or not and probed the reason(s) of it. The freshmen reported the following answers (see Table 23):

Table 24

The Freshmen's Opinions on Studying Vocabulary by CAVI

Freshmen Responses	Frequency	%
It was very enjoyable	18	29.51
I felt very relaxed while learning	9	14.75
It was practical and time-saving	7	11.48
It enabled us to hear the pronunciation of the words	5	8.2
I learned vocabulary easily thanks to games	5	8.2
It developed my listening, reading, writing skills and vocabulary knowledge	5	8.2
I gave me chance to study at anytime and anywhere	4	6.56
Learning by CAVI was more effective than traditional learning	3	4.92

Learning atmosphere was interesting with computers	2	3.28
It gave flexibility to language learning	1	1.64
It gave me more enthusiasm than traditional methods	1	1.64
It helped me to learn the words permanently	1	1.64
TOTAL	61	100

It is clear from the table above that the freshmen mostly gave positive answers to the question "Did you like studying vocabulary by CAVI?" and mentioned their reasons. Despite all these positive responses, there was also one student who reported her negative impression about impression on studying vocabulary by CAVI and claimed:

> *"I didn't like reading the articles on-screen. Sometimes I got bored. Additionally, I didn't like reading the definition of the words on-screen because I cannot understand without the paper version of it."*

The second open-ended question was whether they would like to study other skills (reading, writing, listening, speaking and grammar) by CALL or not. They were also supposed to mention which skill/skills they would like to study by CALL. The answers of the freshmen are presented in the table below:

Table 25

The Freshmen's Opinions on Studying Other Language Skills by CALL

Question	Freshmen Responses	Frequency	%
Would you like to study other language skills by CALL?	Yes	26	100
	No	0	0
	Total	26	100
Which skill/skills would you like to study by CALL?	Listening	20	32.7
	Speaking	12	19.6
	Reading	10	16.3
	Writing	10	16.3
	Grammar	9	14.7
	Total	61	100

According to Table 24, all of the freshmen are eager to study other language skills by Computer Assisted Language Learning (CALL). Mostly they want to study listening skill by CALL (32.7%). Speaking follows listening skill with the percentage of 19.6. The freshmen are also enthusiastic about studying reading (16.3%), writing (16.3%) and grammar (14.7%) by CALL. The last open-ended question probed whether the freshmen had difficulty in using the software or not. They gave the following answers (see Table 25):

Table 26

The Freshmen's Opinions on the CAVI Software (Moodle)

Question	Freshmen Responses	Frequency	%
Did you have any difficulties in using the software (Moodle)?	Sometimes	6	23.2
	Rarely	3	11.5
	Never	17	65.3
	Total	26	100

According to the table, most of the freshmen did not face any difficulties in using the Moodle (65.3%). 6 freshmen claimed that they sometimes had some problems with the Moodle while 3 of them reported that they rarely ran into difficulty with using the Moodle. They mentioned that they had to wait due to the Internet connection cutting out sometimes. They also complained that the software was working slowly. Another problem the freshmen encountered was the difficulty of reading articles on-screen. They claimed that they could not concentrate on the topic for that reason.

CHAPTER VI
DISCUSSION AND CONCLUSION

6.1 Introduction

In this chapter, the problem, the design, the participants, and the procedure of the present study are summarized, the findings are discussed in the light of the literature and researches in the field and the conclusions of the study are outlined. Pedagogical implications are also discussed. Lastly, the limitations of the study and suggestions for further research are provided.

6.2 Summary of the Study

The present study made an attempt to investigate the effects of computer assisted vocabulary instruction on ELT freshmen's vocabulary learning and compared CAVI (Computer Assisted Vocabulary Instruction) with CLT (Communicative Language Teaching) in terms of vocabulary achievement. Moreover, whether the groups differ in their vocabulary gains five weeks after the application was scrutinized through a vocabulary retention test. The study also examined how the CAVI (Computer Assisted Vocabulary Instruction) group students perceived the computer assisted vocabulary instruction classes, what their feelings were about the effectiveness of these classes, and strengths and weaknesses of the classes.

Lacking random selection of participants and having treatment groups constructed from intact classes, the present study employed a quasi experimental study. While the experimental (treatment) group was treated in a different way from the control (non-treatment) group, the two groups received the same pre-, post- and delayed post-test. The pre-, post- and delayed post-test results of the two groups were compared to each other to find out any differences between groups.

The participants of the study consisted of 52 freshmen studying in the English Language Teaching Department of Balıkesir University in Balıkesir, Turkey in the spring semester of 2012-2013 academic years. All the participants were advanced learners of English. They were native speakers of Turkish aged between 18 and 24.

Necessary permissions were granted from the Ethics Committee of Dokuz Eylül University Institute of Educational Sciences and Balıkesir University before the experiment, and the participants were informed about the confidentiality of their answers, the procedure, and the involvement in the study. The study was conducted in the spring semester of 2012-2013 academic years. The intact class was taught by the researcher herself in Lexical Competence Course in the ELT Department at the Faculty of Education of Balıkesir University with the first year class. Before the experiment, the students were randomly assigned to one of the groups; Computer Assisted Vocabulary Instruction (experimental group) or Vocabulary Instruction through Communicative Language Teaching (control group) and they were given a pre-test. Following the pre-test, the two groups were taught the 20 target vocabulary by the researcher in accordance with the lesson plans developed for each group. The experiment took four weeks for both groups. All students received two class hours of instruction per week. Both groups were given the post-test immediately after the experiment. The same test was also used as the delayed post-test which was administered to the freshmen five weeks after the experiment in order to test the retention. Additionally, *The Attitudes towards CALL Questionnaire* was administered to the CAVI Group. As CAVI applications have offered a different learning experience, the aim of the questionnaire was to explore how the participants perceived the corresponding learning conditions and what they felt about the effectiveness of CALL. Furthermore, three open-ended questions were asked to CAVI group in order to explore their opinions about the applications.

The quantitative data collected from the vocabulary achievement test which was used as the pre-test before the experiment, as the post-test immediately after the experiment and as the delayed post-test 5 weeks after the post-test were analysed by SPSS 16.0 (Statistical Package for the Social Sciences) program on the computer. As

for the qualitative data, the data obtained from the questionnaires were analysed descriptively using the SPSS 16.0 (Statistical Package for the Social Sciences) software. The three open-ended questions were decoded and item analysed through descriptive analysis method (Creswell, 2002) and findings were depicted qualitatively.

6.3 Discussion

As a result of increasing popularity of technology use in education, its role in language methodology has been respected by many language teachers and a number of studies have been conducted by researchers who believe that technology use in language methodology is an important area worthy of investigation. All these studies have shed light on today's second language learning/teaching processes. Here, the present study aims to explore the effectiveness of computer assisted vocabulary instruction on vocabulary achievement. In this section, the findings of the present study are discussed by referring to the previous research mentioned in the second and the third chapters.

6.3.1 The Effectiveness of Computer Assisted Vocabulary Instruction on Vocabulary Achievement

Our first research question was whether computer assisted instruction had an impact on ELT freshmen's vocabulary achievement. Similar to the previous research (Koçak, 1997; Özdemir, 2001; Tozcu & Coady, 2004; Eşit, 2007; Nakata, 2008; Cellat, 2008; Kılıçkaya & Krajka, 2010; Lin et al., 2011; Kayaoğlu et al., 2011; Gorjian et al., 2011; Fehr et al., 2012) supporting the idea that computer assisted vocabulary instruction facilitates L2 vocabulary acquisition, the results of this study indicated that computer assisted vocabulary instruction helped ELT freshmen to improve their vocabulary knowledge ($p=.000<0.05$). Therefore, it can be suggested that the present study shows parallel results to the related literature.

6.3.2 The Effectiveness of Communicative Language Teaching on Vocabulary Achievement

The second research question of our study was whether communicative language teaching had an effect on ELT freshmen's vocabulary achievement. The results of the study included similar results to those found in earlier research (Coady & Huckin, 1997; Yaman, 2006; Xia, 2010) with respect to the context of the effectiveness of communicative language teaching on vocabulary achievement. Similar to previous findings (Coady & Huckin, 1997; Yaman, 2006; Xia, 2010) suggesting that communicative language teaching is effective in English vocabulary teaching and learning in many aspects, the findings of the present study demonstrated that communicative language teaching enabled ELT freshmen to increase their vocabulary knowledge ($p=.000<0.05$). That is to say, this study shows parallel results with the literature (Coady & Huckin, 1997; Yaman, 2006; Xia, 2010) concerning the effect of communicative language teaching on vocabulary achievement.

6.3.3 The Comparison of Computer Assisted Instruction and Communicative Language Teaching in terms of Their Effectiveness on Vocabulary Achievement

The third research question was whether the Computer Assisted Instruction group learned more vocabulary than the Communicative Language Teaching group. Previous research (Koçak, 1997; Özdemir, 2001; Tozcu & Coady, 2004; Eşit, 2007; Nakata, 2008; Cellat, 2008; Kılıçkaya & Krajka, 2010; Lin et al., 2011; Kayaoğlu et al., 2011; Gorjian et al., 2011; Fehr et al., 2012) has generally supported the idea that computer assisted vocabulary instruction facilitates L2 vocabulary acquisition. However, there are also some studies which have revealed that computer assisted vocabulary instruction is not more effective than teacher-led instruction (Tokaç, 2005; Cellat, 2008). Contrary to many studies (Koçak, 1997; Özdemir, 2001; Tozcu & Coady, 2004; Eşit, 2007; Nakata, 2008; Cellat, 2008; Kılıçkaya & Krajka, 2010; Lin et al., 2011; Kayaoğlu et al., 2011; Gorjian et al., 2011; Fehr et al., 2012) supporting computer assisted vocabulary instruction, the results of the present study showed that both instruction types (CAVI and CLT) were successful in teaching

vocabulary and their effects on vocabulary achievement did not have any significant difference (p=.079>0.05). So, it can be said that the findings of this study contradict with the previous research (Koçak, 1997; Özdemir, 2001; Tozcu & Coady, 2004; Eşit, 2007; Nakata, 2008; Cellat, 2008; kaya & Krajka, 2010; Lin et al., 2011; Kayaoğlu et al., 2011; Gorjian et al., 2011; Fehr et al., 2012) to a certain extent despite showing parallel results with those of some studies (Tokaç, 2005; Cellat, 2008).

6.3.4 The Comparison of Computer Assisted Instruction and Communicative Language Teaching in terms of Vocabulary Retention

The fourth research question was whether the Computer Assisted Instruction group retained more vocabulary than the Communicative Language Teaching group. In contrast to the results of the prior studies (Cellat 2008; Kılıçkaya & Krajka, 2010; Hulstijn et al.,1996; Chun & Plass ,1996) showing that the CAVI group learned and retained more vocabulary than teacher-led group, the results of this study indicated that there was no significant difference between the groups in terms of their vocabulary retention levels (p=.503> 0.05). Hence, it can be concluded that the result of this study contradicts the related literature (Cellat 2008; Kılıçkaya & Krajka, 2010; Hulstijn et al.,1996; Chun & Plass ,1996) regarding the effect of CAVI on vocabulary retention.

