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VOCABULARY LEARNING STRATEGY USE, VOCABULARY SIZE AND LEXICAL THRESHOLD

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KELİME ÖĞRENME STRATEJİLERİ KULLANIMI, KELİME HAZİNESİ BÜYÜKLÜĞÜ VE KELİME BİLGİSİ EŞİK SEVİYESİ

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KELİME ÖĞRENME STRATEJİLERİ KULLANIMI,
KELİME HAZİNESİ BÜYÜKLÜĞÜ VE KELİME BİLGİSİ EŞİK SEVİYESİ

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ÖZET

Kelime bilgisinin Yabancı Dil olarak İngilizce (YDİ) öğrenim ve öğretimindeki beceri ve dil bileşenlerinin merkezinde olduğunun kabul edilmesi hızla gelişen Kelime Öğrenme Stratejileri (KÖS) araştırma koluna öncülük etmiştir. Araştırma odakları arasında kıyaslanabilir sonuçlarını değerlendiren özgün KÖS öğretimi, KÖS tercihlerinin kazanımlara etkisi, kelime hazinesi büyüklüğü (KHB), kelime bilgisi eşik seviyesi (KBES), KÖS kullanımının öğrenci kaynaklı değişkenlerle ilişkisi ve KÖS öğretimi yer almıştır. Mevcut çalışma birçok araştırma odağını bir araya getirerek, öğrencilerin KÖS öğrenimine dair geçmiş deneyimlerini, kullanım sıklığına dayalı olarak KÖS tercihlerini, kullanım sıklığının KÖS öğretimine dair deneyimleriyle, temel ölçütü KBES olan KHB ve cinsiyetle ilişkisini, kullanım sıklığının KHB üzerine etkisini ve öğrencilerin KÖS öğretiminin Yabancı Dil olarak İngilizce öğretimine bütünleştirilmesi üzerine fikirlerini yansıtmayı hedeflemektedir. Bu çalışma 2013-2014 öğretim yılında Erciyes Üniversitesi İngiliz Dili ve Edebiyatı Bölümünde beş farklı seviyede okuyan 149 Türk YDİ öğrencisiyle yürütülmüştür. Veriler KÖS Anketi ve KHB Testi ile toplanmıştır ve SPSS 22.00 kullanılarak betimsel ve yordayıcı istatistik tekniklerle analiz edilmiştir. Sonuçlar öğrencilerin KÖS öğretimine dair geçmiş deneyimlerinin sınırlı olduğunu, en sık kullandıkları strateji kategorisi ve özgün stratejinin sırasıyla belirleme kategorisi ve bağlamdan tahmin etme stratejisi olan orta seviye strateji kullanıcıları olduklarını, KÖS kullanım sıklığının cinsiyete göre anlamlı bir farklılık gösterdiğini ancak KÖS öğretimine dair geçmiş deneyimlere ve KHB'ne göre farklılık göstermediğini, KÖS kullanım sıklığının KHB üzerine bir etkisi olmadığını ve öğrencilerin KÖS öğretiminin YDİ öğretimine bütünleştirilmesi üzerine olumlu düşünceler taşıdıklarını ortaya koymuştur.

Anahtar Kelimeler: Kelime Öğrenme Stratejileri, Kelime Hazinesi Büyüklüğü, Kelime Bilgisi Eşik Seviyesi, Kelime Öğrenme Stratejisi Öğretimi, Cinsiyet

VOCABULARY LEARNING STRATEGY USE, VOCABULARY SIZE AND LEXICAL THRESHOLD

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ABSTRACT

Vocabulary has been acknowledged to be at the centre of the skills and components in EFL learning and teaching, ushering in a proliferating line of research in Vocabulary Learning Strategies (VLS). Various research interests have focused on teaching particular VLS to see their comparable outcomes, on how VLS preferences affect learning outcomes, on vocabulary size (VS), on lexical threshold (LT), on how the use of VLS correlated with learner variables and on explicit VLS instruction. This study aimed to combine several research interests to reflect the learners' prior experiences of learning VLS through explicit instruction, their preferences in VLS based on the frequency of use, their frequency of VLS use in relation to prior experiences of learning VLS through explicit instruction, VS benchmarked by LT, and gender, the effect of the frequency of VLS use on VS, and their ideas about the integration of explicit VLS instruction in EFL classrooms. The study was carried out during 2013-2014 academic year with 149 Turkish EFL learners studying at five different grade levels at Erciyes University English Language and Literature Department. The data were collected through VLS Questionnaire and the Vocabulary Size Test, and analysed by descriptive and interpretive statistics using the SPSS 22.00. The results revealed that the learners had limited experience of learning VLS through explicit instruction, they were medium VLS users whose most frequently used category and particular VLS were respectively determination strategies and guessing from context, the frequency of VLS use differed significantly according to gender but did not according to the prior experiences of learning VLS through explicit instruction and VS, the frequency of VLS use had no effect on VS, and the learners had positive ideas about the integration of explicit VLS instruction in EFL classrooms.

Key Words: Vocabulary Learning Strategies, Vocabulary Size, Lexical Threshold, VLS Instruction, Gender

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LIST OF ABBREVIATIONS

AWL : Academic Word List

EFL : English as a Foreign Language

ELL : English Language and Literature

ESL : English as a Second Language

EVST : Eurocentres Vocabulary Size Test

GSL : General Service List of English Words

LLS : Language Learning Strategy/Strategies

VLS : Vocabulary Learning Strategy/Strategies

VS : Vocabulary Size

VST : Vocabulary Size Test

VLT : Vocabulary levels Test

VLSQ : Vocabulary Learning Strategies Questionnaire

L1 : First Language

L2 : Target language

LT : Lexical Threshold

SILL : Strategy Inventory of Language Learning

CALLA : The Cognitive Academic Language learning Approach

CATSS : Computer Adaptive Test of Size and Strength

SBI : Strategy-Based Instruction

SSBI : Styles- and Strategy-Based Instruction

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CHAPTER 1

INTRODUCTION

1.0 Introduction

This chapter of the study presents the background to the study, the statement of the problem, the purpose of the study, research questions and the significance of the study.

1.1 Background of the Study

The central importance of vocabulary as a language component in second and foreign language learning contexts has finally been established as a result of accumulating research over the past four decades. After many years of neglect by applied linguists in favour of grammar, vocabulary began to be given a fair share by the 1970s thanks to the definitive attention directed by Richards (1976) to the role of vocabulary.

The growing interest in vocabulary brought with it the need to define what vocabulary is (Lewis, 1993, 1997, 2008), to list what knowing a word entails (Richards, 1976; Nation, 1990), to classify what types of vocabulary knowledge there are such as partial / precise (Schmitt, 2000), breadth / depth (Anderson & Freebody, 1979) and receptive / productive (Nation. 1990), and to understand where the words that are learned are stored, namely the mental lexicon (Aitchison, 1987) and how the words are learned, i.e. the process during which vocabulary learning strategies are used (Ahmed, 1989; Gu & Johnson, 1996; Nation, 2001; Sanaoui, 1995; Schmitt, 1997).

The selection of what to teach and learn in the limited time of instruction was another concern among teachers, learners and researchers alike, which gave rise to word frequency count studies, where word frequency was considered the most important among several other features of a word (Schmitt, 2000). Frequency information was then used by Nation (1983; 1990) to form vocabulary levels of high frequency, academic, technical, and low frequency words, which were meant to guide both the

programme planners and teachers in their efforts to plan programmes, select the vocabulary content and decide how to teach it, and the students to understand the relative importance of those vocabulary levels and how best to learn the vocabulary using the given suggestions and vocabulary learning strategies. Vocabulary levels provided both the teaching and the learning parties with insights into how much time to spend on different levels of vocabulary and what teaching and learning strategies to use for efficient instruction and utmost gain (Nation, 1990).

Word frequency was also evidenced to be well-linked with lexical text coverage – the percentage of the words a learner understands in a text – that is, words of high frequency appear far more often in texts than low frequency words, which means that high frequency words deserve explicit intentional focus both on the part of the learner and the teacher in class time as they provide the most return in terms of lexical text coverage (Nation, 1993). Lexical text coverage, in turn, was apparently found to be enhanced by degrees depending on the increasing vocabulary sizes (VS hereafter) of different learners (Meara, 1996), who need varying VS for various tasks in the L2 (Nation & Beglar, 2007).

One of the most primary tasks in any L2 has been the receptive skill of reading, whose facilitation through VS received a great deal of rigorous scrutiny among researchers as well as its effect on the growth of VS , with the general agreement on the fact that reading comprehension and vocabulary knowledge are strongly connected (Blachowics & Fisher, 2004; Grabe and Stoller, 1997; Hu and Nation, 2000; Hulstijn, Hollander & Greidanus, 1996; Laufer, 1992; Laufer & Ravenhorst-Kalovski, 2010; Nation, 1993, 2001, 2006; Nation & Coady, 1988; Nation & Waring, 1997; Milton, 2009; Schmitt, 2000, 2010a; Wesche & Paribakht , 1994; 2000).

It seemed to be clear, then, that the size of a learner's overall vocabulary affects the lexical text coverage for which high frequency, mid-frequency and low frequency words are very critical, with varying degrees though, which in turn, determines how much of the text the learner is likely to successfully comprehend. At that point, there arose a need to know how to assess learners' VS, for which the unit of counting was chosen as the *word family* by Nation, whose VS assessment tests, Vocabulary Levels Test (VLT hereafter) (1983, 1990) and Vocabulary Size Test (VST hereafter) (Nation & Beglar, 2007), have been the most widely used ones among researchers.

After it was possible to extrapolate how large overall receptive VS learners have, the next research enquiry was to determine the minimum VS at or beyond which successful comprehension is highly likely; namely, the lexical threshold (LT hereafter) for unassisted comprehension (Hirsh & Nation, 1992; Hsueh-Chao & Nation, 2000; Laufer, 1989;1992; Laufer & Ravenhorst-Kalovski, 2010; Nation, 1990; 2001; 2006) and the resulting minimal LT was a vocabulary size of 4,000-5,000 with 95% coverage and the optimal LT was 8,000-9,000 word families with 98% coverage (Laufer & Ravenhorst-Kalovski, 2010; Nation & Beglar, 2007).

In order for second and foreign language learners to build a vocabulary of any size, there have been two distinctively different approaches to learning and teaching of vocabulary: incidental, i.e. context only approach, and intentional, i.e. explicit focus in classroom activities (Coady, 1997), which, after some time of being considered as dichotomous and as if an either / or choice, have come to be regarded as complementary ends of a continuum that could be used in combination (Gu, 2003a; Nation, 2001; Sökmen, 1997).

Either incidental or intentional or at best both, the task of learning vocabulary has always overwhelmed students (Meara, 1980; Thornbury, 2007; Gu, 1994). Being one of the most challenging tasks, where lack of words is seen as an obstacle (Nation, 1998), vocabulary is considered an incrementally improving aspect of language learning over time (Schmitt, 2000), rather than instantaneous. The following student complaints of having problems with vocabulary clearly explains how frustrated learners may feel:

> - Oral is my weakness and I can't speak a fluent sentence in English. Sometimes I am lack of useful vocabularies to express my opinions.
> - My problem is that I forget the words soon after I have looked in the dictionary. For example when I read a English book.
> - I would like to improve my vocabulary. I have the feeling that I always use the same idiomatic expressions to express different sort of things.
> - I'd like to enlarge my vocabulary (this word I also had to find in dictionary). Too often my speaking is hard caused by missing words. (Thornbury, 2007, p. 13)

In order to help learners in their hard work of learning words, committing them to memory, recognizing them in text, recalling them when needed for oral or written production, and gradually accumulating words to have increasingly larger VS to be able to carry out various L2 tasks, "learner endeavours" (Schmitt, 1997, p. 199), which have come to be called strategies with a focus on learner autonomy (McCarthy, 1990; Nation, 1998) were introduced in the teaching and learning of vocabulary. Vocabulary Learning

Strategies (VLS hereafter) appeared as a subset of the more general Language Learning Strategies (LLS hereafter), a great many of which were, in fact, VLS (Takac, 2008).