6.3.5 Gender Difference in Vocabulary Achievement of the CAVI Group

The fifth research question was whether gender played a role in vocabulary achievement of the Computer Assisted Instruction group. The results revealed that gender did not have a significant impact on the vocabulary achievement of the freshmen in the CAVI Group (p=.420>0.05). In the literature on gender effect in vocabulary learning, there are some studies (Nyikos, 1990; Lynn & Wilson, 1993; Aslan, 2009) which indicated the superiority of the females. However, Grace (2000), Jiménez & Terrazas (2008), Burgoyne, Kelly, Whiteley & Spooner (2009), and Llach & Gallego (2012) found no significant difference between females and males in

foreign language vocabulary learning. When the results of the study is compared with the findings of previously conducted studies (Nyikos, 1990; Lynn & Wilson, 1993; Grace, 2000; Jiménez & Terrazas, 2008; Aslan, 2009; Burgoyne, Kelly, Whiteley & Spooner, 2009; Llach & Gallego, 2012), it is seen that like in the studies of Grace (2000), Jiménez & Terrazas (2008), Burgoyne, Kelly, Whiteley & Spooner (2009), and Llach & Gallego (2012), the gender factor does not affect vocabulary achievement.

6.3.6 Gender Difference in Vocabulary Achievement of the CLT Group

The next research question was whether gender had an impact on vocabulary achievement of the Communicative Language Teaching group or not. The findings of the study indicated that the difference between genders in terms of vocabulary knowledge level was not statistically significant ($p=.109>0.05$). Hence, gender did not have a significant impact on the vocabulary achievement of the freshmen in the CLT group. The results of this study contradict with the previous research (Nyikos, 1990; Lynn & Wilson, 1993; Aslan, 2009) suggesting the superiority of females and show parallel results with the studies of Grace (2000), Jiménez & Terrazas (2008), Burgoyne, Kelly, Whiteley & Spooner (2009), and Llach & Gallego (2012) claiming that there are no gender differences.

6.3.7 The Effect of Frequency of Computer Use on Vocabulary Achievement

Another research question probed whether the frequency of computer use played a role in the vocabulary achievement of the freshmen in the CAVI group or not. The results showed that statistically there was no significant relationship between the CAVI group's vocabulary knowledge levels and frequency of their computer use ($p=.534>0.05$). So, frequency of computer use had no effect on vocabulary achievement of the freshmen who had learned vocabulary through Computer Assisted Vocabulary Instruction. The majority of the studies so far (Kulik & Kulik, 1987; Jurich, 1999; Osunade, Ojo & Ahisu, 2009; Sanni et al., 2009; Ogedebe, 2012) reported that there exists positive correlation between the frequency

of computer use and academic achievement. Nevertheless, the result of this study differs from the literature in this respect and reveals that there is no effect of frequency of computer use on vocabulary achievement as previously found in the studies of Muir-Herzig (2004) and Al-Jarf (2007).

6.3.8 The Effect of High School Type on Vocabulary Achievement

The present study was also aimed at finding out whether the freshmen's high school type affected their vocabulary achievement. Most of the students graduated from Anatolian High School (19) whereas there were also some students who had graduated from General High School (3) and Anatolian Teacher Training High School (3). The statistical findings demonstrated that the type of high school had no significant impact on vocabulary achievement of the freshmen who had learned vocabulary through Computer Assisted Vocabulary Instruction ($p=.725>0.05$). When the result is compared with the previously conducted studies (İskender, Beşoluk & Cengiz, 2008; Çiftçili, Derelioğlu & Gazioğlu, 2009; Gunjal, 2012), it is seen that like in the study of Gunjal (2012), there was no significant effect of school type on English vocabulary achievement of students.

6.3.9 Attitudes Towards Computer Assisted Language Learning

The last research question investigated the ELT freshmen's attitudes towards Computer Assisted Language Learning. The review of research on the students' attitudes towards CALL reveals that students were undecided about the effectiveness of CALL and they believed teachers were effective in CALL environment (Küçük, 2009). The studies of Askar, Yavuz & Köksal (1992) and Şentürk (1997), however, suggest the claim that students have positive attitudes towards the use of CALL. Students reported developments in concentration and self-evaluation while studying in a computer assisted class. They also believe that computer assisted instruction is a better and more comfortable way of learning than traditional methods. The result of this study also supports this claim. All of the participants totally agree that computer assisted language learning develops their vocabulary knowledge. All freshmen also

think that CALL gives flexibility to language learning. Most of them believe that CALL develops their listening skills (Pardo- Ballester, 2012). Most of the freshmen agree that the feedback provided by computer is clear and think that the feedback gives them enough information on where they went wrong (Ahmad et al., 1985; McDonough, 1995; Oxford and Crookall, 1990). Freshmen also have faith in computer based language exercises and computer based language tests. Moreover, they believe that teacher's proficiency of using computers in language learning largely defines their own attitudes to CALL. According to them, teacher's enthusiasm in CALL largely defines their own motivation. Most of the freshmen would like to learn foreign language by computer. They regard CALL as a valuable extension of classical learning methods. They also agree that computer assisted language learning constitutes a more relaxed and stress-free atmosphere (Brett, 1997). For them, it takes longer to get into a face-to-face conversation than a virtual one on computers. The freshmen believe that computer assisted language learning develops their reading skills (Kılıçkaya, 2007). Moreover, they think that learning a foreign language assisted by computer enhances their intelligence.

Even though the freshmen generally have positive attitudes towards CALL, there are also some ideas that they do not agree with. For example, they do not agree that CALL develops their speaking skills. They do not believe that computer-assisted language learning is more adequate than the traditional learning. For them, people who learn a language assisted by computer assisted learning are less proficient than those who learn through traditional methods. Lastly, they do not agree that learning a foreign language assisted by computer is as good as oral practice.

The freshmen responses to the open-ended questions in the scale also reveal their opinions on the effectiveness of computer assisted vocabulary instruction. They report that they like studying vocabulary by CAVI as it is very enjoyable (18), practical (7), and time-saving (7) (Warschauer & Healey, 1998). Nine of the freshmen mention that they feel very relaxed while learning by CAVI. Five of them think that CAVI enables them to hear the pronunciation of the words. For them, learning vocabulary is easy and permanent thanks to online games (5). Two of them

believe that learning atmosphere is interesting with computers and gives flexibility to language learning (Dhaif, 1989). Five of the freshmen claim that the CAVI software develops their listening, reading, writing skills and vocabulary knowledge. It gives them chance to study at anytime and anywhere (4). Moreover, the freshmen report that learning by CAVI is more effective than traditional learning (3) and gives them more enthusiasm (1). All of the freshmen (26) express that they would like to study other language skills, especially listening skill (20), by CALL. Lastly, most of them (17) mention that they do not face with any difficulties in using the CAVI software (Moodle).

6.4 Conclusions of the Study

In the light of the results of this study, some concluding remarks can be made. First of all, when the two groups were investigated within themselves, the results of the study lead us to the conclusion that both instruction groups' mean scores were found to have increased significantly, and they did not experience forgetting over time. It can be deduced that learning can certainly occur no matter what the instruction type is (Gagne, Wager, Golas, Keller, & Russell, 2005).

Secondly, it can be concluded from the study that despite receiving different instruction types, there were no significant differences between the groups in vocabulary gains. In other words, both instruction types (CAVI and CLT) were successful in teaching vocabulary and their effects on the freshmen's vocabulary achievement did not have any significant difference. This conclusion drawn from these results highlighted the significance of the fact that computer assisted instruction may not always offer better learning experience to students with respect to vocabulary learning contrary to what is believed. The teacher factor is also important and computers cannot substitute teachers (Tokaç, 2005; Cellat, 2008).

Thirdly, similar effects of the two different instruction types on students' vocabulary gains on the delayed post-test applied five weeks after the treatment can be put as the third conclusion drawn from the results of this study. Again, no

significant difference was found between the CAVI and CLT groups, which signifies the importance of the fact that both instruction types are effective in terms of retention (Oberg, 2011).

Next, the comparison of male and female students' vocabulary gains suggested that there was no significant difference between male and female students in terms of vocabulary achievement in both groups (CAVI and CLT). Hence, it can be concluded that the gender factor does not play a role in vocabulary achievement (Grace, 2000; Jiménez & Terrazas, 2008; Burgoyne, Kelly, Whiteley & Spooner, 2009; Llach & Gallego, 2012).

Another conclusion drawn from the results of this study was the fact that the frequency of computer use did not have an impact on the vocabulary achievement of the freshmen in the CAVI group (Muir-Herzig, 2004; Al-Jarf, 2007).

The present study also revealed the fact the type of high school had no significant impact on vocabulary achievement of the freshmen who had learned vocabulary through Computer Assisted Vocabulary Instruction. That is to say, the freshmen's high school type did not affect their vocabulary achievement (Gunjal, 2012).

Lastly, it can be deduced from the results of the present study that the freshmen have positive attitudes towards the use of CALL (Askar, Yavuz & Köksal, 1992; Şentürk, 1997; Kılıçkaya, 2007). According to them, studying vocabulary in a computer based environment is very enjoyable, practical and time-saving (Warschauer & Healey, 1998). Therefore, they would like to study other language skills, especially listening skill, by CALL.

6.4 Pedagogical Implications of the Study

This study intended to reveal whether computer assisted instruction is effective in vocabulary achievement of the ELT freshmen or not. Considering the findings, several pedagogical implications can be suggested.

First of all, the most important pedagogical implication is that computer assisted language learning may be a useful aid to the language methodology. Computer technologies have become so widespread in schools that their uses have expanded dramatically. This study provided evidence for facilitating effect of computer assisted instruction on freshmen's vocabulary learning. Thus, it can be recommended that language teachers use such commercially available CAVI software to enhance learners' vocabulary knowledge in a computer based environment. As CAVI programs are practical and time-saving, teachers need not waste time in preparing materials for vocabulary instruction. Moreover, CAVI provides learners with the individualized learning, autonomy and immediate feedback. The individualized learning promotes autonomy as learners can control their own learning process individually and learn at their own pace (McDonough, 1995; Oxford and Crookall, 1990). They can review what they have learned easily. CAVI provides instant feedback to each individual learner whereas it may not be possible to provide immediate feedback to each individual learner in the traditional classroom (Nikova, 2002). Interactive self-checking exercises provide learners with an opportunity to examine their output and lead them to acquire more self-confidence in learning (Lee, 2000; McGreal, 1988). CAVI software also improves students' pronunciation. In EFL environment, they are rarely exposed to foreign language input out of classroom. As CAVI software exposes students to native speaker pronunciation, it will be helpful for them to develop their pronunciation skills. Therefore, integrating CAVI in language programs is worthwhile.

Although previous research has generally supported the idea that computer assisted vocabulary instruction facilitates L2 vocabulary acquisition, there are also some studies which have revealed that computer assisted vocabulary instruction is

not more effective than other instruction types. So, it can be said that the effectiveness of the use of CALL is a highly debatable point. Contrary to many studies supporting computer assisted vocabulary instruction (Koçak, 1997; Özdemir, 2001; Tozcu & Coady, 2004; Eşit, 2007; Nakata, 2008; Cellat, 2008; Kılıçkaya & Krajka, 2010; Lin et al., 2011; Kayaoğlu et al., 2011; Gorjian et al., 2011; Fehr et al., 2012), the results of the present study showed that both instruction types (CAVI and CLT) were successful in teaching vocabulary and their effects on vocabulary achievement did not have any significant difference. In other words, both instruction types have facilitating effect on students' vocabulary learning. Here, it can be deduced that learning can certainly occur no matter what the instruction type is. Learning is a natural process that leads to changes in what learners know, what they can do, and how they behave (Gagne, Wager, Golas, Keller, & Russell 2005). As constructivism posits, the learner is in charge of his or her learning and it results from both a cognitive processing and organizing of information within the individual. The meaning must come from the individual, where they are able to take ownership of the information and organize it in a way that provides meaning and value for them (Gray, 1997). That is to say, there has been a shift in the field of educational theory- shifting away from the so called traditional method of teaching to a more alternative and student centered learning in which students cognitively and socially process new information and learning. With reference to the findings of this study, it could be recommended that teachers bear in their mind that there is not a "best" way to learn or teach a foreign language. They should be well aware of the fact that instruction types should be altered in various ways by focusing on those engaging students in meaning.

6.5 Limitations of the Study and Suggestions for Further Research

There are a number of limitations in this study. To begin with, the participants of the study were limited to 52 freshmen studying in the ELT Department of the Necatibey Education Faculty at Balikesir University. The number of the students in each group was restricted to 26 (26 from the experimental group and 26 from the control group). However, larger participant groups are better to extend the results of

the study to whole population. So, it may cause a problem in terms of generalizability. Further studies can be carried out with larger sizes so that reliability will increase.

As there was limited time for carrying out this research, the implementation period lasted only for four weeks. It would be better if the time frame of the treatment was longer. Moreover, the treatment was carried out with only one proficiency level of the students; advanced, also because of the time limitation. The results would be more generalizable if the experiment was conducted with the lower groups as well.

This study attempted to compare the effects of Computer Assisted Instruction and Communicative Language Teaching on students' vocabulary achievement and retention. Further research can investigate the effects of an integrated type of instruction (Computer Assisted Instruction & Communicative Language Teaching) by comparing it with other instruction types. Furthermore, this study investigated the effects of computer assisted instruction on vocabulary achievement. Further research can focus on determining the effectiveness of CALL on other skills (reading, writing, speaking, and listening).

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APPENDICES

Appendix A. Pre-, Post-, Delayed Post-Test

Read the sentences. Circle the answer that best matches the meaning of each bold word.

1. Bloggers often have more freedom than journalists because they are not **confined** by journalism's traditions and values.

a. limited
b. satisfied
c. clarified
d. prohibited

2. Gardening, cooking, and knitting used to be considered **menial** tasks, but are now expensive hobbies for many people.

a. boring or unskilled
b. honourable or respectable
c. useless or hopeless
d. useful or enjoyable

3. Some newspapers **acknowledge** losing sales because of the Internet, and as a result, they are creating their own websites.

a. dislike
b. agree with or admit to
c. enjoy
d. refuse

4. My sister's knitting store is **thriving** because every knitter in town buys supplies there.

a. futile
b. successful
c. unusual
d. ordinary

5. A blogger who was at the scene of an accident **relayed** first-hand reports through his blog.

a. passed on
b. invested
c. destroyed
d. separated

6. Plants have even more **vulnerability** to climate change and natural disasters than animals do because plants cannot move.

a. ability to protect oneself
b. tendency
c. resistance
d. openness to attack or damage

7. Although we know how many hours Americans work each week, we still don't know how much **leisure** time they have.

a. occupied
b. spare
c. uninterrupted
d. perfect

8. Frank Gehry likes to create **controversy**, to get people discussing his challenging, modern style of architecture.

a. fun
b. unity
c. harmony
d. disagreement

9. Some blogs aren't about a single clear subject, but are a collection of **random** thoughts.

a. belonging to other people
b. lacking a regular objective, pattern, or purpose
c. done on purpose rather than by accident
d. very strict and difficult to change

10. The Global Seed Vault will play a **crucial** role in protecting the world's food crops from weather disasters and climate change.

a. very important
b. small
c. trivial
d. new

11. A community is stronger when people care about each other and **form bonds**.

a. work together
b. play musical instruments
c. make connections
d. divorce

12. If possible, architects should design places so that visitors **encounter** a welcoming atmosphere in any public space.

a. meet with
b. hope for
c. appreciate
d. create

13. In good public places, people can **mingle**, getting to know new people if they want.

a. sit together
b. make noise
c. mix and chat
d. embrace

14. Food crops are always in danger from **devastating** diseases and natural disasters.

a. minor and easy to stop
b. extremely interesting
c. existing only in small numbers
d. extremely destructive and damaging

15. The Global Seed Vault in Norway is trying to **consolidate** many smaller collections of rare plant seeds and shoots from all over the world.

a. bring together in a single place
b. sell for a large amount of money
c. divide things into different parts
d. spread something over an area

16. There are so few members of some plant species left that they are in danger of becoming **extinct**.

a. vivid
b. overgrown
c. alive
d. gone forever

17. His teachings are of great **relevance** to modern life.

a. not important to or connected with a situation
b. inevitability
c. urgency
d. practical and especially social applicability

18. She's one of those film stars who **pop up** everywhere, on TV, in magazines, on Broadway.

a. appear unexpectedly
b. reflect on
c. shake uncontrollably
d. look down on

19. There is an added **incentive** for you to buy from our catalogue- a free gift with every purchase.

a. lack of success in doing or achieving something
b. something that encourages you to do something
c. a thing that makes somebody less likely to do something
d. an official suggestion about the best thing to do

20. The two governments have agreed to **engage in** a comprehensive dialogue to resolve the problem.

a. disregard
b. give notice to
c. get involved in
d. suffer from

Appendix B. Lesson Plans

LESSON PLAN 1- VOCABULARY INSTRUCTION THROUGH COMMUNICATIVE LANGUAGE TEACHING (CLT)

Date **:** March 12th, 2013

Location **:** Classroom

Length of class **:** 90 minutes (2 class hours)

Grade **:** Freshman

English Proficiency Level **:** Advanced

Course **:** Lexical Competence

Class Profile **:** 27 freshmen (17 females and 9 males) aged between 18 & 23.

Objectives **:** At the end of the lesson, students will be able to learn and use the new vocabulary items (*to be confined to sth, to acknowledge sth, random, to relay sth, relevance*) in real situations.

Materials **:** Board, board marker, handouts, an article by Lasica DJ entitled "Blogs and journalism need each other" (2003, *Nieman* Reports)

PROCEDURE

Warm up (15 minutes)

- The teacher tells the students why she uses the Internet, such as for sending email, and online shopping. Then she asks the students if they use the Internet for the same reasons.

- The teacher puts the students in pairs or small groups to discuss the two questions below:

1. *Why do you use the Internet?*

2. *Have you ever kept a blog or used a social networking site to tell the world what you are thinking? Why or why not?*

- The teacher calls on volunteers to share their ideas with the class. She asks questions: *What do you think is the main reason why people use the Internet? What are your favorite websites?*

Presentation (30 minutes)

- The teacher distributes an article from Harvard University's quarterly magazine for journalists, *Nieman Reports,* which considers the relationship between blogging and journalism, to the students. As the pre-reading activity, the teacher asks the students to check the statements that they think the article will support:

  - It is necessary to be a trained journalist in order to write about news.
  - Anyone can write about the news.
  - Blogs are a good way to get news and information.
  - Blogs are a bad way to get news and information.

- The teacher tells the students that they should review their answers after reading the article and she instructs the students to read the article individually and silently. The teacher also reminds the students to refer to the glossed words (*to be confined to sth, to acknowledge sth, random, to relay sth, relevance*) as they read.

- After the students read the article, the teacher writes the target word *"to be confined to sth"* on the board and asks the students to guess what they think *confined* means. She provides alternative example sentences to help them understand the word *confined.* For example, "*I couldn't go to work because I was confined to my bed with the flu", "Keep the dog confined in a suitable travelling cage", "He was confined to a wheelchair after the accident."* Then, the teacher writes the definition of the word on the board. The teacher and the students work

on the pronunciation of the word (number of syllables, stressed syllables). The teacher pronounces the word and has students repeat. She also has the students use the target word in a sentence by directing such statements as "In a society, people are confined by_____" and "In the classroom, you are confined by_____" to them.

- The teacher writes the target word *"to acknowledge sth"* on the board and asks the students to guess what they think *to acknowledge* means. She provides such alternative example sentences as *"I did not acknowledge that he had done anything wrong"* and *"The government won't even acknowledge the existence of the problem"* to help the students grasp the meaning of the word *to acknowledge.* Then, the teacher tells the students that "it is the opposite of *to refuse*" and presents the target word with the help of the antonym. Later, the teacher and the students work on the pronunciation of the word (number of syllables, stressed syllables). The teacher pronounces the word and has students repeat. She also has the students use the target word in a sentence by directing such statements as "Tarkan is widely acknowledged to be a _____" and "I (*acknowledge/do not acknowledge) the saying "Money doesn't buy happiness*" to them.

- The teacher writes the target word *"random"* on the board and asks the students to guess the meaning of *random*. In order to help them understand the word *random,* the teacher provides the example sentences *"Random numbers are generated by the computer"* and *"The names are listed in random order"*. Then, the teacher shows the students the picture below to illustrate the meaning of *random* and asks them to guess the meaning of the word.

She also tells the students that these are lottery numbers and that lottery numbers are chosen at _____". So, she ensures that all of the students understand the word *random.* Later, they work on the pronunciation of the word (number of syllables, stressed syllables). The teacher pronounces the word and has students repeat. The teacher tells the students to work in pairs, with one thinking of a random number from 1 to 10 while the other tries to guess the number.

- The teacher writes the target word *"to relay"* on the board and asks the students to guess what they think *to relay* means. In order to help the students understand the word *to relay,* she provides the example sentences *"He relayed the message to his boss"* and *"Instructions were relayed to her by phone".* Then, the teacher writes the definition of the word on the board. The teacher and the students work on the pronunciation of the word (number of syllables, stressed syllables). The teacher pronounces the word and has students repeat.

The teacher puts the students in small groups to work together and shows a Turkish daily newspaper to the classroom. A different page of the newspaper is delivered to each group. The teacher gives each group five minutes to take a close look at the headlines. Then, she calls on each group *to relay* the headlines to the class in English.

- The teacher writes the target word *"relevance"* on the board and asks the students to guess what they think *relevance* means. She provides alternative example sentences to help the students grasp the meaning of *relevance.* For example, *"What relevance does that point have to the discussion?", "His teachings are of great relevance to modern life."* Then, the teacher writes the definition of the word on the board. The teacher and the students work on the pronunciation of the word (number of syllables, stressed syllables). The teacher pronounces the word and has students repeat. Later, the teacher asks the students the question *"Does this course have relevance to your teaching career?"* and she calls on volunteers to share their ideas with the class.

Practice (30 minutes)

- As the during-reading activity, the teacher has students mark the statements about the article true (*T*) or false (*F*) and then correct the false statements.

- The teacher goes over the answers with the class and elicits corrections for the false statements.

- The teacher presents a "fill-in-the-blanks" activity. The students are expected to complete the sentences with the correct form of the words in the box.

confined	to acknowledge	to relay
random	relevance	

1. After the Germanic invasions, Celtic cultures, which in pre-Roman times had covered most of Western Europe, were _____ almost entirely to the British Isles.
2. In statistics, _____ samples are obtained either by sampling replacement from a finite population or by sampling without replacement from an infinite population.
3. Since the firm has been found negligent by the court, his claim for _____ for the accident hasn't been accepted.
4. While proving useful in many scientific fields, computers-generated knowledge, as Professor Hayes _____, is not without pitfalls.
5. By running this experiment for 20 days, hundreds of Skype calls were _____ through our controlled host.