LLS led the way to a more systematized line of research in VLS that proliferated after the 1990s. The research in the area of VLS took two directions. The first orientation was to adopt an experimental design to instruct a group of learners in one or two particular VLS and compare their gains in vocabulary with those of a control group and mostly researched VLS were the keyword method (Brown & Perry, 1991), dictionary use (Laufer & Kimmel, 1997), guessing meaning from contexts (Clarke & Nation, 1980) among several others. The second approach was to look at VLS from a wider perspective and explore them as a whole. Among the second group, the line of researchers with considerable contribution to VLS research were Ahmed (1989), Sanaoui (1995), Stoffer (1995, cited in Schmitt, 1997), Gu and Johnson (1996), Lawson and Hogben (1996), Schmitt (1997), Kudo (1999), Kojik-Sabo and Lightbown (1999), Hatch and Brown (1995) and Nation (2001).

Several studies showed that learners tended to use a wider range of VLS together rather than making use of one or two specific VLS (Ahmed, 1989; Gu & Johnson, 1996; Lawson & Hogben, 1996), resulting in various taxonomies of VLS, most comprehensive (Schmitt, 1997; Takac, 2008) and widely used (Catalan, 2003) of which is Schmittt's (1997) VLS taxonomy.

To conclude, VLS seem to have a critical role to play as an all-inclusive tool-kit in order to help students by means of VLS instruction to expand their VS because larger VS means more lexical text coverage, which leads to better comprehension and at or beyond a favourable lexical text coverage, the optimal LT, understanding unsimplified, authentic texts such as novels, without assistance may highly likely be achieved.

1.2 Statement of the problem

After a period of underestimation (discussed in 2.1.1), the inevitably essential language component, vocabulary, being the very basic ingredient of any of the four language skills, be it receptive or productive, has gained itself appropriate interest (discussed in 2.1.2), whose equally important role in comparison to grammar is concisely put by Harmer: "If language structures make up the skeleton of language, then it is vocabulary that provides the vital organs and the flesh" (1994, p.153). The

introduction of lexical competence (Richard, 1976), the advent of frequency count studies to determine what vocabulary to teach such as West's GSL (cited in Schmitt, 2000) and how to teach each vocabulary level (Nation 1983;1990), devising of standardised tests to assess vocabulary size (Nation, 1990; Nation & Beglar, 2007), the emphasis on lexical text coverage (Carroll, Davies & Richman, 1971 cited in Nation, 2001; Francis & Kucera, 1982, cited in Nation and Waring ,1997) and finally determining lexical thresholds for various L2 tasks (Hirsh & Nation, 1992; Laufer, 1989; 1992; Laufer & Ravenhorst-Kalovski, 2010) have gradually proved the due importance attached to vocabulary, which is phrased as "lexical sophistication" and empirically shown to closely relate to academic success (Daller & Xue, 2009).

However, theorizing vocabulary as vitally important has not automatically eased the burden on the part of the EFL learner; whatever the circumstances, it is necessarily the learner who does any kind of learning in general and vocabulary learning in particular, as is the case in the discussions of learner autonomy (Nation, 1998). All the same, it is within the role of the teacher to make the learners more aware of the how to learn vocabulary by explicitly teaching and showing them (Chamot, 2005; Nation, 2001; Muzimoto &Takeuchi, 2009; Schmitt, 1997) those particular ways, namely, the vocabulary learning strategies (Gu & Johnson, 1996; Nation, 1990, 2001; Schmitt, 1997). Having considered both parties of the learning-teaching process, it seems imperative to find out whether and /or to what extent learners were made aware of VLS by their teachers through explicit teaching during their prior experiences and whether they would like explicit VLS instruction to be integrated in the regular classroom teaching as part of the curriculum.

It is evidenced that learners find the task of learning vocabulary hard (Meara, 1980; Thornbury, 2007; Gu, 1994), that learners with larger vocabulary sizes are more successful (Meara, 1996; Meara & Fitzpatrick, 2000) and that learners who use more vocabulary learning strategies in a more elaborate way are more proficient (Green & Oxford 1995; Kojik-Sabo & Lightbown, 1999; Rubin, 1975; Sanaoui, 1995). Still, not all the research studies conducted to investigate VLS have yielded the same or similar results, to name a few, Bozgeyik's (2011), Kalajahi and Pourshahian's (2012), and Maghsoudi's (2017). Therefore, in order to contribute to the understanding of how learners use VLS in their vocabulary learning in general, specific research foci on their preferences of VLS use with regard to frequency of use, the relationship between the

frequency of VLS use and prior experiences of explicit VLS learning and that between frequency of VLS use and VS along with the effect of the frequency of VLS use on the VS all appear to be necessary.

It is also acknowledged that the learners themselves constitute a versatile variable with a number of individual differences, including gender, on which how they make use of the VLS largely depends. While the majority of the reviewed research literature (Aslan, 2009; Catalan, 2003; Green & Oxford; 1995; Gu, 2002; Oxford, Nyikos & Ehrman, 1988; Shadikah, Fauziati & Supriyadi, 2017; Uster, 2008) has found gender to be a significant variable affecting the use of VLS, there are several studies that have found non-significant results (Kalaycıoğlu, 2001; Noormohamadi, Amirian & Hesabi, 2015; Pana & Afghari, 2015). The inconsistency of the results in the literature and the scarcity of the studies conducted in the Turkish EFL context about the relationship between gender and the frequency of VLS use combine to make it one of the foci of the present study.

1.3 Purpose of the Study

There seems to be an interplay between several pairs of aspects: (i) vocabulary and its indispensable importance for EFL learners, (ii) VLS to enlarge the learner's incrementally-growing VS and the differential contribution of VS to lexical text coverage, (iii) the varying lexical text coverage and unassisted comprehension of unsimplified L2 texts that might be achieved after reaching the optimal LT and for all of which VLS instruction has been shown to be considerably facilitative. Based on the aforementioned background, the present study with a sample of EFL students studying at Erciyes University English Language and Literature Department at five different grade levels from preparatory year to 4th year aims to carry out explorations into the learners' past familiarity with explicit VLS instruction, the preferences of learners with regard to VLS, the correlation between the frequency of VLS use and the three variables of prior experiences of explicit VLS instruction, VS, and gender, the effect of the frequency of VLS use on the VS, and the present attitudes of the learners towards the integration of explicit VLS instruction.

More specifically, the study is concerned with reflecting (i) their prior experiences of learning VLS through explicit instruction, (ii) their current preferences in

VLS based on the frequency of VLS use, (iii) whether their frequency of VLS use changes according to prior experiences of learning VLS through explicit instruction, VS, and gender, (iv) whether their frequency of VLS use has an effect on their VS, and (v) their ideas about the integration of explicit VLS teaching in EFL classrooms and the curricula.

1.4 Research Questions

In order to fulfil the manifold purposes of the present study, carried out with the Turkish EFL learners at five grade levels studying at Erciyes University English Language and Literature Department, around the learners' prior experiences of learning VLS through explicit VLS instruction, the VLS preferences, the correlation between variables of prior experiences of explicit VLS instruction, VS, and gender, the effect of the frequency of VLS use on the VS, and the learners' ideas towards the integration of explicit VLS instruction into EFL classrooms and the curricula, the following research questions have been formulated:

1. What are the prior experiences of the learners majoring in ELL concerning the explicit instruction of VLS?

2. What are the preferences of the learners majoring in ELL in terms of VLS?

    a. What is the overall frequency of learners' VLS use?
    b. What percentage of the learners are high, medium, and low users of VLS?
    c. What is the most frequently used VLS category?
    d. What are the most frequently used particular VLS?

3. Does the frequency of VLS use of the learners majoring in ELL differ according to the following variables?

    a. The prior experiences of the learners concerning the explicit instruction of VLS
    b. Vocabulary Size
    c. Gender

4. Does the frequency of VLS use have an effect on the VS of the learners majoring in ELL?
5. What are the ideas of the learners majoring in ELL concerning the integration of explicit instruction of VLS in EFL classrooms and the curricula?

1.5 Significance of the Study

There has been proliferating research since the role of vocabulary and lexical competence was established; milestones studies on VLS were done by pioneering researchers and various taxonomies of VLS have been devised as a result. Much of the VLS research has been on the teaching of single VLS that were reported to work best, mainly memory strategies. However, as it was acknowledged by many researchers (Ahmed, 1989; Bozgeyik, 2011; Ekmekçi, 1999; Gu & Johnson, 1996; Meara, 1980; Sanaoui, 1995; Takac, 2008), attempts to find answers to what combinations of VLS are used by different types of learners and how the use of preferred VLS help their language skills in general and vocabulary proficiency in particular, surveying VLS from a holistic approach have become a more valid research endeavour.

Therefore, the present study seeks to investigate the VLS use of the Turkish EFL learners studying at Erciyes University English Language and Literature Department from a holistic angle in general. More specifically, it explores the learners' past familiarity with VLS instruction, the present practices of VLS use with regard the frequency of use with correlation and regression analyses and the attitudes to VLS instruction through a number of research questions with several sub-questions, which widens the present study in terms of scope. There are several studies, which the present study is partly similar to, looking into the relationship between VLS and its effect on vocabulary learning outcomes in general. To illustrate, here is a collection of research investigating such relationships: between the VLS and success in vocabulary learning of first year English Language Teaching students (Alamdari, 2010), between the frequency of VLS use and perceptions of usefulness and vocabulary proficiency of learners from four different levels of English from Beginner to Upper-intermediate (Bozgeyik, 2011); between Iranian TEFL majoring students' frequency of VLS use and its contribution to their VS (Hamzah, Kafipour & Abdullah 2009), between the VLS use and the language learning outcomes of Turkish EFL learners (Ekmekçi, 1999), between the most frequently used VLS and the L2 vocabulary proficiency along with a focus on finding which VLS are more relevant to learning high and low frequency vocabulary for the first year degree students from various disciplines in Hong Kong (Fan, 2003).

As can be seen, along with their differences, all the above mentioned studies focus on VLS use; both overall VLS use and particular VLS use, frequency of use, and their relationship with several outcomes such as success, vocabulary proficiency, VS,

general language proficiency and vocabulary proficiency. The present study, on the other hand, includes two more dimensions by investigating into (i) prior experiences of the participants of learning VLS through explicit instruction and probing into its degrees and (ii) the attitudes of learners as to the integration of explicit VLS instruction into EFL classrooms and curricula. No other studies within the researcher's knowledge have used direct questions regarding prior experiences of learning VLS through explicit instruction and regarding their ideas about the integration of explicit VLS instruction in their questionnaires. Several studies, for example, have deduced beliefs and attitudes through reported helpfulness ratings of VLS (Bozgeyik, 2011; Fan, 2003; Schmitt, 1997), seeing that students rated some VLS high in terms of usefulness even though they rated them low in terms of frequency of use, which was an indirect indication of positive learner attitudes towards VLS instruction.

The present study may be attached significance in several other ways as well. For one thing, it has not limited its sample solely to EFL preparatory class students or to a specific major, but both. In other words, the sample comprises of both preparatory class students of ELL and ELL majoring students from all four grade levels, which allows for a more general representation of VLS habits in the research context. For another thing, two of the subject matters of the study, the VS and thus VLS, are key requirements for EFL learners studying ELL, who need a relatively higher vocabulary size, when compared to other majors which are not completely English-medium. That is to say the study is carried out at a major where students are highly likely to be more successful if they are able to comprehend unsimplified authentic texts in various genres such as novels, drama, poetry, and prose without much assistance with the help of a larger size of vocabulary that gives them an edge of gaining a greater lexical text coverage. For this purpose, the study has used receptive vocabulary size rather than productive. The present study has not used means and averages in order to classify learners in terms of their receptive vocabulary sizes in the sample itself, but has employed the LT established by Laufer and Ravenhorst-Kalovski (2010) and Nation (2006, 2007) as the benchmark, the satisfactory lexical knowledge to adequately comprehend a text without assistance, which is the receptive knowledge of 8,000-9,000 word families that provide favourable conditions for unassisted pleasurable reading.

In brief, the study aims to contribute to the research literature by drawing attention to (i) the extent to which Turkish EFL learners majoring ELL were made familiar with VLS through explicit VLS instruction, (ii) the frequency of overall VLS use, the percentage of low, medium, high VLS use, the most frequently used VLS category, and the most frequently used VLS, (iii) the relationship between the frequency of VLS use and variables of prior experiences of learning VLS through explicit VLS instruction, VS, and gender, (iv) the effect of the frequency of VLS use on the VS, and (v) the learners' attitudes towards the integration of explicit VLS instruction into EFL classrooms and curricula. The researcher also aims to inform the Department Heads of the results of the study in order for them to use as a basis for the appraisal of their program's vocabulary component.