Production (15 minutes)

- The teacher has the students play the game BINGO. She writes up 10 words (*confined, to acknowledge, random, to relay, relevance, to establish, ultimately, to disseminate, renegade, to convey*) on the board. Each student chooses any 5 of the items from the board and writes them down. The teacher then selects one of

the items at random (bits of paper in the palm of her hand) and offers synonym of the item but does not say the word itself. If a student thinks they have the word the teacher described, they tick it. When a student ticks all of their words, they shout BINGO! The first student to shout BINGO wins the game.

Homework

- For their homework, the students are to choose one of the questions below and write individually in response:

1. *Are blogs a good way to report the news? Are they better than traditional forms of reporting the news? Why or why not?*

2. *What makes someone want to blog? Would you ever blog about your events happening in your community? Why or why not?*

LESSON PLAN 2- VOCABULARY INSTRUCTION
THROUGH COMMUNICATIVE LANGUAGE TEACHING (CLT)

Date **:** March 19th, 2013
Location **:** Classroom
Length of class **:** 90 minutes (2 class hours)
Grade **:** Freshman
English Proficiency Level **:** Advanced
Course **:** Lexical Competence
Class Profile **:** 27 freshmen (17 females and 9 males) aged between 18&23.
Objectives **:** At the end of the lesson, students will be able to learn and use the new vocabulary items (*menial, thriving, incentive, leisure, to engage in sth*) in real situations.
Materials **:** Board, board marker, handouts, taboo cards, pictures, an article by Stephen J. Dubner and Steven D. Levitt entitled "Laid-Back Labor: The $140 Handmade Scarf" (May 6, 2007, *The New York Times*)

PROCEDURE

Warm up (15 minutes)

- The teacher asks the students what they like to do in their free time. The teacher also asks them what else they have to do which they don't find fun. She calls on volunteers to share their ideas with the class.

- The teacher puts the students in pairs or small groups to discuss the two questions below:

1. *What do you do for fun? Are your leisure activities the same as your parents' or grandparents' were at your age?*

2. *Can you think of a job that you would find fun? What would make work fun?*

- The teacher calls on volunteers to share their ideas with the class. Then she focuses the students' attention on the pictures. She asks the students to look at the pictures and to describe the activities in the pictures as fun or work. She models answering the first item by asking the students if they think the activity is work or fun.

- The teacher directs the students to complete the activity individually. Then she puts the students into small groups to share their opinions. She asks a representative from each group to report on one activity they disagreed about.

Presentation (30 minutes)

- The teacher distributes an article from the column "Freakonomics" in *The New York Times Magazine*, which talks about how to define work and fun, to the students. As the pre-reading activity, the teacher asks the students the question *"Do you think people work more now than in the past?"* and reminds them to think about their definition of *work* before answering the preview question.

- The teacher tells the students that they should review their answers after reading the article and she instructs the students to read the article individually and silently. The teacher also reminds the students to refer to the glossed words (*menial, thriving, incentive, leisure, to engage in sth*) as they read.

- After the students read the article, the teacher writes the target word "menial" on the board and asks the students to guess what they think *menial* means. She provides such alternative example sentences as *"It is fairly menial work, such as washing dishes and cleaning floors"* and *"Rather than take a low-paying menial job, she turned to the apprentice system"* to help the students understand the word *menial.* Then, the teacher uses collocations of the *menial* such as *a menial job, a menial task, menial work* to present the word. So, the teacher helps the students

learn the target word in collocations. The teacher and the students work on the pronunciation of the word (number of syllables, stressed syllables). The teacher pronounces the word and has students repeat. Later, the teacher asks the students to give an example of menial jobs such as cleaning floors, dog walking and answering the phone.

- The teacher writes the target word *"thriving"* on the board and asks the students to guess what they think the word means. In order to help them understand the word *thriving*, the teacher provides the example sentences *"A thriving industry"* and *"The town has become a thriving business center"*. Then, the teacher tells the students that "it is the synonymous with *flourishing*" and presents the target word through the use of synonym. The teacher and the students work on the pronunciation of the word (number of syllables, stressed syllables). The teacher pronounces the word and has students repeat. In order for students to learn the word, the teacher has the students use the target word in a sentence by directing such statements as "_____ is a thriving industry in Turkey" and "In my opinion, _____ has become a thriving brand of smart phone recently."

- The teacher writes the target word *"incentive"* on the board and asks the students to guess what they think the word means. She provides such alternative example sentences as *"Bonus payments provide an incentive to work harder"* and *"This gives pupils a strong incentive to read in English"*. Then, the teacher writes the definition of the word on the board. The teacher and the students work on the pronunciation of the word (number of syllables, stressed syllables). The teacher pronounces the word and has students repeat.

The teacher asks the students the question "What are the *incentives* for you to choose to become an English teacher?" She calls on volunteers to share their ideas with the class.

- The teacher writes the target word *"leisure"* on the board and asks the students to guess what the word means. She provides alternative example sentences to help

them understand the word *leisure.* For example, "*Most people only have a limited amount of leisure time", "The town lacks leisure facilities such as swimming pool or squash courts".* The teacher tells the students that it is the synonymous with *free time* and *spare time* and presents the target word through the use of synonym. The teacher and the students work on the pronunciation of the word (number of syllables, stressed syllables). The teacher pronounces the word and has students repeat. The teacher also has the students use the target word in a sentence by directing such statements as "My favorite leisure time activities are _____ "and "I spend my leisure time *(outdoors/indoors)* "to them.

- The teacher writes the target word *"to engage in sth"* on the board and asks the students to guess what *menial* means. She also provides alternative example sentences to help the students understand the word *to engage in sth.* For example, *"Eventually they engage in a true courtship dance.", "The two governments have agreed to engage in a comprehensive dialog to resolve the problem."* Then, the teacher writes the definition of the word on the board. The teacher and the students work on the pronunciation of the word (number of syllables, stressed syllables). The teacher pronounces the word and has students repeat.

The teacher asks the students the question "Have you ever actively engaged in any student communities such as theatre club, musical society or sports club?" She calls on volunteers to share their ideas with the class.

Practice (30 minutes)

- As the during-reading activity, the teacher has the students mark the statements about the article true (*T*) or false (*F*) and then correct the false statements.

- The teacher goes over the answers with the class and elicits corrections for the false statements.

- The teacher distributes a handout which includes a paragraph and two charts, to the class. She has the students work individually to summarize the various people's definitions of *leisure* in the right columns of the charts. The teacher tells the students they will need to refer to the article they have read at the beginning of the course to complete the chart I below. The teacher calls on volunteers to share their answers.

CHART I

What is the definition of *leisure*?	
Levitt and Dubner	
Ramey and Francis	

- The teacher has the students read the paragraph that she has distributed and then asks the students to complete Chart II. She has the students work individually to summarize the various authors' opinions in the right column of Chart II. She calls on volunteers to share their answers.

CHART II

Do Americans have more *leisure* time now than in the past?	
Ramey and Francis's opinion	
Aguiar and Hurst's opinion	
The author's opinion	

- The teacher presents a "fill-in-the-blanks" activity. The students are expected to complete the sentences with the correct form of the words in the box.

to engage in sth	menial	thriving
leisure	incentive	

1. Although the average education level of the women in the United States is higher than that of their male counterparts, they are highly concentrated in underpaid and _____ jobs.

2. The Roman city of Pompeii in A.D. 79 was a _____ provincial centre, a few miles from the Bay of Naples, with a population of between 10,000 and 20,000 people.

3. There is no _____ for young people to do well at school because there aren't any jobs when they leave.

4. Today the United States, still by far the most prosperous country in the world, is increasing its working hours instead of creating a more positive balance between work and _____ time.

5. Despite dramatic increases in trade worldwide, countries still differ substantially in the extent to which they _____ trade.

Production (15 minutes)

- The teacher has the students play the game TABOO. She puts the students in five teams. In the game, the players must get their team to guess a given word, but each word comes with related vocabulary that cannot be used in the description. The key in this game is to think of another way to give the clues on the taboo card. Players do this by using similar but not the same vocabulary. The teacher limits the description to four or five sentences. If a team can guess the word from the clues that are provided, the writer scores a point. For this game, the teacher chooses the words that the class has just studied during the course. The target words are *menial*, *thriving*, *incentive*, *leisure*, *to engage in sth*, *boom*, *labor*, *consensus*, *respectively*, *the odds*, *the going rate*, *to be embedded in sth*, *tricky*, *firmly*, *substitute for sb. /sth*.

Homework

- For their homework, the students are to choose one of the questions below and write individually in response:

1. *Think about the activities you do in your daily life. Which would you pay someone else to do for you if you could? Why?*

2. *Choose a leisure activity and write a persuasive paragraph arguing why it should or should not be considered work.*

LESSON PLAN 3- VOCABULARY INSTRUCTION
THROUGH COMMUNICATIVE LANGUAGE TEACHING (CLT)

Date **:** March 26th, 2013
Location **:** Classroom
Length of class **:** 90 minutes (2 class hours)
Grade **:** Freshman
English Proficiency Level **:** Advanced
Course **:** Lexical Competence
Class Profile **:** 27 freshmen (17 females and 9 males) aged between 18 & 23.
Objectives **:** At the end of the lesson, students will be able to learn and use the new vocabulary items (*vulnerability, devastating, to be crucial to/for sth, to consolidate, extinct*) in real situations.
Materials **:** Board, board marker, handouts, a photo, an article by Elisabeth Rosenthal entitled "In Norway, Global Seed Vault Guards Genetic Resources" (February 28, 2008, *The New York Times*)

PROCEDURE

Warm up (15 minutes)

- The teacher asks the students what countries they have visited or lived in and makes a list on the board.

- The teacher puts the students in pairs or small groups to discuss the two questions below:

1. *Have you ever worked with someone from another country? What were the benefits of cooperating with this person?*

2. *What issues or problems in your country do other countries also have? How do they affect you personally? Would cooperating with other countries help solve these problems?*

- The teacher calls on volunteers to share their ideas with the class. Then she focuses the students' attention on the photo. She asks the students to look at the photo and has a volunteer describe the photo to the class. She also asks the students why they think all of these people from different countries are working together and then she elicits the students' answer.

Presentation (30 minutes)

- The teacher distributes an article from *The New York Times Magazine*, which reports on the world's response to the dangers threatening the genetic diversity of the world's food supply, to the students. As the pre-reading activity, the teacher asks the students the question *"What do you think might cause plants to become extinct?"* and she has the students work in pairs to write three possible reasons plants could become extinct. The teacher writes some of the students' ideas on board for review after the reading.

- The teacher instructs the students to read the article individually and silently. The teacher also reminds the students to refer to the glossed words (*vulnerability, devastating, to be crucial to/for sth, to consolidate sth, extinct*) as they read.

- After the students read the article, the teacher writes the target word "vulnerability" on the board and asks the students to guess what *vulnerability* means. She provides alternative example sentences to help them understand the word *vulnerability*. For example, "*The extreme vulnerability of old people to crime", "The earthquake highlighted the vulnerability of elevated highways", "Old people are particularly vulnerable to the flu"*. Then, the teacher writes the definition of the word on the board. The teacher and the students work on the pronunciation of the word (number of syllables, stressed syllables). The teacher

pronounces the word and has students repeat. She also has the students use the target word in a sentence by directing such statements as "The vulnerability of newborn babies to _____ "and "Nowadays women are especially vulnerable to _____ "to them.

- The teacher writes the target word *"devastating"* on the board and asks the students to guess the meaning of it. She provides such alternative example sentences as *"He heard the devastating news that his father was dead"* and *"She was injured in a devastating explosion"* to help the students understand the word *devastating.* Later, the teacher tells the students that it is the synonymous with *disastrous* and presents the target word through the use of synonym. The teacher and the students work on the pronunciation of the word (number of syllables, stressed syllables). The teacher pronounces the word and has students repeat. Then the teacher asks the students the question "What is the most *devastating* news that you have heard recently? She calls on volunteers to share their ideas with the class.

- The teacher writes the next target word *"to be crucial to/for sth"* on the board and asks the students to guess the meaning of it. In order to help them understand the meaning of the word, the teacher provides the example sentences *"The talks are crucial for the success of the plan"* and *"Her work has been crucial to the project's success".* Then, the teacher tells the students that "it is the opposite of *unimportant*" and presents the target word with the help of the antonym. Later, the teacher and the students work on the pronunciation of the word (number of syllables, stressed syllables). The teacher pronounces the word and has students repeat.

The teacher asks the students the question "Does motivation play a *crucial role* in language acquisition? Why or Why not?" She calls on volunteers to share their ideas with the class.

- The teacher writes the target word *"to consolidate"* on the board and asks the students to guess the meaning of it. She provides such alternative example sentences as *"The two companies consolidated for greater efficiency"* and *"All the debts have been consolidated"* to help the students understand the word *to consolidate.* Then, she writes the definition of the word on the board. The teacher and the students work on the pronunciation of the word (number of syllables, stressed syllables). The teacher pronounces the word and has students repeat.

The teacher reads a paragraph on global warming aloud and then asks the students what they can do for slowing down global warming. First, the teacher directs the students to work individually to list two or three ideas and then she tells the students that they should *consolidate* for greater efficiency. So, they are divided into groups of five to brainstorm solutions to this problem and compare their lists in order to generate more ideas. The teacher calls on groups to share their best ideas.

- The teacher writes the target word *"extinct"* on the board and asks the students to guess the meaning of it. The teacher also provides alternative example sentences to help the students understand the word *extinct.* For example, *"There is concern that the giant panda will soon become extinct", "A lot of trades have become extinct because of the development of technology."* Then, the teacher shows the students the picture below illustrating the meaning of *extinct* and asks them what they see in the picture.

The teacher tells the students that "dinosaurs lived million years ago but they are now *extinct*". Later, the teacher and the students work on the pronunciation of the word

(number of syllables, stressed syllables). The teacher pronounces the word and has students repeat.

She also has the students use the target word in a sentence by directing such statements as "_____ are now almost extinct in modern society" and "_____ is in danger of becoming extinct" to them.

Practice (30 minutes)

- As the during-reading activity, the teacher directs the students to match the details with the countries. She encourages the students to scan the article for the names of the countries to find the information they need.

Countries	
___**1.** Norway	___**6.** the United States
___**2.** Belgium	___**7.** Afghanistan
___**3.** France	___**8.** the Philippines
___**4.** Mexico	___**9.** the United Kingdom
___**5.** Nigeria	___**10.** Ireland

Details

a. This country is the location of the Global Seed Vault.
b. This country was the location of a potato famine in the 19th century.
c. This nation donated $20 million to the Global Seed Vault.
d. Ninety-four percent of peas are no longer grown here.
e. Scientists in this country are searching the world for banana samples and preserving their shoots.
f. A typhoon hit a seed bank here, destroying many samples.
g. Scientists in this country are searching for and preserving coffee plant samples.
h. Labs here banked cassava.
i. Seed banks in this country were destroyed in conflicts.
j. Labs here banked corn species.

- The teacher has the students compare answers with a partner and goes over the answers with the class.

- The teacher presents a "fill-in-the-blanks" activity. The students are expected to complete the sentences with the correct form of the words in the box.

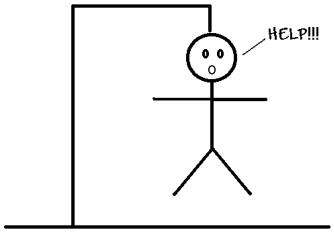
vulnerability	devastating	crucial
to consolidate	extinct	

1. It is estimated that one fourth of all bird species will become _____ within the next two centuries.
2. The most _____ human impact on environments can be seen on islands to which settlers have introduced new animals and plants.
3. In the short term, ministers are planning to _____ the one-off special payments into the basic pension.
4. In art history, primitivism is a notion _____ 20th-century art and modern thinking rather than a specific movement or group of artists.
5. The suicide attacks have heightened concern about the _____ of maritime traffic to terrorist attacks.

Production (15 minutes)

- The teacher has the students play the game HANGMAN. In this game, one student comes to the board and draws horizontal lines, one for each letter that his word has. He also writes the definition of the word on the board. Then the other students have to guess which letters are used in the word. If a letter is used, the student at the blackboard writes it down; if not, he draws the gallows and hangman as indicated in the picture below (one line for each wrong letter). If he can finish his hangman before the other students have guessed his word, he has won. The other students can guess the whole word as soon as they think they know it. For each wrong guess, however, another line is drawn. The student who

guesses the right word is the next one to come to the blackboard and think of the next word. For this game, the teacher chooses the game words among the ones that the class has just studied during the course. The target words are *vulnerability, devastating, crucial, consolidate, extinct, inevitable, urgency, erosion, conserve, confronting.*



Homework

- For their homework, the students are to choose one of the questions below and write individually in response:

1. *Does your home country have any unique plants or crops that aren't found anywhere else? Do you feel they should be preserved in the Global Seed Vault? Why or Why not?*

2. *Do you think the scientists and governments in the article on the Global Seed Vault will be successful in preserving seeds and shoots from around the world? What are the consequences for humanity if the Global Seed Vault project is not successful?*

LESSON PLAN 4- VOCABULARY INSTRUCTION
THROUGH COMMUNICATIVE LANGUAGE TEACHING (CLT)

Date **:** April 2nd, 2013

Location **:** Classroom

Length of class **:** 90 minutes (2 class hours)

Grade **:** Freshman

English Proficiency Level **:** Advanced

Course **:** Lexical Competence

Class Profile **:** 27 freshmen (17 females and 9 males) aged between 18 and 23.

Objectives **:** At the end of the lesson, students will be able to learn and use the new vocabulary items *(to mingle, to form bonds, controversy, to encounter sth/sb, to pop up)* in real situations.

Materials **:** Board, board marker, handouts, a photo, a questionnaire, an article from the magazine *The Economist* entitled "The New Oases"

PROCEDURE

Warm up (15 minutes)

- The teacher asks the students what public places they spend time in (for example, parks, libraries, banks, or malls). She elicits examples of public places and writes the students' ideas on the board.

- The teacher puts the students in pairs or small groups to discuss the two questions below:

1. *Does your hometown have many public places you can walk to? What are they?*

2. *What public place do you like best? Why? If there is a public place you never visit, why not?*

- The teacher calls on volunteers to share their ideas with the class.

- The teacher distributes a questionnaire to the students. She reads the directions aloud: "If you were designing a new library for your town or school, how important would each feature be? Complete the questionnaire. Circle the number that best corresponds to your opinion, from 1 (Not at All Important) to 5 (Very Important)." The teacher has the students complete the questionnaire individually.

- The teacher puts the students in small groups and instructs them to discuss their answers to the questionnaire and compare their three most important features. She encourages the students to arrive at a consensus about the most important features. Then the teacher calls on a volunteer from each group to present their top three features to the class.

Presentation (30 minutes)

- The teacher distributes an article from the magazine *The Economist*, which describes a change in the design of public places to fit new "nomadic lifestyles", to the students. As the pre-reading activity, the teacher directs the students' attention to the photograph of the Stata Center at the Massachusetts Institute of Technology (MIT), a university in the U.S. and asks the students what they think people do in this building. The teacher has the students write three predictions. She tells the students they should review their predictions after reading.

- The teacher instructs the students to read the article individually and silently. The teacher also reminds the students to refer to the glossed words (*to mingle, to form bonds, controversy, to encounter sb/sth, to pop up*) as they read.

- After the students read the article, the teacher writes the target word "*to mingle"* on the board and asks the students to guess what *to mingle* means. She provides such alternative example sentences as *"The prince mingled freely with the crowd"* and *"If you will excuse me, I must go and mingle"* to help the students understand the meaning of the word. The teacher builds a situation to illustrate the word *"to mingle"* by making use of mime and gesture. She acts as if she is in a party and moves among the students (guests) and talk to them. So, the teacher ensures that the students grasp the meaning of the word in the quickest way. Later, the teacher and the students work on the pronunciation of the word (number of syllables, stressed syllables). The teacher pronounces the word and has students repeat. Then the teacher asks the students the question "Have you ever mingled with different people in a party?" and calls on volunteers to share their ideas with the class.

- The teacher writes the next target word "*to form bonds"* on the board and asks the students to guess what it means. In order to help the students grasp the meaning of the word, the teacher provides the example sentences *"Do mice form bonds with owners?"* and *"Atoms form bonds with each other"*. Then, the teacher writes the definition of the word on the board. The teacher and the students work on the pronunciation of the word (number of syllables, stressed syllables). The teacher pronounces the word and has students repeat. She also has the students use the target word in a sentence by directing such statements as "I have formed bonds with my _____ and "and "Mothers who are depressed sometimes fail to form bond with their _____ "to them.

- The teacher writes the word *"controversy"* on the board and asks the students to guess what it means. She provides such alternative example sentences as "*Controversy exists as to how safe these drugs are", "This is a subject that*

always causes controversy" and "Her latest book has aroused a lot of controversy." In order to enable the students to understand the meaning of the word. Then, the teacher writes the definition of the word on the board. The teacher and the students work on the pronunciation of the word (number of syllables, stressed syllables). The teacher pronounces the word and has students repeat. She also has the students use the target word in a sentence by directing the statement "In Turkey, there has been a lot of controversy over _____" to them.

- The teacher writes the word *"to encounter sb/sth"* on the board and asks the students to guess what the word means. In order to help them understand the word, she provides the example sentences *"We encountered a number of difficulties in the first week"* and *"On their way home they encountered a woman selling flowers"*. Later, the teacher tells the students that it is the synonymous with *to meet with* and presents the target word through the use of synonym. The teacher and the students work on the pronunciation of the word (number of syllables, stressed syllables). The teacher pronounces the word and has students repeat.

The teacher has the students choose the best public place that they have *encountered* and they know well to write about. Some examples of public places are cafés, restaurants, parks, sports stadiums, public buildings at a university or the downtown area of their city. The teacher has the students list descriptions of the place, its design, the people who use it, and the activities that happen there in their notebook individually. She also instructs the students to evaluate their chosen public place using their own criteria. She has the students make a chart to evaluate the place. The students will write a list of criteria that make the public place appealing in the first column and they will explain why their place does (not) meet those criteria in the second column. For example,

PUBLIC PLACE: Starbucks	
CRITERIA	**EVALUATION + REASONS**
Easy to meet with others	**YES:** well-maintained tables with three or four comfortable chairs
Easy to find cheaper beverages	**NO:** very expensive

- The teacher writes the last target word *"to pop up"* on the board and asks the students to guess what it means. She also provides alternative example sentences to help the students grasp the word *to pop up.* For example, *"The notification 'Your computer is at risk' popped up on the screen", "Madonna pops up everywhere, on TV, in magazines, on Broadway"* Then, the teacher writes the definition of the word on the board. The teacher and the students work on the pronunciation of the word (number of syllables, stressed syllables). The teacher pronounces the word and has students repeat. The teacher asks the students to write about an event that *popped up* in their life and changed it for the better. She calls on volunteers to share their ideas with the class.