CHAPTER 2

LITERATURE REVIEW

2.0 Introduction

This chapter comprises of several sections to provide the present study with a review of literature on VLS use, VS, and LT as well as basic knowledge of what vocabulary is and how essential it is for EFL learners. First, the importance of vocabulary throughout the recent decades is portrayed, vocabulary is defined and knowledge of a word is discussed. Secondly, the organisation of the mental lexicon, the word store, is dealt with, followed by a focus on word frequency and frequency counts used in the selection of what vocabulary to teach, how to learn and test it. Thirdly, there is a discussion of the way vocabulary levels determine the order of which vocabulary to learn and how that is followed by how word frequency in different vocabulary levels affects lexical text coverage. Next, the relationship between VS and reading, and the assessment of VS that is used to determine the LT at or beyond which various tasks can be achieved are covered. Finally, the two broad approaches, incidental and intentional vocabulary learning, to enlarge students' vocabulary are explained, leading the way to the discussion of VLS, which take their root from LLS, with further focus on studies on particular and overall VLS, a taxonomy of VLS, the degree of contextualization of VLS and VLS instruction.

2.1 The Importance of Vocabulary

Learning a second or a foreign language inherently entails the gradual mastery of several language skills and language components, namely, the receptive skills of listening and reading, the productive skills of speaking and writing, the grammar, the orthography and the phonology of the language among others with the absence of few or even one of which the language being used would seem incomplete. However, the vocabulary of the language, as it appears to have a lot to do with all the other skills and components, is at the point of

intersection where all those skills and components meet at a common ground, and whose role is summarized by Richards (2000, p. xi, in Schmitt, 2000).

> ... [L]exical knowledge is central to communicative competence and to the acquisition of a second language. Vocabulary and the lexical units are at the core of learning and communication. No amount of grammatical or other type of linguistic knowledge can be employed in communication or discourse without the mediation of vocabulary.

The idea that vocabulary is central to language (Bromley, 2007; DeCarrico, 2001; Zimmerman, 1997) can easily be endorsed by simply thinking how it would be impossible to listen to a speech, read a text, utter anything or express an idea in written form, produce inflected or derived forms, spell or pronounce anything if it had not been for the basic ingredient of the language, that is, vocabulary. Laufer (1986, p. 69) describes the sine qua non of language acquisition in quite a straightforward manner:

> No language acquisition, whether first, second, or foreign; child or adult, can take place without the acquisition of lexis. Sound patterns of a language which do not form a lexical item are no more than meaningless noise; grammatical rules in themselves, unless they relate particular sounds to particular meanings, are only interesting abstractions with insufficient communicative value.

The unique importance of vocabulary has often been mentioned mostly in comparison to grammar, which has long been given "pride of place" (Siclair & Renouf, 1988, p. 2). Wilkins (1972, p. 111 cited in Milton, Wade & Hopkins, 2010, p. 83) concisely maintains that "without grammar very little can be conveyed, without vocabulary *nothing* can be conveyed". The very same view is reflected in the advice of coursebook writers, Daller and Hockin: "if you spend most of your time studying grammar, your English will not improve very much. You will see most improvement if you learn more words and expressions. You can say very little with grammar, but you can say almost everything with words!" (Thornbury, 2007, p. 13) Wilkins (1974, p. 19-20 cited in Zimmerman, 1997, p. 14) explains that the role of vocabulary in the language system is as crucial as that of grammar, and that learning a language requires not only the mastery of its grammar but the mastery of its vocabulary as well.

Widdowson asserts that native speakers can understand grammatically incorrect sentences that have the correct vocabulary better than sentences with inappropriate words that are grammatically well-formed. He prioritizes lexis over syntax stating that the starting point needs to be lexis, and syntax can only be put to an auxiliary role (1978, cited in Perez Basanta, 2010). Similarly, Sinclair states that "a lexical mistake

often causes misunderstanding, while a grammatical mistake rarely does" (Lewis, 2008, p. 16).

Barcoft (2004, p. 201) mentions three reasons why vocabulary plays such an important role in a language: (i) the relationship between vocabulary and the ability to communicate, (ii) student perceptions about the relative importance of vocabulary, and (iii) the critical role of vocabulary knowledge in the development of grammatical competence.

To reiterate, vocabulary is at the very heart of language in general, of second and foreign language teaching and learning in particular; therefore, syllabus and curriculum planners need to pay the essential attention to it (Perez Basanta, 2010).

2.1.1 The Period of Neglect

Although there had been some very promising interest in vocabulary teaching and learning long before the 1980s, due to the onset of generative linguistics, there was such a decline in the focus on the lexical aspect of the language in the contemporary practices that vocabulary was almost discriminated (Laufer, 2009).

Until the early 1980s, never was vocabulary paid such well-deserved attention (Chacón-Beltrán, 2010); this apparent lack of attention by applied linguists has been expressed differently (Carter, 1998; DeCarrico, 2001; Kojik-Sabo & Lightbown, 1999; Laufer, 1986; Levenston, 1979; Meara, 1980; Richards, 1976; Schmitt, 2000). Richards explains the contemporary status quo in the world of linguistics concerning the place of vocabulary as follows:

> The teaching and learning of vocabulary has never aroused the same degree of interest within language teaching as have such issues as grammatical competence, contrastive analysis, reading, or writing, which have received considerable attention from scholars and teachers. The apparent *neglect* of vocabulary reflects the effects of trends in linguistic theory, since within linguistics the word has only recently become a candidate for serious theorizing and model building (Richards, 1976, p. 77). (Emphasis added)

Meara (1980) not only reiterates how negligent applied linguistics was but also points to an interesting fact, which Laufer (1986, p. 70) calls the "paradox of the neglect".

> This *neglect* is all the more striking in that learners themselves readily admit that they experience considerable difficulty with vocabulary, and once they have got over the initial stages of acquiring their second language, most learners identify the acquisition of

> vocabulary as their greatest single source of problems. (Meara, 1980, p. 221) (Emphasis added)

Laufer (1986, pp. 69-70) concludes that "vocabulary has not been a good source of inspiration for investigators…" and acknowledges why Meara (1980) calls vocabulary "a neglected aspect" and Levenston (1979, p. 147) "a victim of discrimination", and surmises that vocabulary has been given a "step-child status" (Laufer, 1986, p. 73). In much the same way, Carter (1998, p. 184) points out that vocabulary was the "poor relation" of language teaching, attributing the neglect partly to the specialization on syntax and phonology in linguistic research.

In short, it is stated that vocabulary teaching and learning were not given their fair share in terms of value across various methodologies because of the priority given to syntax and phonology (Zimmerman, 1997).

2.1.2 The Period of Interest

After a long period of neglect, by the late 1970s and the early 1980s, vocabulary began to receive some close attention, and thus there was "a boom" (Read, 2004a, p. 146) in second language vocabulary acquisition research in the 1990s and early 2000s that gave comprehensive coverage of theory, research and practice. The negative metaphors of "neglected aspect", "step-child", "poor relation", "Cinderella" (Lewis, 1993, p. 89), and "marginal" (Catalan, 2002, p. 149) were replaced by positive metaphors such as "guest of honour" , "the natural child of the field" (Laufer, 1986, p. 74), "privileged" (Catalan, 2002, p. 149), and vocabulary started to be "given the pride of place" (Schmitt, 2000, p. 10) and even to be called "the core or heart of language" (Lewis, 1993, p. 89).

Schmitt (2010b) explains that vocabulary is now widely recognized as a main component thanks to the publication of several influential books focusing specifically on vocabulary and the regularity with which vocabulary issues were dealt with in research articles, which resulted in a comparably more information about teaching vocabulary in a more principled way. One such article that ignited interest in vocabulary is Richards's (1976), in which lexical competence is introduced as a reference tool with which objectives for teaching vocabulary and the assessment of the techniques that are used to achieve these objectives were to be determined.

The grammar versus vocabulary opposition restricted the development and role of vocabulary when designing syllabi; however, grammar is not really separate from vocabulary, as Lewis (1993, 2008) explains, lexically clear words such as 'submarine' and lexically vague words such as 'take' determine their own grammar. The same interconnectedness is echoed in Schmitt (2000, p. 14);

> One of the most important current lines of thought is the realization that grammar and vocabulary are fundamentally linked. Evidence from large *corpora* (language databases) shows that there is more lexical patterning than ever imagined, and that much of what was previously considered grammar is actually constrained by lexical choices. In effect, this makes it difficult to think of vocabulary and grammar as separate entities. Rather, one must conceptualize them as partners in synergy with no discrete boundary, sometimes referred to as *lexicogrammar*.

The lexical syllabi and the recognition of the role of lexical chunks, both of which owe a lot to the discoveries in the field of corpus linguistics, have resulted in "awareness as to the key role vocabulary plays in language learning" and even though most course books are still organised around a grammatical syllabus, vocabulary is given a fair share, not treated as an "add-on" (Thornbury, 2007, p. 14). Many recent studies such as Daller and Xue's (2009, p. 179) empirically verify that what relates most closely to academic success is "lexical sophistication".

2.2 Defining Vocabulary

What is vocabulary? When this seemingly simple question is asked, the most probable answer by "the layperson" (Schmitt, 2000, p. 1) would be as simple as the question itself: *words*. Schmitt (2000, p. 1) draws attention to the fact that "for anyone interested in exploring the subtlety and magic of lexis, the term *word* is too general to encapsulate the various forms vocabulary takes", and exemplifies how even the same meaning can be represented by six different lexical units; "*die / expire / pass away / bite the dust / kick the bucket / give up the ghost*". The first two are single words; the third is a phrasal verb and the last three are idioms. These examples are made up of one to four words and show that not always is there a one-to-one correspondence between a meaning and a single word. Quite frequently, multiple words are used to represent meanings. In order to ease dealing with these multiword units, a more generic term *lexeme*, which is used interchangeably with *lexical unit* or *lexical item*, was coined and is defined as "an item that functions as a single meaning unit, regardless of the number of words it contains" (Schmitt, 2000, p. 2).

Lewis defines “lexical items” (1993, p. 90) or “chunks” (1993, p. vi; 1997; p. 255; 2008, p. 7) as “socially sanctioned independent units” (1993, p. 90). As is clear, vocabulary is not just a list or collection of single words themselves but an entity made up of several *lexical units* which are formed by either one word or more.

2.3 Knowledge of a Word

Knowing a word cannot be equated with solely knowing its meaning, but rather, requires numerous kinds of information. The most influential inquiry into the knowledge of a word is Richards’s seminal article where he not only poses fundamental questions such as “What does it mean to know a word? How are words remembered? What are the social dimensions of word usage?” (1976, p. 77) but also lists a number of assumptions concerning lexical competence. Nation (1990; 1998) developed the frame Richards (1976) had outlined into a more detailed analytical table incorporating a receptive (R) versus productive (P) dimension that was not evident in Richards’.

Table 2.1. Knowing a Word (Nation, 1990, p. 31)

Form		
Written Form	R	What does the word sound like?
	P	How is the word pronounced?
Spoken Form	R	What does the word look like?
	P	How is the word written and spelled?
Position		
Grammatical patterns	R	In what patterns does the word occur?
	P	In what patterns must we use the word?
Collocations	R	What words or types of words can be expected before or after the word?
	P	What words or types of words must we use with this word?
Function		
Frequency	R	How common is the word?
	P	How often should the word be used?
Appropriateness	R	Where would we expect to meet this word?
	P	Where can this word be used?
Meaning		
Concept	R	What does the word mean?
	P	What word should be used to express this meaning?
Associations	R	What other words does this word make us think of?
	P	What other words could we use instead of this one?

Knowing a word precisely requires the answers to the above-mentioned questions about a single lexical item; however, Nation (1990) draws attention to the fact that it is not the case for all the vocabulary a native speaker has.

2.3.1 Partial and Precise Vocabulary Knowledge

Vocabulary learning is not instantaneous; it happens over time with the help of each encounter possibly adding to the incomplete knowledge of a lexical item. The process of learning vocabulary is said to be "incremental" (Schmitt, 2000, p. 117, 2010a, p. 19, 2010b, p. 28; Wesche & Paribakht, 1994, p. 2, 2000, p. 197; Wu, 2013), "developmental" (Read, 2000), "iterative, elaborative and cumulative" (Wesche & Paribakht, 2000, p.207), which requires multiple encounters ranging from 7 to 16 times or more as stated by Nation (1990, pp. 43-45). The researcher warns that if adequate repetition opportunities or attention to vocabulary for learning to occur are not provided by the teacher or the course book, it will mean a waste of time and energy previously spent on that vocabulary.