Practice (30 minutes)

- As the during-reading activity, the teacher directs the students to circle the correct answers to the questions related to the article:

1. Why does the "student street" in the Stata Center have twists and curves?

a. only for artistic value
b. because there are no landline telephones
c. to create controversy and something to discuss
d. to create space that is comfortable for different uses

2. According to Oldenburg's definition, which is a third place?

a. a bookstore that holds free weekly discussion groups for local residents
b. a coffee shop with Internet access
c. a suburban shopping mall
d. a museum that charges people to attend public lectures

3. What can you infer from Reading 1 about people who live in the suburbs?

a. They work longer hours than other people.
b. They don't have much contact with other people outside work.
c. They dislike shopping in urban centers.
d. They do not have access to coffee shops.

4. What is causing the shift to multifunctional districts, according to the last paragraph of the article?

a. third places
b. the Internet
c. modern architecture
d. changes in lifestyle

- The teacher goes over the answers with the class.

- The teacher presents a "fill-in-the-blanks" activity. The students are expected to complete the sentences with the correct form of the words in the box.

to mingle	controversy	to form bonds
to encounter sth	to pop up	

1. She was, he says, the most violent woman he had _____ in 13 years as an officer.

2. A police officer _____ out of nowhere and ordered us to halt.

3. The government proposal to test 14-year-olds has been causing _____ in the staffroom.

4. You have been talking to Roger all evening - you really ought to _____ with the other guests.

5. In 1912, chemists discovered that sugars and amino acids _____ tight chemical _____ at oven temperatures.

Production (15 minutes)

- The teacher has the students play the game WORD GUESSING. In this game, the teacher divides the class into two groups and has the students pick their team captains who will be standing in front of them. The idea is that the teacher writes the target word on the board and the students except the team captains may get to see the target word. The team captains must guess the word the teacher writes through collecting information from their team members. Whoever answers first and correctly gets a point. For this game, the teacher chooses the game words among the ones that the class has just studied during the course. The target words are *to mingle, nomadic, to form bonds, controversy, to encounter sth, intentionally, to pop up, decline, specialized,* and *neutral.*

Homework

- For their homework, the students are to choose one of the questions below and write individually in response:

1. *Do you think third places differ from country to country? What are some examples of third places in your country that might not exist elsewhere?*

2. *Do you accept the idea in the article that technology can have an alienating effect? Do you like the ideas that the café owner had to encourage people to mingle more? Explain the reasons for your opinion.*

LESSON PLAN 1- COMPUTER ASSISTED VOCABULARY INSTRUCTION (CAVI)

Date **:** March 12th, 2013

Location **:** Computer Lab

Length of class **:** 90 minutes (2 class hours)

Grade **:** Freshman

English Proficiency Level **:** Advanced

Course **:** Lexical Competence

Class Profile **:** 26 freshmen (20 females and 6 males) aged between 18 & 24.

Objectives **:** At the end of the lesson, students will be able to learn and use the new vocabulary items (*to be confined to sth, to acknowledge sth, random, to relay sth, relevance*) in real situations.

Materials **:** Computers (computer for each student), a moodle (a free source e-learning software platform with features and activities designed to engage learners), and an article by Lasica DJ entitled "Blogs and journalism need each other" (2003, *Nieman* Reports)

PROCEDURE

Warm up (15 minutes)

- The teacher tells the students why she uses the Internet, such as for sending email. Then she asks the students if they use the Internet for the same reasons.

- The teacher puts the students in pairs or small groups to discuss the two questions below:

1. *Why do you use the Internet?*

2. *Have you ever kept a blog or used a social networking site to tell the world what you are thinking? Why or why not?*

- The teacher calls on volunteers to share their ideas with the class. She asks questions: *What do you think is the main reason why people use the Internet? What are your favorite websites?*

Presentation (30 minutes)

- The teacher ensures each student has a computer and the Internet access. She also ensures each student connects to the moodle "www.elt-moodle.com". The teacher asks the students to open the moodle that was previously designed by the teacher. The moodle consists of an article from Harvard University's quarterly magazine for journalists, *Nieman Reports*, which considers the relationship between blogging and journalism, a pre-reading activity, a post-reading true-false activity, a game, and a crossword puzzle.

- The teacher tells the students they have five minutes to carry out the pre-reading activity in a computer based environment. As the pre-reading activity, the teacher asks the students to check the statements that they think the article will support:

  - It is necessary to be a trained journalist in order to write about news.
  - Anyone can write about the news.
  - Blogs are a good way to get news and information.
  - Blogs are a bad way to get news and information.

- The teacher tells the students that they should review their answers after reading the article and she instructs the students to read the article that exists in the moodle individually and silently. The teacher also reminds the students to refer to the glossed words (to be confined to sth, to acknowledge sth, random, to relay sth, relevance) as they read. She tells the students that they can see the definition of the word, hear the pronunciation of it, and see the word in a sentence example when they click on a glossed word. For this activity, the teacher gives the students 25 minutes.

- Meanwhile, the teacher circulates around the classroom monitoring the students' progress.

Practice (45 minutes)

- As the post-reading activity, the teacher has the students mark the statements about the article true (*T*) or false (*F*) and then correct the false statements. Five minutes are allotted to this activity. The students are given computer-based immediate feedback on their response to the statements.

- The teacher tells the students they have ten minutes to carry out "fill-in-the-blanks" activity that exists in the moodle. The students are expected to complete the sentences with the correct form of the words in the box. The students are given computer-based immediate feedback on their answers.

confined	to acknowledge	to relay
random	relevance	

1. After the Germanic invasions, Celtic cultures, which in pre-Roman times had covered most of Western Europe, were _____ almost entirely to the British Isles.

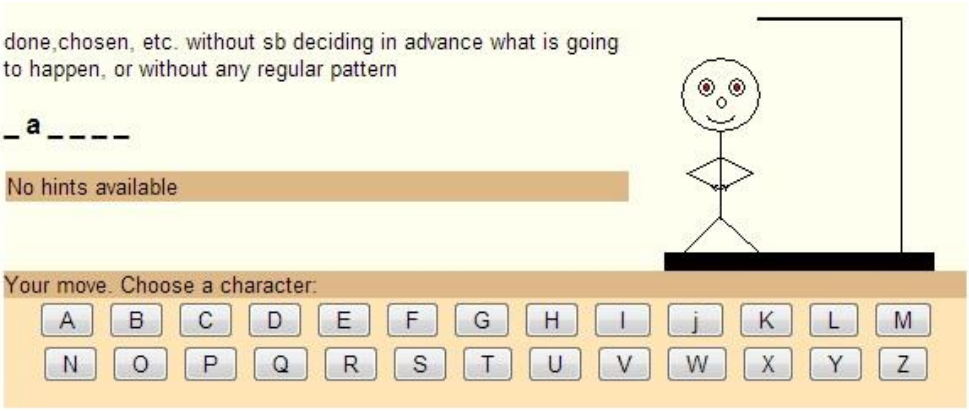
2. In statistics, _____ samples are obtained either by sampling replacement from a finite population or by sampling without replacement from an infinite population.

3. Since the firm has been found negligent by the court, his claim for _____ for the accident hasn't been accepted.

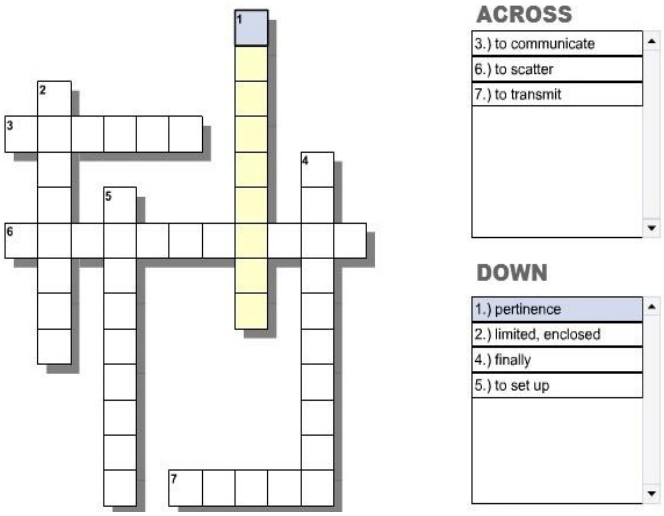
4. While proving useful in many scientific fields, computers-generated knowledge, as Professor Hayes _____, is not without pitfalls.

5. By running this experiment for 20 days, hundreds of Skype calls were _____ through our controlled host.

- The teacher gives the students 15 minutes to play the game Hangman online. The game which has been designed by the teacher includes 10 words (*to be confined to sth, to acknowledge sth, random, to relay sth, relevance, to establish sth, ultimately, to disseminate sth, renegade, and to convey sth*). Each student will try to guess a word from the definition given and to fill in the blanks. Each incorrect guess will bring the student closer to being "*hanged*".



- The teacher instructs the students to play the online crossword puzzle game designed by the teacher beforehand. The students are to fill in each space using the clues (synonyms) on the right-hand. For this game, the teacher gives the students 15 minutes.



- During the aforementioned activities, the teacher circulates around the classroom monitoring the students' progress.

Homework

- For their homework, the students are to choose one of the questions below and write individually in response. They are to write down their thoughts and to submit their homework through moodle.

1. *Are blogs a good way to report the news? Are they better than traditional forms of reporting the news? Why or why not?*

2. *What makes someone want to blog? Would you ever blog about your events happening in your community? Why or why not?*

LESSON PLAN 2- COMPUTER ASSISTED VOCABULARY INSTRUCTION (CAVI)

Date **:** March 19th, 2013

Location **:** Computer Lab

Length of class **:** 90 minutes (2 class hours**)**

Grade **:** Freshman

English Proficiency Level **:** Advanced

Course **:** Lexical Competence

Class Profile **:** 26 freshmen (20 females and 6 males) aged between 18 & 24.

Objectives **:** At the end of the lesson, students will be able to learn and use the new vocabulary items (*menial, thriving, incentive, leisure, to engage in sth*) in real situations.

Materials **:** Computers (computer for each student), a moodle (a free source e-learning software platform with features and activities designed to engage learners), and an article by Stephen J. Dubner and Steven D. Levitt entitled "Laid-Back Labor: The $140 Handmade Scarf" (May 6, 2007, *The New York Times*)

PROCEDURE

Warm up (15 minutes)

- The teacher asks the students what they like to do in their free time. The teacher also asks them what else they have to do which they don't find fun. She calls on volunteers to share their ideas with the class.

- The teacher puts the students in pairs or small groups to discuss the two questions below:

1. *What do you do for fun? Are your leisure activities the same as your parents' or grandparents' were at your age?*

2. *Can you think of a job that you would find fun? What would make work fun?*

- The teacher calls on volunteers to share their ideas with the class.

Presentation (30 minutes)

- The teacher ensures each student has a computer and the Internet access. She also ensures each student connects to the moodle "www.elt-moodle.com". The teacher asks the students to open the moodle that was previously designed by the teacher. The moodle consists of an article from *The New York Times,* which talks about how to define work and fun, to the students, a pre-reading activity, a post-reading activity, and a game and a word search puzzle.

- The teacher tells the students they have five minutes to carry out the pre-reading activity that exists in the moodle. As the pre-reading activity, the teacher asks the students the question *"Do you think people work more now than in the past?"* and reminds them to think about their definition of *work* before answering the preview question.

- The teacher tells the students that they should review their answers after reading the article and she instructs the students to read the article that exists in the moodle individually and silently. The teacher also reminds the students to refer to the glossed words (*menial, thriving, incentive, leisure, to engage in sth*) as they read. She tells the students that they can see the definition of the word, hear the pronunciation of it, and see the word in a sentence example when they click on a glossed word. For this activity, the teacher gives the students 25 minutes.