Knowledge of a word can be put on a cline which ranges from rough categorization or ambiguity to precise meaning and the command of the various shades of meaning (Henriksen, 1999, cited in Wu, 2013). On one end of the continuum of several levels of knowledge, there is superficial familiarity with the word, and the ability to use the word correctly in free production is on the other (Laufer & Goldstein, 2004). Schmitt (2000, p. 118) stresses that leaners may master each component of word knowledge "to greater or lesser degree at any point in time". Regardless of how basic a type of knowledge may seem, it would still follow the cline from partial to precise; for example, the knowledge of the spelling of a word. This means that the knowledge components of a word each may be at a different degree on their own cline at a time (Schmitt, 2010b).

Schmitt's (1998) longitudinal study showed that the students did not seem to have learned derivational forms and meaning senses of all the words. While the core meaning was known, all of the possible senses were not. The association scores were more native-like over time, which meant that the better integration of the words into the students' mental lexicons was a gradual process (Schmitt, 2000, 2010b).

To conclude, learners tend to learn various aspects of word knowledge partially and with each encounter with a lexical item they approximate to precision.

2.3.2 Breadth and Depth of Vocabulary Knowledge

A distinction between breadth and depth of vocabulary knowledge has conventionally been made by many researchers (Anderson & Freebody, 1979; Graves, 1986; Huang, 2006; Nation, 2001; Read, 2004a, 2004b; Schmitt, 2000, 2010a, 2010b; Weshe & Paribahkt, 1994, 2000, Wu, 2013). Anderson and Freebody (1979, p. 20) define the two terms clearly and concisely as below:

> The first may be called 'breadth' of knowledge, by which we mean the number of words for which the person knows at least some of the significant aspects of meaning. … [A] second dimension of vocabulary knowledge, namely the quality or 'depth' of understanding. We shall assume that, for most purposes, a person has a sufficiently deep understanding of a word if it conveys to him or her all of the distinctions that would be understood by an ordinary adult under normal circumstances.

From a vocabulary testing perspective, Read (2004a) explains breadth as the general estimation of the quantity of words the learner knows, usually by reference to samples of words from specified levels in a vocabulary list. Depth of knowledge, on the other hand, has a focus on the idea that just a superficial understanding of the meaning is not sufficient for learners when they are learning useful higher-frequency words; rather, a rich and specific meaning representation together with the knowledge of the word's formal features, syntactic functioning, collocational possibilities, and register characteristics need to be developed. Rashidi and Khosravi (2010) point to the likely relationship between the different levels of vocabulary breadth and depth and reading comprehension levels of learners. Similarly, Topkaraoğlu (2013) states that the experimental group being given vocabulary size and depth enhancement activities over a period of 14 weeks showed significant gains in general language proficiency and vocabulary production.

One of the very few researchers interested in where these two knowledge types intersect is Qian (1999, cited in Greidanus, Bogaards, van der Linden, Nienhuis & de Wolf, 2004), whose study has significant positive correlation results similar to what Greidanus et. al. report in their study between a depth of word knowledge test and a broad word knowledge test. Qian (1998; 1999) concludes that there is a positive and close relationship between learners' vocabulary knowledge scores of depth and breadth

tests, which seems to manifest that there is interconnectedness and interdependence between these two word knowledge dimensions (cited in Greidanus et. al. 2004).

In the same vein, Read (2004b) maintains that by increasing the total number of words they have little or partial knowledge of, learners will also be able to learn the words they often come across in more depth. The coordinate development between the vocabulary size and depth is especially congruent with network building perspective as learners need to build a great deal of connections between items in the mental lexicon in order to enlarge their vocabulary knowledge. Vermeer (2001, cited in Read, 2004b) argues that there is no real difference between depth and breadth on a conceptual level.

Furthering the above statements, Nurweni and Read's (1999) study showed that for students with relatively advanced level of English, breadth and depth of vocabulary knowledge may overlap to a great extent while they may be quite distinct for students of lower levels (cited in Read, 2004b).

2.3.3 Receptive and Productive Vocabulary Knowledge

One of the most familiar distinctions concerning vocabulary knowledge has been receptive and productive vocabulary (Carter, 1998; Chacón-Beltrán, 2010; Henriksen, 1999 cited in Schmitt, 2000; 2010a; Laufer, 1998; Meara & Fitzpatrick, 2000; Melka, 1997; Nation 1990, 2001; Nattinger, 1988; Read, 2000, 2004b; Schmitt, 2000, 2010a; Takac, 2008; Wu, 2013) although there are several other terms that have been used as alternatives such as "active vocabulary vs. passive vocabulary, comprehension vs. production, understanding vs. speaking, recognitional vocabulary vs. actual or possible use" (Melka, 1997, p. 84).

Simply put, receptive vocabulary knowledge is the ability to remember some knowledge of that word upon hearing or seeing it while productive vocabulary knowledge is the ability to use the word in output either in the oral or the written mode (Read, 2000). The distinction is made far more clear in Henriksen's statement that "[there is] a substantial difference in how well different lexical items are mastered in relation to ability to use the words in comprehension and production" (1999, cited in Wu, 2013, p. 24)

According to Nation (1990), productive vocabulary knowledge includes receptive knowledge and goes beyond it, which is in parallel with the traditional view

that it is receptive learning that occurs first, followed by productive knowledge of vocabulary (Laufer, 1998; Schmitt, 2000) and consequently learners' receptive vocabulary is larger than their productive vocabulary (Carter, 1998; Meara & Fitzpatrick, 2000; Schmitt, 2000, 2010a; Takac, 2008; Wu, 2013). This view is empirically verified by Laufer's (1998) study, which compared passive (receptive), controlled active (controlled productive) and free active (productive) vocabulary knowledge in one year of school instruction and found that receptive vocabulary size progressed more than the other two types of vocabulary knowledge. It is also a commonly acknowledged fact that learning difficulty varies depending on whether it is receptive or productive learning; the latter being 50 to 100% more difficult with a rough estimate (Nation, 1990).

Melka Teichroew (1982, cited in Nation, 2001; Meara, 2009) and Melka (1997) draw attention to the inconsistent use of the terms 'receptive' and 'productive' and to how the distinction is perceived, and suggest that rather than dichotomizing the two notions, receptive and productive word knowledge need be considered as a continuum where there are increasing degrees of knowledge or familiarity with a word. Meara (1990; 1997, cited in Schmitt, 2010a; 2000) rejects the idea that the move from receptive knowledge to productive knowledge is linear and gradual. Adopting a perspective of lexical organisation, Meara (1990), rather, argues that active and passive vocabulary is the result of differing types of association between words in the network through "incoming or outgoing links with other words" (Nation, 2001, p. 39).

According to Melka (1997), as knowledge of a word increases gradually, receptive knowledge transforms into productive knowledge; however, another critical issue is raised by another scholar, Read (2000), about the transition of a lexical item from the receptive to the productive end of the continuum. "The problem is to locate the threshold at which the word passes from receptive to productive status. Is there a certain minimum amount of word knowledge that is required before productive use is possible?" (p. 154). However, Read (2000) adds that it is acknowledged by Melka (1997) that the continuum of receptive/productive vocabulary is not a simple smooth one, that the boundary between the two ends is a fluid one, and that there is a lot of interaction between them.

Mondria and Viersma (2004, pp. 85-86), who surveyed five studies, gained some important information on three aspects of receptive and productive word learning,

which they report as (i) “the overlap between receptive learning and productive learning; productive learning leads to a certain amount of receptive learning” and vice versa, (ii) “the degree of difficulty of receptive learning vs. productive learning”; the latter is more difficult, and (iii) “decay of receptive knowledge vs. productive knowledge”; the latter decays faster.

Nation (2001, p. 37) points to the inevitable overlap and the complementary nature of features of vocabulary knowledge when he states that “like most terminology the terms receptive and productive are not completely suitable because there are productive features in the receptive skills – when listening and reading we produce meaning”. If Nation’s well-established framework of what is involved in knowing a word is revisited, it seems clear that receptive and productive aspects of word knowledge complement each other.

2.4 The Organisation of the Mental Lexicon

Jarema and Libben (2007, p. 2) define the mental lexicon as “the mental lexicon is the cognitive system that constitutes the capacity for conscious and unconscious lexical activity”.

Aitchison (1987) states that there are thousands of words in the mental lexicon, most of which can be reached instantly, and if there are so many words that can be found with such an efficient speed when needed, it seems to suggest that the words in the mental lexicon are really perfectly organised; they are not just stacked in random heaps. The mental lexicon is, as Hulstijn (2000, cited in Takac, 2008, p. 11) puts it, “a memory system in which a vast number of words, accumulated in the course of time, has been stored”. The human memory is flexible and can be extended as long as the information to be added is well-structured and thanks to its good organisation, big amounts of data can be stored, remembered, and utilized provided that the information is organised well (Aitchison, 1987). The mental lexicon is organised “as a semantic network of interconnected elements. The elements are concepts or nodes, which are connected to one another by virtue of having various relations with one another” (Carrol, 2007, p. 110)

Schmitt (2010a) draws attention to the fact that in one’s mental lexicon, lexical items have several formal and semantic connections with other lexical items, and these

connections both lead to appropriate lexical usage and more automaticity in using this knowledge since accessibility is thought to be improved by a well-organized mental lexicon. Some types of language output such as slips-of-the-tongue make these connections apparent as the misspoken word has some kind of a connection with the intended word, or, similarly, sometimes similar words are blended together (Aitchison, 2003, cited in Schmitt, 2010a, p. 58).

Ellis (1997, p. 123) states that we make use of four types of lexicons that are specialised for different channels of input/output in order to enter a word into our mental lexicon;

> To understand speech, the auditory input lexicon must categorise the novel sound (which will be variable across speakers, dialects, etc.); to read the word, the visual input lexicon must learn to recognise a new orthographic pattern (or in an alphabetic language, learn to exploit grapheme-phoneme correspondences in order to access the phonology and hence match the word in the auditory input lexicon); to say the word, the speech output lexicon must tune a motor programme for its pronunciation; to write it the spelling output lexicon must have a specification for its orthographic sequence.

To conclude, the mental lexicon appears to be "a mixed system which has found a workable compromise between the requirements of production and those of comprehension" and also its "set-up may have been modified not only to aid speedy retrieval but also to make words easier to remember" (Aitchison, 1987, p. 194).

2.5 Word Frequency and Frequency Counts

The role of word frequency in selecting what vocabulary to teach, how to acquire that vocabulary and how to test it has been among the recurring topics of interest in the field of second or foreign languages (Bogaards & Laufer, 2004). Word frequency is how often a particular word occurs in spoken and/or written discourse and is one of the first factors that may be utilized to select the vocabulary to teach in a course. This idea is evident in Nation and Waring's (1997, p. 8) statement:

> Although a language makes use of a large number of words, not all of these words are equally useful. One measure of usefulness is word frequency, that is, how often a word occurs in normal use of the language. From the point of view of frequency, the word *the* is a very useful word in English. It occurs so frequently that about 7 per cent of the words on a page of written English and the same proportion of the words in a conversation are the repetitions of the word *the*. Look back over this paragraph and you will find an occurrence of *the* almost in every line.

When words are compared to one another, according to Milton (2009), they appear to vary in many ways such as in their sounds, spelling, length, derivations and

inflections, different shades of meaning, and situational use, all of which may have some influence on whether and how fully a word is learned, and all of which are elements of the learning burden or word difficulty.

However, of all the other properties of a word, the most important trait of a word that makes it different from the others is most probably its frequency of occurrence. It is the frequency of a word that determines which words are more likely to be encountered and how often a learner will encounter them, and thus it is highly likely to influence when a word will be learned; the tendency is that some words will be learned earlier while the others will be gained later in the language learning process. Milton and Alexiou (2009, p. 198) state that "there is a strong frequency effect in the learning of foreign language vocabulary. In effect, this means the more frequent a word is then, the more likely it is to be learned." However, this should not be taken as a rule without exceptions because some words (e.g., words of lower frequency) learners learn may be quite dependent on the thematically-driven course material that they are exposed to or whether those words are cognates or not.

Although some frequency counts provide useful information about the frequency and range (i.e. a measure of the number of texts in which a word occurs), the information is not enough, and there are several problems to consider, as Nation (1990) asserts; (i) some very useful and essential words do not appear in the first and second 1,000 words, (ii) some words that are not very appropriate for beginners appear in the first 1,000 words, (iii) different word frequency lists do not agree; the type of the choice of writing to count affects the results, (iv) the order of the words in a frequency list is not usually the best order to teach them, and (v) the reliability of word-frequency lists is to a limited extent. Similarly, Schmitt (2010a) states that most corpus counts are rarely able to determine the frequencies of multi-word fixed expressions as they normally take the single lexical item as their basis , which seems to be their weakness, and therefore their results may be misleading.

Word frequency has presented itself as a major factor on deciding what vocabulary to teach (and learn), how to teach (and learn) and test since as early as the time of the Vocabulary Control Movement, which was in part a reaction to the lack of guidance on the selection of vocabulary of the Direct Method. It was also the time when the combined efforts of three linguists, Palmer, West and Faucett, (1936, cited in

Schmitt, 2000) had produced the Carneige Report, which concluded a need for developing a list of useful vocabulary to produce simple reading materials, and word frequency was an important criterion for the selection of those words (Schmitt, 2000). However, frequency per se as a criterion for such a list was not flawless, and thus several other criteria of a wide a range, as seen below, were used to select the 2,000 words of the *General Service List of English Words (GSL)* (West, 1953, cited in Schmitt, 2000, p. 16):

1. Word frequency
2. Structural value (all structural words included)
3. Universality (words likely to cause offence locally excluded)
4. Subject range (no specialist items)
5. Definition words (for dictionary making, etc.)
6. Word-building capacity
7. Style ("colloquial" or slang words excluded)

(Howatt, 1984, p. 256, cited in Schmitt, 2000, p. 16)

Nation and Waring (1997) list four of the many word frequency counts that are the most well-known: (i) *The General Service List* (West, 1953) with 2,000 headwords and based on a written corpus of 5,000,000, (ii) *The Teacher's Word Book of 30,000 Words* (Thorndike & Lorge, 1944) with a list of 30,000 lemmas – the equivalent of 13,000 word families and based on a written corpus of 18,000,000 words, (iii) *The American Heritage Word Frequency Book* (Carroll, Davies & Richman, 1971), a comprehensive list based on a written corpus of 5,000, 000 running words from texts used in schools in the US in various grades and subject areas, and (iv) *The Brown* (Francis & Kucera, 1982*) LOB* (Lancaster-Oslo-Bergen) and related corpora.

It could be concluded that word frequency and frequency lists can be used to set vocabulary teaching and learning goals. By using the frequency information, learners can decide how much effort they need to pay for a range of vocabulary items and get the best return. Vocabulary frequency lists can also be utilized in curriculum design.

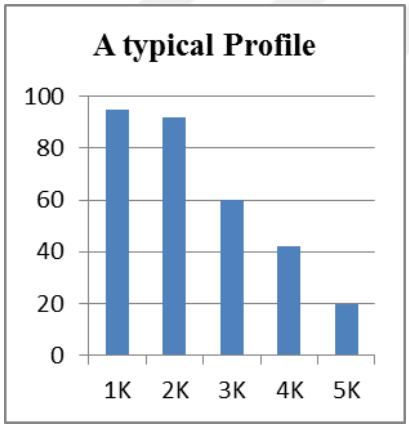
2.6 Vocabulary Levels

The most important measure, if not the only one, of determining the usefulness of a word, and therefore, the amount of effort to teach and learn it has been explained to be word frequency (Bogaards & Laufer, 2004; Nation & Waring, 1997; Milton & Alexiou, 2009; Schmitt, 2000). By using frequency information among other criteria, words can be classified into three main categories, which Nation (1983, 1990) classifies as high-frequency words, low-frequency words, and specialized vocabulary, the third of

which is further divided into two; academic vocabulary and technical vocabulary. In the Vocabulary Levels Test (Nation 1983, 1990), specialized vocabulary was initially represented by *the University Word List* (the UWL), made by Xue and Nation (1984, cited in Nation & Kyongho, 1995; Nation, 2001) by combining the academic word lists of four different studies that had quite an overlap in terms of the words in their lists, and it was later replaced by Coxhead's (2000) *Academic Word List* (The AWL) first in 1998 and then in 2000. Currently, the vocabulary levels are (i) high-frequency words; (ii) academic vocabulary; (iii) technical vocabulary; and (iv) low-frequency words (Nation & Kyongho, 1995; Nation 2001; Nation & Chung, 2009).

Apart from the "broad frequency bands" there are 1,000 band levels (Schmitt, 2010a, p. 70) and from these bands "…the more frequently used words will be the more easily learnt…" (Palmer, 1917, cited in Milton, 2009, p. 25), which is evident in Meara's (2010, p. 6) frequency profile model, as can be seen below.

Table 2.2. Frequency Profile Model (Meara, 2010, p. 6)



For learners, teachers and course planners, this classification of these four groups of words seems extremely important as the decision on which group of words will be focused on will not only affect how they will be taught and learned, but also the goals that are set by learners and teachers will affect the selection of the vocabulary to be learned. In order to clarify how this would affect the choice, Nation (1990) gives some examples; if the goal set is reading, the learner might choose to follow a word list like Longman Structural readers or similar ones, which will provide them with a great deal of graded readers and will increase vocabulary and reading skill simultaneously. If the goal is the four skills, a multipurpose list like the GSL (General Service List) or the

CEL (Cambridge English Lexicon) will be more appropriate. If the learner wants to read university texts, then the UWL will be a suitable list.

Nation (1983, p. 16) provides a general frame of guidelines about how to help students to study vocabulary at the various levels, including references to vocabulary learning strategies, and examples of textbooks of the time, as can be seen below.

Table 2.3. Vocabulary Levels, Types, and Suggested Strategies (Nation, 1983, p. 16)

Vocabulary Level	**Type of vocabulary**	**Learning required to increase vocabulary knowledge at each level**
2,000 word level	*The General Service List*. The vocabulary of simplified reading books.	1. Learning lists of words based on the Longman Structural Readers Lists or *The General Service List.* 2. Intensive and extensive reading of simplified reading books. 3. *Advanced English Vocabulary*, Workbook 1 (Barnard, 1972)
3,000 word level	A basis for beginning to read unsimplified texts.	1. Intensive reading of a variety of texts. 2. Extensive reading of the Bridge Series.
5,000 word level	A wide vocabulary.	1. Training on guessing words in context 2. Wide general reading – novels, newspapers, university texts etc. 3. Intensive reading of a variety of texts. 4. *Advanced English Vocabulary*, Workbooks 1 and 2
the university word level	The specialized vocabulary of university texts.	1. Learning words in the University Word List. 2. Intensive reading of university texts. 3. *Advanced English Vocabulary*, Workbooks 2 and 3 4. Learning prefixes and roots
10,000 word level	A large wide vocabulary.	Activities similar to the 5,000 word level, combined with learning prefixes and roots.
The direct teaching of vocabulary through class teaching and individualized exercises is appropriate for most high frequency words.		

2.6.1 High Frequency Vocabulary

High frequency vocabulary consists of words of the highest frequency of occurrence in most uses of the language, and therefore, “it is the essential common

core" in which there are the most useful 'function' words and 'content' words (Nation & Kyongho, 1995, p. 35), which McCarthy (1990, p. 49) calls "core vocabulary" that could be used by learners just like a "survival kit" in almost any situation, either in formal or informal, both in oral and written mode, especially when in need of an exactly precise word or phrase that cannot be readily remembered or is not known. As for function words, in addition to their essentiality, Lewis (1993) points to the fact that due to their low semantic content and complex patterns, teaching and learning the high frequency words pose difficulties to learners and teachers, which requires direct attention.

High frequency words are a small group of words that occur frequently in a wide range of texts, the most famous list of which is West's (1953) GSL, which typically covers around 75% of the running words in non-fiction texts, around 90% of the running words in fiction (Kyongho, 1989; Hirsh, 1993, cited in Nation & Kyongho, 1995, p. 1) and up to 76% of the Academic Corpus (Coxhead, 2000).

Nation (2001) remarks that the high frequency words of the language are such an important group that both teachers and learners should spend considerable amount of time on mastering them, and that as it is a small group of words, most are likely to get attention through the period of a long-term language teaching and learning programme. Among what can be done to pay the attention they deserve may be direct teaching through teacher explanation and peer teaching, direct learning through study from word cards and dictionary use, incidental learning through guessing from context in extensive reading and use in communication activities, and planned meetings with the words through graded reading and vocabulary exercises. Nation (2001) concludes that anything done by teachers and learners alike so as to ensure that these high frequency words are mastered is well worth doing when their frequency, coverage and range, and the relatively small number are taken into consideration.

In short, when the "cost/benefit" (Schmitt, 1995, p. 6) of learning frequent words is considered, it may clearly be concluded that having some knowledge of these words provides learners with at least 80% of coverage in any kind of written text (Nation, 1990), and therefore, it may be a source of motivation as they will see that the words they know immediately pay off (Carter, 1998).

2.6.2 Academic Vocabulary

The creator of the AWL (The Academic Word List), Coxhead (2000), stresses the importance and challenge of having to make principled decisions in English for Academic Purposes (EAP) courses about the selection of which vocabulary to focus on in the limited class time and independent self-study time. It is further explained that learners face great difficulty as they are less familiar with academic vocabulary than they are with their technical field vocabulary and due to the fact that academic words occur less frequently than general service vocabulary.

The predecessor of the AWL, the UWL (The University Word List), in Coxhead's (2000, p.214) words, is "an amalgam of the four different studies", and thus does not have consistent principles of selection and brings with it the weaknesses of the previous four works it is derived from as their respective corpora are not big enough and the range of topics they cover is not wide and balanced. The UWL contains over 800 word families and provides 8.5% coverage of academic texts (Nation & Kyongho, 1995, p. 36). The new AWL consists of 570 word families that provide a high coverage of 10% (1.5% more coverage compared to the UWL) of academic texts but a low coverage of 1.4% of equivalent fiction text size, which shows its predominantly academic nature. The corpus used to compile the AWL contains 3.5 million running words of written academic texts (Coxhead, 2000, p. 213) from 28 subject areas which are divided into 7 general areas within 4 disciplines; arts, commerce, law, and science (p. 216). The combined coverage of the Academic Corpus by the GSL and the AWL is 86.1%; that is, the GSL 1K: 71.4%, the GSL 2K: 4. 7% and the AWL: 10.0% (Coxhead, 2000, p. 225).

For learners who have grasped the first 2,000 to 3,000 most frequent vocabulary bands, in senior high school or tertiary education, it seems to be wise to aspire to learn the AWL, which is a shared, common vocabulary across many academic fields (Nation, 1990; 2001; Nation & Chung, 2009). One reason why the AWL is important is because it "is the kind of specialized vocabulary that an English teacher can usefully help learners with" (Nation, 2001, p. 307). Nation adds that from this point of view, the AWL may be considered as a continuation – "an extension" (2001, p. 307) – of the general service vocabulary for learners willing to pursue academic study regardless of their specialist area, and thus deserves a great deal of attention from both learners and teachers.

The AWL has gained a considerable amount of attention among publishers of textbooks and several books to teach the AWL have already been published such as Schmitt and Schmitt (2005, cited in Nation & Chung, 2009). Some course books exclusively aim to teach the AWL while others add it as a feature by tagging those words as AWL in various sections.

2.6.3 Technical Vocabulary

Technical vocabulary, which has been variously labelled as "terminological words", "terms and terminology", "specialised lexis", "technical terms", "specialist vocabulary" or "technical words" (Chung & Nation, 2004, p. 252), is "a group of words that will be particularly useful for learners with specific goals in language use, such as reading academic texts in a particular discipline, writing technical reports, or participating in subject specific conferences" (Nation, 2001, p. 316) and thus knowing which words to include as technical vocabulary is crucial for ESP teachers, book writers and lexicographers (Kwary, 2011). Technical vocabulary is very closely related to the subject matter, occurs in a specialist domain, and is part of a system of subject knowledge (Nation & Chung, 2009). Technical vocabulary, Nation and Kyongho (1995) state, has a very high or moderate frequency within a small range of texts or even within one text while it almost never or very rarely appears with the same meaning in other kinds of texts.

The number of words in specialized text has usually been underestimated, and Nation and Chung (2009) state that in their earlier research, technical words covered about 30% of the running words in an anatomy text, and about 20% of the words in an applied linguistics text. When this substantial amount is considered, technical vocabulary seems to be a major concern for ESP students for a number of reasons. Firstly, it seems impossible to ignore the unknown words while reading as they are vitally important to the topic of the text. Secondly, students may also fall short of guessing the meaning from context without a good background technical knowledge of that area. In the same way, dictionary look-up might not work (Nation, 2001).