- Meanwhile, the teacher circulates around the classroom monitoring the students' progress.

Practice (45 minutes)

- As the post-reading activity, the teacher has students mark the statements about the article true (*T*) or false (*F*) and then correct the false statements. Five minutes are allotted to this activity. The students are given computer-based immediate feedback on their response to the statements.

- The teacher tells the students they have ten minutes to carry out "fill-in-the-blanks" activity that exists in the moodle. The students are expected to complete the sentences with the correct form of the words in the box. The students are given computer-based immediate feedback on their answers.

to engage in sth	menial	thriving
leisure	incentive	

1. Although the average education level of the women in the United States is higher than that of their male counterparts, they are highly concentrated in underpaid and _____ jobs.

2. The Roman city of Pompeii in A.D. 79 was a _____ provincial centre, a few miles from the Bay of Naples, with a population of between 10,000 and 20,000 people.

3. There is no _____ for young people to do well at school because there aren't any jobs when they leave.

4. Today the United States, still by far the most prosperous country in the world, is increasing its working hours instead of creating a more positive balance between work and _____ time.

5. Despite dramatic increases in trade worldwide, countries still differ substantially in the extent to which they _____ trade.

- The teacher gives the students 15 minutes to play the game WORD SEARCH online. The game which has been designed by the teacher includes 10 words

(menial, thriving, incentive, engage, leisure, boom, consensus, firmly, labor, tricky). In this play, the target words run horizontally, vertically, diagonally and even backwards. The students will drag to select words and try to find the words as fast as possible to win.

- The teacher instructs the students to play the online audio word match game designed by the teacher beforehand. The students are to find the matching pairs with as few turns as possible. For this game, the teacher gives the students 15 minutes.

- During the aforementioned activities, the teacher circulates around the classroom monitoring the students' progress.

Homework

- For their homework, the students are to choose one of the questions below and write individually in response. They are to write down their thoughts and to submit their homework through moodle.

1. *Think about the activities you do in your daily life. Which would you pay someone else to do for you if you could? Why?*

2. *Choose a leisure activity and write a persuasive essay arguing why it should or should not be considered work.*

LESSON PLAN 3- COMPUTER ASSISTED VOCABULARY INSTRUCTION (CAVI)

Date **:** March 26th, 2013

Location **:** Computer Lab

Length of class **:** 90 minutes (2 class hours)

Grade **:** Freshman

English Proficiency Level **:** Advanced

Course **:** Lexical Competence

Class Profile **:** 26 freshmen (20 females and 6 males) aged between 18 & 24.

Objectives **:** At the end of the lesson, students will be able to learn and use the new vocabulary items (*vulnerability, devastating, to be crucial to/for sth, to consolidate sth, extinct*) in real situations.

Materials **:** Board, computers (computer for each student), a moodle (a free source e-learning software platform with features and activities designed to engage learners), a photo, an article by Elisabeth Rosenthal entitled "In Norway, Global Seed Vault Guards Genetic Resources" (February 28, 2008, *The New York Times*)

PROCEDURE

Warm up (15 minutes)

- The teacher asks the students what countries they have visited or lived in and makes a list on the board.

- The teacher puts the students in pairs or small groups to discuss the two questions below:

1. *Have you ever worked with someone from another country? What were the benefits of cooperating with this person?*

2. *What issues or problems in your country do other countries also have? How do they affect you personally? Would cooperating with other countries help solve these problems?*

- The teacher calls on volunteers to share their ideas with the class.

Presentation (30 minutes)

- The teacher ensures each student has a computer and the Internet access. She also ensures each student connects to the moodle "www.elt-moodle.com". The teacher asks the students to open the moodle that was previously designed by the teacher. The moodle consists of an article from *The New York Times Magazine,* which reports on the world's response to the dangers threatening the genetic diversity of the world's food supply, a pre-reading activity, a post-reading activity, a game, and a crossword puzzle.

- The teacher tells the students they have five minutes to carry out the pre-reading activity in a computer based environment. As the pre-reading activity, the teacher asks the students the question *"What do you think might cause plants to become extinct?"*

- The teacher tells the students that they should review their answers after reading the article and she instructs the students to read the article that exists in the moodle individually and silently. The teacher also reminds the students to refer to the glossed words (*vulnerability, devastating, to be crucial to/for sth, to consolidate sth, extinct*) as they read. She tells the students that they can see the definition of the word, hear the pronunciation of it, and see the word in a sentence example when they click on a glossed word. For this activity, the teacher gives the students 25 minutes.

- Meanwhile, the teacher circulates around the classroom monitoring the students' progress.

Practice (45 minutes)

- As the during-reading activity, the teacher directs the students to match the details with the countries. She encourages the students to scan the article for the names of the countries to find the information they need. Ten minutes are allotted to this activity. The students are given computer-based immediate feedback on their answers.

Countries

___1. Norway
___2. Belgium
___3. France
___4. Mexico
___5. Nigeria
___6. the United States
___7. Afghanistan
___8. the Philippines
___9. the United Kingdom
___10. Ireland

Details

a. This country is the location of the Global Seed Vault.
b. This country was the location of a potato famine in the 19th century.
c. This nation donated $20 million to the Global Seed Vault.
d. Ninety-four percent of peas are no longer grown here.
e. Scientists in this country are searching the world for banana samples and preserving their shoots.
f. A typhoon hit a seed bank here, destroying many samples.
g. Scientists in this country are searching for and preserving coffee plant samples.
h. Labs here banked cassava.
i. Seed banks in this country were destroyed in conflicts.
j. Labs here banked corn species.

- The teacher tells the students they have ten minutes to carry out "fill-in-the-blanks" activity that exists in the moodle. The students are expected to complete the sentences with the correct form of the words in the box. The students are given computer-based immediate feedback on their answers.

vulnerability	devastating	crucial
to consolidate	extinct	

1. It is estimated that one fourth of all bird species will become _____ within the next two centuries.

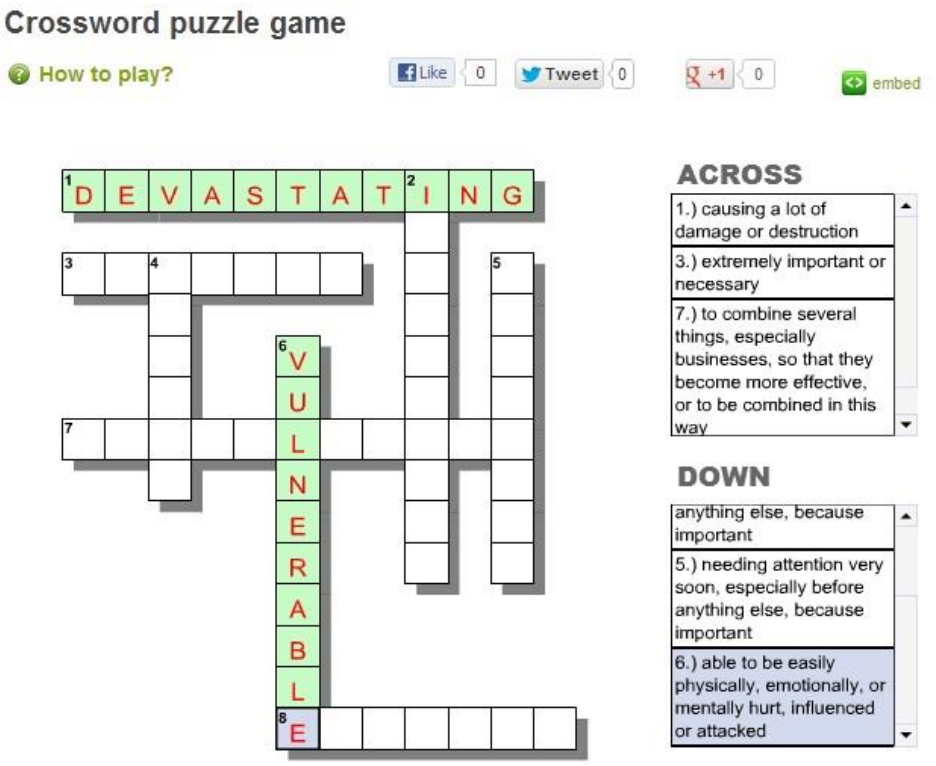
2. The most _____ human impact on environments can be seen on islands to which settlers have introduced new animals and plants.

3. In the short term, ministers are planning to _____ the one-off special payments into the basic pension.

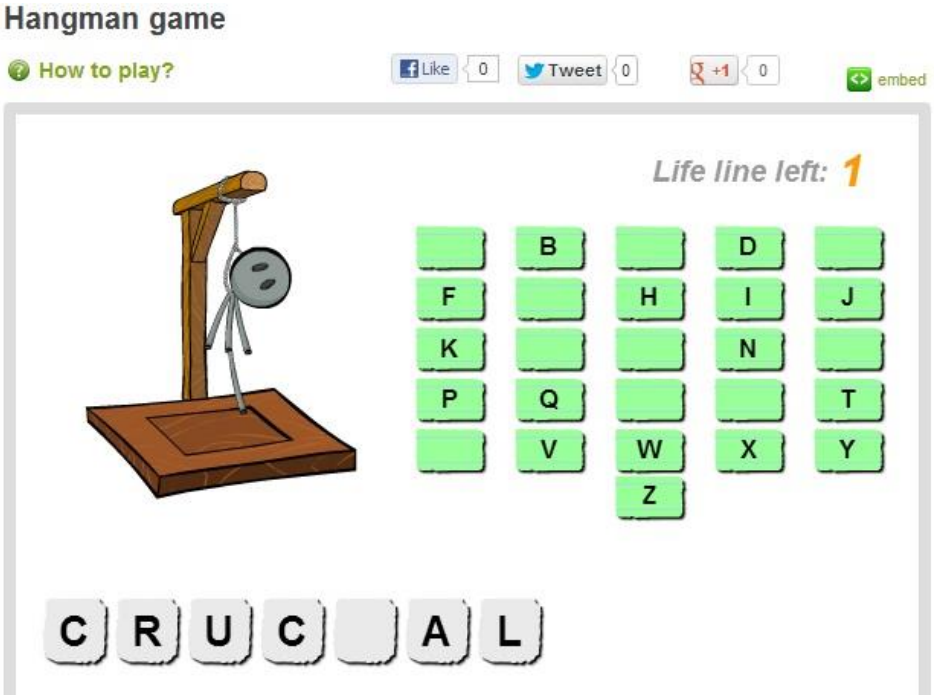
4. In art history, primitivism is a notion _____ to 20th-century art and modern thinking rather than a specific movement or group of artists.

5. The suicide attacks have heightened concern about the _____ of maritime traffic to terrorist attacks.

- The teacher instructs the students to play the online crossword puzzle game designed by the teacher beforehand. The students are to fill in each space using the clues (definitions) on the right-hand. For this game, the teacher gives the students 15 minutes. The game which has been designed by the teacher includes 10 words (*vulnerable, devastating, crucial, consolidate, extinct, inevitable, urgent, erosion, conserve, confronting*).



- The teacher gives the students 10 minutes to play the game Hangman online. Each student will click on the letters in the upper box to guess if letter is in the word. Each incorrect guess will bring the student closer to being "*hanged*".



- During the aforementioned activities, the teacher circulates around the classroom monitoring the students' progress.