Although English teachers are not normally well-equipped to work with technical texts, Nation (1990) proposes that while the subject matter teacher deals with the teaching of technical vocabulary, the English teacher can help learners by teaching them

vocabulary learning strategies. Technical vocabulary is an extremely important level of vocabulary, but it is not a fixed set of words for all areas as it is clear from the fact that it is specialized in different areas, and when it is considered across different specialist fields, one field's technical vocabulary is another field's low vocabulary (Nation, 2001).

2.6.4 Low Frequency Vocabulary

Simply defined, low frequency vocabulary is the words which are (i) outside the high frequency words that are widely used in every type of text; (ii) outside the AWL as it comprises of the most frequently used words in the academic corpus; and also (iii) outside a person's own technical vocabulary (Nation, 2001). Low frequency vocabulary is a large body of words most of which occur very infrequently and have very small coverage (Nation, 2001). However, many of these thousands of words with varying frequency need to be learned in order for the learners to be able to reach the required text coverage for unassisted language use (Nation & Chung, 2009).

In dealing with low frequency vocabulary, the cost-benefit of teaching and learning vocabulary needs be considered and it seems wise for the teacher to train learners in the use of vocabulary learning strategies such as guessing using contextual clues, using word parts to remember words, using vocabulary cards, and using dictionaries. The only times teachers spend class time on low frequency words should be occasions where the teacher uses the low frequency word as an excuse or an opportunity to elaborate on the vocabulary learning strategies. The learners' task is to expand their vocabulary at all times, be it either class time learning or self-study, using vocabulary learning strategies (Nation, 1990; 2001).

2.6.5 Mid-Frequency Vocabulary

Mid-frequency vocabulary, as the word suggests, appears to be the words which can be said to be between the high frequency words and low frequency words excluding the specialized types of vocabulary, namely, the AWL and the technical vocabulary; however, traditionally, such a level did not exist in the classification of vocabulary levels until recently. Schmitt (2010a) calls attention to the fact that the traditional vocabulary levels need to be reappraised in the light of Nation's (2006) results revealing that 6,000-7,000 word families are needed to survive in spoken environments and 8,000-9,000 word families are needed for unassisted comprehension of written texts.

Schmitt suggests that it does not seem wise to maintain that 2,000+ is where high frequency level stops and proposes a new category to bridge the gap between 2,000 and 8,000-9,000 level, which could be called *mid-frequency* vocabulary.

Similarly, the reappraisal would call into question (i) the classical advice of explicitly teaching and learning of the first 2,000 words, (ii) ignoring low frequency vocabulary as they do not deserve teaching time, and (iii) acquiring the words in between through extensive reading and the wise use of vocabulary learning strategies. Schmitt focuses on the fact that if what learners need is between 6,000-9,000 word families according to newer figures of the more recent studies, then it is unrealistic for learners to try hard to acquire vocabulary beyond the 2,000 level on their own, without any help from teachers. It is further stated that the stakeholders (learners, teachers, material writers and researchers) will need to concentrate on mid-frequency vocabulary to help learners improve their language use with lexis being not of a major problem.

Mid-frequency words have recently been given attention through some mid-frequency readers (Nation & Anthony, 2013, cited in Nation, 2015) whose vocabulary range from the 4,000 to 8,000 word levels. It is stated that the mid-frequency readers have been developed as an attempt to produce material at the appropriate level of difficulty accessible even to high proficiency learners.

2.7 Word Frequency and Lexical Text Coverage

The relationship between word frequency and lexical text coverage has long been emphasized and evidenced by research (Carroll et.al., 1971, cited in Nation, 2001; Francis & Kucera, 1982, cited in Nation, 1993; Hsueh-Chao & Nation, 2000; Laufer & Nation, 1999; Laufer & Ravenhorst-Kalovski, 2010). Lexical text coverage can be defined as "the percentage of words that a reader understands" (Laufer & Ravenhorst-Kalovski, 2010, p. 16) in a text, and therefore calculated simply by dividing the number of known words by the total number of words in a text and then multiplying it by 100 (Nation, 2001).

The figures below assume that high frequency words are more likely to be learned and known earlier than low frequency words (Nation & Waring, 1997) and show that "the most frequent words contribute very heavily on text coverage and the less frequent a word is, the less it contributes" (Milton, 2009, p. 46). To illustrate, if a

student chose to learn the first 1,000 words, s/he would cover about 75% of the words on a page but if s/he chose to learn the least frequent words, s/he would cover only 0.3% of the words on a page (Nation, 1993).

Table 2.4. Word Frequency and Lexical text Coverage

Number of words	**% text coverage**	**Vocabulary size**	**Text coverage**
10	23.7		
100	49		
1,000	74.1	1,000	72.0%
2,000	81.3	2,000	79.7%
3,000	85.2	3,000	84.0%
4,000	87.6	4,000	86.8%
5,000	89.4	5,000	88.7%
		6,000	89.9%
12,448	95		
		15,851	97.8%
43,831	99		
86,741	100		
Carrol, Davies and Richman, 1971 cited in Nation, 2001		Francis and Kucera, 1982 cited in Nation and Waring ,1997	

The figures above are said to underestimate the coverage of each frequency band as neither study is based on word families; word families provide more coverage (Nation, 1993; Nation & Waring, 1997). According to Nation (1990), the high frequency words (the first 2,000 words) cover 87% of a text while low frequency words (123,200 words) cover only 2%, based on the total number of words in the large Webster's dictionary. Similarly, Nation (2006) reports that 2,000 word families provide 87.83% coverage; 4,000 provide 94.8% coverage, where there is one unknown word in every 20; and 9,000 provide 98.24% coverage, where there is one unknown word in every 50, of the running words in the five novels in the study.

2.8 Vocabulary Size

Vocabulary size is the number of words at least the meanings of which a person knows, and in order to measure it, first the unit of measurement should be determined (Bauer and Nation, 1993). Among units of counting vocabulary are tokens, types (word forms), lemmas, and word families (Nation, 2001; Schmitt, 2010a). Tokens are simply all the running words in a text while types are the number of different words, for instance, in the first sentence of this paragraph, there are 30 tokens but 26 types; *the* and *of* occurred 3 times each. A lemma is a headword, "base or root" (Schmitt, 2010a,

p.189), plus its inflections and contracted forms and all the items under a lemma are usually the same part of speech (Francis & Kucera, 1982 cited in Nation, 2001), while a word family contains both the lemma(s) and the derivation(s) of the base word, all of which are semantically related (Schmitt, 2010a); for example, *extends*, *extending*, *extended*, *extensive*, *extensively*, *extension* and *extent* are considered the members of a word family of the base word *extend* (Read, 2000, p. 84). Bauer and Nation (1993) underscores the importance of the word families as unit of counting vocabulary both for a systematic approach to the teaching of vocabulary and for determining the vocabulary load of texts.

Several questions need be answered to get an illuminating insight into the vocabulary size a learner needs; (i) "How many words are there in the language?" (ii) "How many words do native speakers know?" and (iii) "How much vocabulary do you need to use another language?" (Nation & Waring 1997, pp. 6-7; Nation, 2001, pp. 9-11)

According to Goulden, Nation and Read's (1990) study, there are around 114,000 world families in *Webster's Third New International Dictionary,* which, as a learning goal, is highly unlikely for an ESL or EFL learner (Nation, 2001). A well-educated native-speaker has a vocabulary size of around 17,000 word families; which is stated to represent a vocabulary acquisition rate of 2 or 3 words per day (Goulden, Nation & Read, 1990). Roughly speaking, native speakers acquire around 1,000 word families each year of their early lives and reach a vocabulary size of around 20,000 when they graduate from university, which could be an achievable goal for non-native ESL learners, although it would not be realistic for most EFL learners (Nation, 2001). The vocabulary size a learner needs to use the language undoubtedly depends on what the learner wants to do with the language such as read novels, hold conversations, deal with academic texts or use it in a technical field, and all vocabulary levels are of great importance but especially the high frequency vocabulary thanks to its high coverage (Nation, 1990; 2001). Nation and Beglar (2007) state that learners need various vocabulary size for various tasks in L2. The incontrovertible fact that vocabulary size has a substantial impact on all language skills is reflected in Meara's words below:

> All other things being equal, learners with big vocabularies are more proficient in a wide range of language skills than learners with smaller vocabularies, and there is some

> evidence to support the view that vocabulary skills make a significant contribution to almost all aspects of L2 proficiency (1996, p. 37)

Similarly, Alderson's DIALANG study reveals "that the size of one's vocabulary is relevant to one's performance on any language test; in other words, that language ability is to quite a large extent a function of vocabulary size" (2005, p. 88, cited in Schmitt, 2010a). In Meara and Fitzpatrick's words, "Successful L2 language learners are avid collectors of words, and tend to measure their own success according to the number of words they know" (2000, p. 20).

2.8.1 Vocabulary Size and Reading

There has been a general consensus that reading comprehension and vocabulary knowledge and hence vocabulary size are closely related and further some researchers claim that the relationship is not unidirectional (Blachowics & Fisher, 2004; Grabe & Stoller, 1997; Hsueh-Chao & Nation, 2000; Laufer, 1992; Laufer & Ravenhorst-Kalovski, 2010; Milton, 2009; Nation, 1993, 2001, 2006; Nation & Coady, 1988; Nation & Waring, 1997; Schmitt, 2000, 2010a). The fact that "the more words you know, the better you will be able to understand when reading... in a foreign language" (Milton, 2009, p. 47), which is evident in Kameli and Baki's (2013) and Moinzadeh and Moslehpour's (2012) findings, is further reinforced by the fact that just as "vocabulary knowledge can help reading, … reading can contribute to vocabulary growth" (Nation, 2001, p. 238) as was shown in an EFL context by Day, Omura and Hiramatsu (1991).

Research on vocabulary size and reading comprehension has similarly taken two directions; the effect of vocabulary size on reading comprehension such as Laufer (1992), which primarily focused on a vocabulary threshold for reading, and the effect of reading on vocabulary growth such as Hulstijn and Hollander (1996), mainly focusing on incidental vocabulary learning. Wesche and Paribakht (1994; 2000) have, however, chosen to show in their research that vocabulary learning is relatively more enhanced both in terms of size and depth when text-based vocabulary exercises are added to reading than extensive reading of multiple texts only.

In the case of native speakers, who begin learning to read with a considerable vocabulary size of around 5,000 words, vocabulary size contributes to reading comprehension as they mainly work with texts that contain known vocabulary, and after a few years of learning to read, the relationship is reversed; now reading skills that have

been mastered enhance vocabulary growth. However, in the case of non-native learners of English, the relationship is much more complicated since the learners are already able to read in their L1; they may have to use a different writing system from their own (e.g. Japanese EFL learners); and there is the inevitably common situation of having an L2 vocabulary size of almost nothing (Hsueh-Chao & Nation, 2000). Along the same line, Horst, Cobb and Meara's (1998) study show that EFL learners with bigger vocabulary sizes benefitted more from incidental vocabulary learning opportunities in the form of extensive reading.

Despite the challenge, reading still has great value for EFL learners of all proficiency levels in order to increase their vocabulary size. Schmitt (2000) specifies that intermediate and advanced learners with vocabulary size of around 3,000 words may utilise reading as a means of exposure to the remaining words outside their vocabulary and that even students with very little vocabulary could make use of reading through *graded readers* – books with controlled vocabulary and limited range of grammatical structures.

In order for larger vocabulary size, learners need to read both intensively and extensively. In intensive reading, short texts of 100-300/500 words are studied with deliberate procedures directing a great deal of attention to the vocabulary, grammar and discourse although the general aim is comprehension. Extensive reading, on the other hand, is reading books with a focus on the meaning of the text. It can either aim at increasing vocabulary size or developing fluency (Nation, 2001).

It may be concluded that "reading and vocabulary are reciprocally causal" (Grabe & Stoller, 1997, p. 119) as "research leaves us in little doubt about the importance of vocabulary knowledge for reading, and the value of reading as a means of increasing vocabulary" (Nation & Coady, 1988, p. 108).

2.8.2 Assessment of Vocabulary Size

In a typical vocabulary size test, test takers are given a large number of words (Laufer & Goldstein, 2004; Meara, 2009; Read, 2000, 2004b) and evaluated whether those words are known or not (Meara, 2009). The nature of vocabulary size tests has been explained as follows:

> At first sight, this work looks as though we are primarily concerned with single words, but actually things are more complicated than this. If the target words are well-chosen, then we can extrapolate from the target words to an estimate of the test-takers *overall vocabulary size*, and most tests of vocabulary breadth do just this. Thus, although we are ostensibly testing individual words, what really interests us is using this data to generate a description of the test-takers' *overall vocabulary size*. Vocabulary size is not a feature of individual words: rather it is a characteristic of the test takers *entire vocabulary*. (Meara, 2009, p. 75) (Emphasis added)

Vocabulary size has traditionally been divided into two according to what is expected of the learner to do when they are assessed. 'Receptive vocabulary size' is assessed by recognition tests while 'productive vocabulary size' is assessed by recall tests (Milton, 2009; Nation, 1990, 2001; Schmitt, 2010a). Recognition items are aimed at testing whether "learners can remember the meaning of a word when they see or hear that word" while recall items intend to test whether learners "can say or write the word when they see some representation of its meaning" (Nation, 1990, p. 79). To clarify, translating an underlined word in an L2 sentence requires receptive knowledge, where the learner goes from the form of the word to its meaning, whereas translating a given L1 word into L2 (e.g. English) requires productive knowledge, where the learner goes from the meaning to the word form, and a recognition vocabulary item uses choices, whereas a recall item does not and asks the testee to provide the required form or meaning (Nation, 2001).

In his major book, *Assessing Vocabulary*, Read (2000) identifies four of the most commonly used test formats in vocabulary size tests: (i) multiple choice items of various kinds, (ii) matching of words with synonyms or definitions, (iii) supplying an L1 equivalent for each L2 target word, and (iv) the checklist (or yes-no), in which the test-takers simply indicate whether they know the word or not. In a later article, Read (2004b) comments that the test-takers' task needs to be a simple one (e.g. the four test formats) as a test of vocabulary size has to assess a large sample of words in a reasonable length of time.

There are a number of tests assessing vocabulary size albeit most of them are tests of receptive vocabulary size with recognition items rather than tests of productive vocabulary size, the reason of which is likely to be the fact that "it is much more difficult to assess productive vocabulary knowledge than it is to assess receptive vocabulary knowledge" (Meara, 2009, p. 34; Meara & Fitzpatrick, 2000, p. 20). Read (2004a, p. 155) comments that "the best-known" test of vocabulary size is Nation's

(1983, 1990) Vocabulary Levels Test (VLT), which has five bands (2K, 3K, 5K, 10K and the UWL) covering the most frequent 10,000 words in English. The VLT has a word-definition format (Schmitt, 1994) requiring "form-recognition" (Schmitt, 2010a, p. 197) where there is "a simple task of matching words and definitions" (Read, 2004a, p. 155). Although it was originally designed as a diagnostic test for classroom use, it has been widely used for various purposes such as placement in language programs and a measure in vocabulary studies and was later revised and validated by Beglar and Hunt in 1999 and by Schmitt, Schmitt and Clapham in 2001 (Read, 2004a).

Another well-known test of vocabulary size uses the checklist format, the Eurocentres Vocabulary Size Test (the EVST) (Meara & Jones, 1990, cited in Meara, 2010), and is the first of a series of tests that Meara and his colleagues produced. The EVST uses the simplest format, perhaps "deceptively simple" as Milton (2009, p. 73) calls it, where the test-takers see a list of lexical items and indicate whether they know it or not, which could be labelled as meaning-recall items, although the testees are not asked to demonstrate the meaning in any way (Schmitt, 2010a). There are five main levels, each containing 3 tests of 60 lexical items, 40 real English words from that particular band and 20 imaginary words and the test could be used to get a rough lexical profile of individual learners or to monitor students' progress over time. It was used in Eurocentres language schools as a placement test (Meara, 2010). The second of the series is the X_Lex, which is a computerized checklist test that covers the 5,000 level and provides both a vocabulary profile and overall vocabulary size estimate. The third, the Y_Lex, is the continuation of X_Lex, as it is an advanced version and aims at more advanced language users. It covers words in the 6K-10K range and provides an overall vocabulary size in addition to vocabulary knowledge profiling (Schmitt, 2010a). Meara and Milton (2003, cited in Milton, 2010) tested students passing Cambridge exams at various levels and had an estimate of their vocabulary sizes through X-Lex tests; their data show that, for example, A2 level (Kernel English Test) test takers' X_Lex vocabulary size result corresponds to 1,500-2,500 words while, for example, C1 level (Cambridge Advanced English) to 3,750-4,500.

While explaining the rationale of their Computer Adaptive Test of Size and Strength (CATSS), Laufer and Goldstein (2004, p. 409) emphasize the importance of "the ability to establish the *link between word form and meaning*", that "the form

meaning link in the mental lexicon can have four degrees of strength: active recall (…), passive recall, active recognition, and passive recognition, …" and maintain that:

> Knowing *many* words (units of meaning) is more important than knowing few words *in depth*. Hence, a good vocabulary test should test *how many words* are known. In other words, it should try to provide a picture of the learner's overall vocabulary size (Laufer & Goldstein, 2004, p. 409).

The CATSS has 30 items from five frequency bands (2K, 3K, the AWL, 5K and 10K) in four modalities as listed above and thus has 600 items altogether but because the test is computer adaptive, a testee does not have to answer all the items; for instance, a test taker will not have to answer questions in the lower strength items if s/he has answered that item correctly in the strongest mode active-recall. However, if a testee gives no response or an incorrect response for a word in the active-recall mode, then the word is kept in memory for the testee to encounter it again in the lower-strength modalities. The items in each frequency band are presented after all the items in the previous band have finished (Laufer & Goldstein, 2004)

The most recent test of vocabulary size is Nation and Beglar's (2007) Vocabulary Size Test (VST) containing 140 items of "traditional four-option multiple choice meaning-recognition format, with the target word and a non-defining example sentence as the stem" (Schmitt, 2010a, p. 199) where each frequency level (1K-14K) is represented by 10 items and the AWL is distributed among 1K-10K (Nation & Beglar, 2007). The VST is a measure of written receptive vocabulary size where the testees need to "have a moderately developed idea of the meaning of the word", which means the VST is slightly more demanding than the VLT as "the correct answer and the distractors usually share some elements of meaning and thus it is not diagnostic like the VLT but a measure of proficiency to determine a learner's entire vocabulary" (Nation & Beglar, 2007, p.11). The VST has been validated by Beglar (Beglar, 2010; Schmitt, 2010a; Nation, 2012) with Rasch reliability indices of >0.96 and commented to be providing "teachers and researchers with a new instrument that greatly extends the range of measurement provided by other measures of written receptive vocabulary size" (Beglar, 2010, p.101).

2.9 Lexical Threshold

Lexical threshold marks either the "all-or-nothing" or "the probabilistic boundary" between having and not having enough lexical knowledge to adequately

comprehend a text (Nation, 2001, p. 238). In the former traditional view, adequate comprehension is possible only if the threshold is crossed, while in the latter the chances of adequate comprehension are higher or lower depending on whether the threshold is crossed or not and Laufer (1989; 1992) takes this probabilistic view (Nation, 2001).

Nation (1990, p. 116) emphasises "the important priority" of "developing a large reading vocabulary" for students aspiring to continue academic study, where the researcher argues at least 3,000 headwords are necessary for reading unsimplified texts with some chance of understanding; however, he also warns that although guessing is possible at around 5-6% density of unknown words (about 15-18 unknown words on one page), the vocabulary burden is high. Laufer and Ravenhorst-Kalovski (2010, p. 16) also refer to "reading vocabulary" as "sight vocabulary" and define it as "words whose meaning is so familiar … they can be understood out of context. Therefore, when encountered in a text, these words are recognised and decoded quickly and without any cognitive effort" and it is then explained that a reader's size of sight vocabulary and lexical text coverage are related factors of lexical threshold.

Several research studies have been conducted to provide some insight into lexical threshold; how sight vocabulary size, lexical text coverage and reading comprehension interact. Hirsh and Nation (1992) state that for pleasurable reading of unsimplified texts students need a vocabulary size of about 5,000 word families corresponding to 97-98% text coverage; where there are 3-2 unknown tokens per 100 tokens, which means there is one unfamiliar token in every 3.3-5 lines of text.

Hsueh-Chao, and Nation's (2000) study shows similar results to Hirsh and Nation's (1992) and West's (1955, cited in Hsueh-Chao & Nation, 2000); where four groups of text coverage, 80%, 90%, 95% and 100% were created; a predictable relationship between the density of unknown words and degree of comprehension was observed and the same figure of 98% text coverage determined the threshold at which the density of unknown words was one in fifty.

Laufer (1992) states the vocabulary threshold for satisfactory comprehension, which in her study was considered as 56% success in the standardized reading comprehension tests, to be 3,000 word families but adds that if adequate comprehension was defined as, for example, 63% or 70% reading score, then the lexical threshold

aimed to be reached would be 4,000 and 5,000 word families respectively. Nation (2006) reports both on the trialling of the 1K-14K lists prepared from the British National Corpus (BNC) and uses those lists to determine the lexical threshold (i.e. the vocabulary size that is necessary) for comprehending written and spoken English without being assisted. The results show that the 14K lists were sequenced as it should be and that assuming unassisted comprehension requires 98% text coverage, a vocabulary size of 8,000-9,000 word families (including 1-2% proper nouns) marks the lexical threshold for reading novels. The lexical thresholds for various other texts ESL/EFL learners are likely to deal with are summarized as 8,000 word families (including 5-6% proper nouns) for newspapers; 6,000 word families (including 1.5% proper nouns) for children's movies; and 7,000 word families (including 1.3% proper nouns) for spoken English in Nation (2007), where the VST is introduced.

Lexical threshold for unassisted reading has recently been revisited by Laufer and Ravenhorst-Kalovski (2010, p. 15), who attempt to conceptualise "adequate reading comprehension" and to see at what lexical threshold such comprehension occurs; i.e. what text coverage and what vocabulary size are needed. The VLT (Nation, 1983) revised by Schmitt, Schmitt and Clapham (2001), Vocabulary Profiler based on the 20K BNC and a standardized national reading comprehension test were used in the study and the results suggest that there are two thresholds: a minimal lexical threshold that requires 95% coverage (including proper nouns) and 4,000-5,000 word families and an optimal lexical threshold with a coverage of 98% (including proper nouns) and 8,000 word families.

It seems that the most recent studies agree that a lexical threshold with 98% coverage that requires the receptive knowledge of 8,000-9,000 word families provide favourable conditions for unassisted pleasurable reading if not guaranteeing it.

2.10 Incidental and Intentional Vocabulary Learning

In any attempt to answer the question of how learners, either L1 or L2, deal with the extremely challenging task of learning all the words they need in both communicative and academic environments, it has been customary to touch upon the concepts of incidental and intentional learning (Barcoft, 2004, 2009a, 2009b; Day et. al, 1991; Ellis, 1995; Gu, 2003a, 2003b; Hulstijn, Hollander & Greidanus,1996; Hulstijn,

2001; Nation, 2001; Schmitt, 2010a; Waring & Nation, 2004; Wesche & Paribakht, 2000; 1994), which are usually associated with the terms implicit and explicit (Sökmen, 1997) or indirect and direct (Nation, 1982) learning. Hulstijn (2001, p. 267) outlines the distinction as follows:

> Currently, in the applied domains of L1 and L2 pedagogy, incidental vocabulary refers to the learning of vocabulary as the by-product of any activity not explicitly geared to vocabulary learning, with intentional vocabulary learning referring to any activity aiming at committing lexical information to memory.

Ellis (1995) points to the fact that implicit vocabulary learning is identical to incidental learning as Krashen's (1989, cited in Ellis, 1995) Input Hypothesis underscores that language is acquired – or is "picked up" (Hulstijn, Hollander & Greidanus, 1996, p. 327) – subconsciously, where the attention is focused on understanding messages but not on the form of the language. Along the same line, Ellis (1995, p.5) also acknowledges a "contra-Krashen" view, where learners are regarded as active information processors with various meta-cognitive strategies to enhance their learning of vocabulary.