Homework

- For their homework, the students are to choose one of the questions below and write individually in response. They are to write down their thoughts and to submit their homework through moodle.

1. *Does your home country have any unique plants or crops that aren't found anywhere else? Do you feel they should be preserved in the Global Seed Vault? Why or Why not?*

2. *Do you think the scientists and governments in the article on the Global Seed Vault will be successful in preserving seeds and shoots from around the world? What are the consequences for humanity if the Global Seed Vault project is not successful?*

LESSON PLAN 4- COMPUTER ASSISTED VOCABULARY INSTRUCTION (CAVI)

Date **:** April 2nd, 2013

Location **:** Computer Lab

Length of class **:** 90 minutes (2 class hours)

Grade **:** Freshman

English Proficiency Level **:** Advanced

Course **:** Lexical Competence

Class Profile **:** 26 freshmen (20 females and 6 males) aged between 18 & 24.

Objectives **:** At the end of the lesson, students will be able to learn and use the new vocabulary items *(to mingle, to form bonds, controversy, to encounter sth, to pop up)* in real situations.

Materials **:** Board, computers (computer for each student), a moodle (a free source e-learning software platform with features and activities designed to engage learners), a photo, and an article from the magazine *The Economist* entitled "The New Oases"

PROCEDURE

Warm up (15 minutes)

- The teacher asks the students what public places they spend time in (for example, parks, libraries, banks, or malls). She elicits examples of public places and writes the students' ideas on the board.

- The teacher puts the students in pairs or small groups to discuss the two questions below:

1. *Does your hometown have many public places you can walk to? What are they?*

2. *What public place do you like best? Why? If there is a public place you never visit, why not?*

Presentation (30 minutes)

- The teacher ensures each student has a computer and the Internet access. She also ensures each student connects to the moodle “www.elt-moodle.com”. The teacher asks the students to open the moodle that was previously designed by the teacher. The moodle consists of an article from the magazine *The Economist* entitled "The New Oases" which describes a change in the design of public places to fit new "nomadic lifestyles", a pre-reading activity, a post-reading activity, a game, and a word search puzzle.

- The teacher tells the students they have five minutes to carry out the pre-reading activity in a computer based environment. As the pre-reading activity, the students are to look at a photograph of the Stata Center at the Massachusetts Institute of Technology (MIT), a university in the U.S. and write three predictions about what people do in that building.

- The teacher tells the students that they should review their answers after reading the article and she instructs the students to read the article that exists in the moodle individually and silently. The teacher also reminds the students to refer to the glossed words (*to mingle, to form bonds, controversy, to encounter sth, to pop up*) as they read. She tells the students that they can see the definition of the word, hear the pronunciation of it, and see the word in a sentence example when they click on a glossed word. For this activity, the teacher gives the students 25 minutes.

- Meanwhile, the teacher circulates around the classroom monitoring the students' progress.

Practice (45 minutes)

- As the during-reading activity, the teacher directs the students to circle the correct answers to the questions related to the article in the moodle. Ten minutes are allotted to this activity. The students are given computer-based immediate feedback on their answers.

1. Why does the "student street" in the Stata Center have twists and curves?
a. only for artistic value
b. because there are no landline telephones
c. to create controversy and something to discuss
d. to create space that is comfortable for different uses

2. According to Oldenburg's definition, which is a third place?
a. a bookstore that holds free weekly discussion groups for local residents
b. a coffee shop with Internet access
c. a suburban shopping mall
d. a museum that charges people to attend public lectures

3. What can you infer from the article "The New Oases" about people who live in the suburbs?
a. They work longer hours than other people.
b. They don't have much contact with other people outside work.
c. They dislike shopping in urban centers.
d. They do not have access to coffee shops.

4. What is causing the shift to multifunctional districts, according to the last paragraph of the article?
a. third places
b. the Internet
c. modern architecture
d. changes in lifestyle

- The teacher tells the students they have ten minutes to carry out "fill-in-the-blanks" activity that exists in the moodle. The students are expected to complete the sentences with the correct form of the words in the box. The students are given computer-based immediate feedback on their answers.

to mingle	controversy	to form bonds
to encounter sth	to pop up	

1. She was, he says, the most violent woman he had _____ in 13 years as an officer.

2. A police officer _____ out of nowhere and ordered us to halt.

3. The government proposal to test 14-year-olds has been causing _____ in the staffroom.

4. You have been talking to Roger all evening - you really ought to _____ with the other guests.

5. In 1912, chemists discovered that sugars and amino acids _____ tight chemical _____ at oven temperatures.

- The teacher gives the students 10 minutes to play the word scramble game online. The students are to click and drag on the letters and then drop them into the position they think the letters should be in to unscramble the word. They can click on the hint button and see the definition of the word if they need. If they get 5 attempts wrong, the game is over. The target words are *to mingle, to form bonds, controversy, to encounter sth, to pop up*, and *decline.*

- The teacher gives the students 15 minutes to play the game WORD SEARCH online. The game which has been designed by the teacher includes 10 words (*to mingle*, *decline*, *to encounter*, *controversy*, *nomadic*, *neutral*, and *specialized*). In this play, the target words run horizontally, vertically, diagonally and even backwards. The students will drag to select words and try to find the words as fast as possible to win.

- During the aforementioned activities, the teacher circulates around the classroom monitoring the students' progress.

Homework

- For their homework, the students are to choose one of the questions below and write individually in response. They are to write down their thoughts and to submit their homework through moodle.

1. *Do you think third places differ from country to country? What are some examples of third places in your country that might not exist elsewhere?*

2. *Do you accept the idea in the article that technology can have an alienating effect? Do you like the ideas that the café owner had to encourage people to mingle more? Explain the reasons for your opinion.*

Appendix C. Questionnaire

THE ATTITUDE TOWARDS COMPUTER ASSISTED LANGUAGE LEARNING QUESTIONNAIRE

SECTION I: PERSONAL INFORMATION

Please tick (√) the appropriate choices and provide the necessary information below.

Name:

Class:

Gender: □ Male □ Female

Age:

Type of High School: □ General High School □ Super High School

□ Anatolian High School □ Anatolian Teacher Training High School

Do you have a computer?

□ Yes □ No

How long have you been using computers?

□ 1-3 years □ 4-6 years □ 7-9 years □ More than 9 years

How often do you use the Internet?

□ Daily □ Once a week □ Once a month □ Never

SECTION II: THE ATTITUDE TOWARDS COMPUTER ASSISTED LANGUAGE LEARNING (CALL) QUESTIONNAIRE

Through this questionnaire, we would like to know how your attitude is towards Computer Assisted Language Learning (CALL). Please read each statement carefully and indicate the extent to which you agree with the following statements. Please mark your response by circling the number to the right of each statement ranging from 1 (totally disagree) to 5 (totally agree).

	Totally disagree	**Disagree**	**Undecided**	**Agree**	**Totally agree**
1- Learning a foreign language assisted by computer is as good as oral practice.	1	2	3	4	5
2- Computer based language tests are as good as paper-and- pencil tests.	1	2	3	4	5
3- Computer- assisted language learning is more adequate than the traditional learning.	1	2	3	4	5
4- People who learn a language assisted by computer- assisted learning are more proficient than those who learn through traditional methods.	1	2	3	4	5

	Totally disagree	Disagree	Undecided	Agree	Totally Agree
5- Computer- assisted language learning is a valuable extension of classical learning methods.	1	2	3	4	5
6- Computer- assisted language learning gives flexibility to language learning.	1	2	3	4	5
7- Computer- assisted language learning is as valuable as traditional language learning.	1	2	3	4	5
8- Computer- assisted language learning can stand alone.	1	2	3	4	5
9- Computer- assisted language learning constitutes a more relaxed and stress-free atmosphere.	1	2	3	4	5
10- Learning a foreign language assisted by computer enhances your intelligence.	1	2	3	4	5
11- I would like to learn foreign language by computer.	1	2	3	4	5
12- The feedback provided by computer is clear.	1	2	3	4	5
13- The feedback provided by computer gives me enough information on where I went wrong.	1	2	3	4	5
14- Computer- assisted language learning develops my reading skills.	1	2	3	4	5
15- Computer- assisted language learning develops my listening skills.	1	2	3	4	5
16- Computer- assisted language learning develops my writing skills.	1	2	3	4	5
17- Computer- assisted language learning develops my speaking skills.	1	2	3	4	5
18- Computer- assisted language learning develops my grammar.	1	2	3	4	5
19- Computer- assisted language learning develops my vocabulary knowledge.	1	2	3	4	5
20- Teacher's attitude towards CALL largely defines my own attitude.	1	2	3	4	5
21- Teacher's enthusiasm in CALL largely defines my own motivation.	1	2	3	4	5
22- Teacher's proficiency of using computers in language learning largely defines my own attitude to CALL.	1	2	3	4	5
23- I have faith in computer- based language tests.	1	2	3	4	5
24- I have faith in computer- based language exercises.	1	2	3	4	5
25- I feel less inhibited when communicating in the foreign language via computer than in face- to- face situation.	1	2	3	4	5
26- In a face- to- face situation (classroom) I often feel anxiety when speaking in the foreign language.	1	2	3	4	5
27- For me, it takes longer to start a face to face conversation than a virtual one on computers.	1	2	3	4	5

SECTION III: OPEN-ENDED QUESTIONS

Please answer the questions below.

28. Did you like studying vocabulary by CAVI (Computer Assisted Vocabulary Instruction)? Why or why not? Explain your reasons.

29. Would you like to study other language skills (reading, writing, listening, speaking & grammar) by CALL (Computer Language Learning)? If yes, which skill/skills?

30. Did you have any difficulties in using the software (moodle)? If yes, what were the problems?

Appendix D. The Ethical Approval of the Study by the Ethics Committee of Dokuz Eylül University Institute of Educational Sciences

T.C.
DOKUZ EYLÜL ÜNİVERSİTESİ
EĞİTİM BİLİMLERİ ENSTİTÜSÜ MÜDÜRLÜĞÜ
ETİK KURULU KARARI

TOPLANTI TARİHİ : 17/12/2012
TOPLANTI SAYISI : 20

KARAR-3-:
Yabancı Diller Eğitimi Anabilim Dalı İngilizce Öğretmenliği Yüksek Lisans Programında Doç.Dr.Fatma Feryal ÇUBUKÇU danışmanlığında 2011950117 numaralı öğrencisi Tutku BAŞÖZ'ün tezi kapsamında gerçekleştireceği uygulamalara yönelik 04/12/2012 tarihli dilekçesi ve ekleri görüşüldü.

Yapılan görüşmeler sonucunda,
Yabancı Diller Eğitimi Anabilim Dalı İngilizce Öğretmenliği Yüksek Lisans Programında Doç.Dr.Fatma Feryal ÇUBUKÇU danışmanlığında 2011950117 numaralı öğrencisi Tutku BAŞÖZ'ün *The Effectiveness of Computer-Assisted Instruction on Vocabulary Achievement (Bilgisayar Destekli Öğretimin Sözcük Başarısına Etkisi)* konulu tez çalışması kapsamında yapmak istediği uygulamaların etik açıdan uygunluğuna, oy birliği ile karar verildi.

31.12.2012
Doç.Dr.Ali Günay BALIM

Prof.Dr.Teoman İsmail KESERCİOĞLU
(BAŞKAN)

Yrd.Doç.Dr.İrfan YURDABAKAN
(ÜYE)

Doç.Dr.Ali Günay BALIM
(ÜYE)

Yrd.Doç.Dr.Emine HALIÇINARLI
(ÜYE)

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