The very question of whether vocabulary is best learned incidentally through an implicit, natural process of picking up during extensive reading or intentionally through an explicit, planned process of learning during direct vocabulary instruction has long been seen as a dichotomy until very recently when several researchers came to express that in fact different ways of vocabulary learning may well be placed on a continuum. Coady (1997, pp. 275-281) identifies four main positions on this continuum. The first is the "context alone" of Krashen, which almost excludes the need for or the effect of direct instruction and which is supported by Nagy and Anderson's (1984, cited in Coady, 1997) conclusion that the vocabulary size of an L1 learner cannot solely rely on explicit instruction, but that vocabulary is learnt in increments through incidental learning during extensive reading. The second position is "strategy instruction", where the main source of vocabulary learning is still considered as the context but there is a felt need for equipping the learner with relevant explicit strategies (Oxford & Crookall, 1989; Sökmen, 1997), some of which may even take the form of partially decontextualized activities. The third position is called "development plus explicit instruction", where a wide variety of techniques are employed to teach explicitly the highly frequent words at early stages but at later stages the teaching and learning are more context-based – the typical situation in most EFL contexts. Nation (1990)

emphasizes the need for quick learning of the most frequent 2,000 words using most efficient means assisted by direct vocabulary teaching and graded readers and Coady (1993, cited in Coady, 1997) expresses that those words need to be learnt to the point of automaticity. The fourth position in the continuum is "classroom activities", which is for teaching vocabulary in the traditional sense through practical handbooks such as *Working with Words* by Gairns and Redman (1986), which do not advocate a specific methodology but provide generic activities.

Schmitt (2010b, p. 40) clearly states the pros and cons of each type of vocabulary learning as follows:

> In short, intentional learning is focused and effective, but limited in terms of number of words (and word knowledge types) it can address. Incidental learning is slow and untargeted, but can fill in the 'contextual' types of word knowledge, and provide recycling for words already partially learned. From this, we can see that both approaches are necessary, as they compensate for the gaps left by the other approach.

The two "seemingly opposing .. ends of the dichotomy" (Gu, 2003a, p.98), which, in reality, are "complementary activities" intensifying one another's learning outcomes (Nation, 2001, p. 369), after a full swing from direct, explicit teaching and learning of vocabulary to implicit learning of words, have appropriately come together back in the middle as intentional plus incidental learning (Sökmen, 1997).

2.11 Vocabulary Learning Strategies

The notion of 'strategy' that underlies both language learning strategies (LLS hereafter) and vocabulary learning strategies (VLS hereafter) has been in the conceptual vocabulary of applied linguistics since the 1970s, during which Hyme's communicative competence based on the idea that "there are rules of use without which the rules of grammar would be useless" (Hymes, 1972, cited in Grenfell & Macaro, 2007, p. 10) was distinguished from Chomskyan competence based on deep innate structures of Universal Grammar. The seminal article by Canale and Swain (1980, p. 30) posits "strategic competence" as one of the four components of communicative competence. Meanwhile, research in the 1970s appears to have shifted its focus from a predominantly teacher-centred perspective to one where the way learners' actions affect their language acquisition began to be explored (Schmitt, 1997).

Oxford (1990, p. 7) refers to the Greek origin of the word 'strategy', meaning leadership in a war; managing the troops, ships, or aircraft in a planned way and

mentions another related but different word ‘tactics’, defined as tools to achieve the success of strategies, emphasizing the fact that the two terms have some shared qualities such as “planning, competition, conscious manipulation and movement toward a goal”.

When the word ‘strategy’ is used without its military aspects and applied to education, the term ‘learning strategies’ emerges. Takac (2008) and Macaro (2001) list numerous definitions of LLS by various researchers who all agree that they contribute to language learning although they differ in their approaches. LLS may simply be defined as “operations employed by the learner to aid the acquisition, storage, retrieval, and use of information” (Oxford, 1990, p. 8). It is commented that although commonly used, this simple definition fails to fully convey the reality of the LLS and therefore expands on it: “learning strategies are specific actions taken by the learner to make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferrable to new situations (Oxford, 1990, p. 8). The following table (Oxford, 1990, p. 10) shows the general features of LLS.

Table 2.5. Features of Language Learning Strategies

Language learning strategies:

1. Contribute to the main goal, communicative competence
2. Allow learners to become more self-directed
3. Expand the role of teachers
4. Are problem oriented
5. Are specific actions taken by the learner
6. Involve many aspects of the learner
7. Support learning both directly and indirectly
8. Are not always observable
9. Are often conscious
10. Can be taught
11. Are flexible
12. Are influenced by a variety of factors

An attempt to define VLS would simply quote the definition of LLS with one difference which is that it has a more specific goal of learning the vocabulary of the language. This is evident in Takac’s (2008, p. 52) conclusion that VLS are “specific strategies utilised in the isolated task of learning vocabulary”. However, Catalan (2003, p. 56) summarizes all the complementary aspects of the VLS definitions after reviewing what several researchers have proposed into one working definition as given below.

> …vocabulary learning strategy: knowledge about the mechanisms (processes, strategies) used in order to learn vocabulary as well as steps or actions taken by students (a) to find

> out the meaning of unknown words, (b) to retain them in long-term memory, (c) to recall them at will, and (d) to use them in oral or written mode.

Nation (2001, p. 352), who states that "vocabulary learning strategies are part of language learning strategies which in turn are a part of general learning strategies", mentions the difficulty in defining what a strategy exactly is but asserts that in order for a strategy to deserve a teacher's attention, it needs to (i) involve choice, (ii) be complex, (iii) require knowledge and benefit from training and (iv) increase the efficiency of vocabulary learning and vocabulary use.

Nation (1990) underscores the importance of teaching students VLS for their use when trying to learn low frequency vocabulary, which is a large body of lexical items, as they are too many to be dealt with in class time and knowledge of which provides learners with the required lexical text coverage for unassisted understanding (Nation & Chung, 2009).

Graves (1987, cited in Lawson & Hogben, 1996, p. 106) suggests that as students do most of their vocabulary learning on their own, it is sensible to motivate them "to adopt personal plans to expand their vocabularies over time". Recently, there has been an increasing stress on the importance of developing foreign language learners' autonomous learning strategies (Lawson & Hogben, 1996, p. 106). McCarthy (1990, p. 129) asserts that "learners can be trained to take more responsibility for how and what they learn, and organizing vocabulary learning is a particularly productive area for encouragement of learner autonomy". Nation (1998) in his article entitled *Helping learners take control of their vocabulary learning* states that lack of vocabulary is seen by language learners as one of the major obstacles to being able to use the L2 and that VS and text coverage studies show that teachers cannot present and practise all those words necessary for normal language use, which is why learner autonomy regarding vocabulary growth is essentially important. Nation (1998, p. 9) concisely expresses that "no matter what the teacher does or what the course book presents, it is the learner who does the learning" and lists several principles of how learners can become autonomous in their vocabulary learning (Nation, 1998, pp. 10-16):

1. Learners should know what vocabulary to learn, what to learn about it, how to learn it, how to put it to use, and how to see how well it has been learned and used.
2. Learners should continue to increase their vocabulary size and enrich the words they already know.

3. Learners should use word frequency and personal need to determine what vocabulary should be learned.
4. Learners should be aware of what is involved in knowing a word and should be able to find that information about words.
5. Learners should be familiar with the generalizable language systems that lie behind vocabulary use.
6. Learners should know how to make the most effective use of direct, decontextualized learning procedures.
7. Vocabulary learning needs to operate across the four strands of meaning focused input, language focused learning, meaning focused output, and fluency development.
8. Learners should be aware of and excited by their progress in vocabulary learning.

Schmitt (2000) points to the fact that strategies were most often used by many of the learners for learning vocabulary rather than more complicated language tasks that require the integration of a number of linguistic skills, which could be attributed to the more discrete nature of learning vocabulary, perhaps making the effective applications of the strategies simpler, to the tendency of classrooms to put more emphasis on discrete activities than on integrative ones, or to the special value students place on vocabulary learning. It is also added that simpler, more mechanical VLS are more commonly preferred to more complex ones where considerable active manipulation of information is required and that it is possible to generalize that "shallower" VLS are likely to be more appropriate for beginners, while VLS that require deeper-level processing may more often be benefited by intermediate or advanced learners (Schmitt, 2000, p.132).

Apparently, VLS research has taken its roots from two research orientations. The first consists of studies concerning general LLS, many of which are in fact VLS or may be applied to vocabulary learning. The other line of research contains studies investigating the efficacy of individual VLS application. These two directions of research lead the way to the appearance of a separate subgroup of LLS, namely VLS, thereby drawing attention to the perceived need for more systematic research into VLS (Takac, 2008), as although vocabulary is considered by most language teachers as the "single, biggest component of any language course…,… yet vocabulary often seems to be the least systematized and the least catered for of all the aspects of learning a foreign language" (McCarthy, 1990, p. viii).

2.11.1 A Basis for Vocabulary Learning Strategies

The pioneering work that has led the way to VLS studies has been a number of milestones studies carried out in the area of LLS. With her influential article, 'What the "Good Language Learner" Can Teach Us', Rubin (1975) presents techniques and

approaches that the successful language learner utilises. The researcher suggests that less successful students may readily be helped by their teachers to improve their performance if their teachers paid more attention to those learner strategies that are already seen as effective. Those seven good language learner strategies listed and elaborated in the article are briefly as follows. The good language learner (i) makes willing and accurate guesses, (ii) has a strong drive to learn by communication, (iii) does not feel inhibited, (iv) pays attention to form, looking for language patterns, (v) takes every opportunity to practice, (vi) monitors how he/she speaks and how others do, and (vii) pays attention to meaning (Rubin, 1975).

Among other researchers working on similar lines, Stern (1975, cited in Stern, 1983, pp. 414-415) puts forward 10 strategies, namely: (i) "planning", (ii) "active", (iii) "empathic", (iv) "formal", (v) "experimental", (vi) "semantic", (vii) "practice", (viii) "communication", (ix) "monitoring", and (x) "internalisation". By analysing the organisation of students' notebooks, their strategies for learning words and studying for tests were investigated by Cohen and Aphek (1978) in an attempt to isolate some important cognitive strategies and identify strategies particularly used for memorization, grammatical analysis and translating.

Rubin's (1981, p.124-126) study uses an observation schedule where the cognitive processes in language learning are first divided into two broad areas as processes that may directly and indirectly contribute to learning, both of which have their sub-categories of processes, and each process in turn has its several observable LLS. Directly contributing processes are "clarification/verification" (18), "monitoring" (3), "memorisation" (4), "guessing/inductive inferencing" (4), "deductive reasoning" (10), "practice" (9) and "indirect ones are creating opportunity for practice" (6), "production tricks" (13); 67 items of LLS in total.

Naiman, Fröhlich, Stern and Todesco (1996), who take Stern's (1975) list as their starting point, ask several fundamental questions in the preface to their book: "What makes good language learners tick? What do they do that poor learners don't do? Could we help the poor learners by teaching them some of the good learners' tricks?" (Naiman et.al., 1996, p. xii), and categorized the following general strategies: (i) "active task approach", (ii) "realisation of language as a system", (iii) "realisation of language as a means of communication and interaction", (iv) "management of affective

demands", and (v) "monitoring of L2 performance" (Naiman, et. al., 1996, pp. 30-33). Apart from these five general strategy categories, the study identified a comprehensive list of more specific techniques made up of 53 items grouped under 7 sections, one of which is vocabulary, which has the most techniques, 13, and these are listed as follows:

1. Making up vocabulary charts in L2/L1 and memorizing them…
2. Learning words in context…
3. Putting words into different structures and drilling oneself
4. Learning words that are associated in a field…
5. Reading aloud and/or silently (looking up words…)
6. Using a dictionary when necessary…
7. Reading a dictionary
8. Listening to conversations or the radio…
9. (a) carrying a notebook around … (b) writing down words one hears in phonetic transcriptions…
10. Using new words in phrases or in practical context
11. Games …
12. Repeating words
13. Switching on tape-recorder with vocabulary when one feels relaxed (Naiman, et. al. 1996, pp. 33-37).

A basic classification of LLS is put forward by the researchers O'Malley and Chamot (1985; 1990) and Chamot and O'Malley (1987), namely, (i) "metacognitive"; "advance organisation", "organisational planning", "selective attention", "self-monitoring", "self-evaluation", (ii) "cognitive"; "resourcing", "grouping", "note taking", "summarizing", "deduction/induction", "imagery", "auditory representation", "elaboration", "transfer", "inferencing", and (iii) "social-affective"; "questioning for clarification", "cooperation and self-talk" (1987, pp. 248-249).

By far the most influential LLS categorisation scheme, probably the most used as it is or as adapted and the most referred to, appears to be Rebecca Oxford's (1990) Strategy Inventory for Language Learning (SILL). SILL is a very detailed list of 80 specific LLS under two broad categories of direct and indirect LLS; the direct ones require the direct manipulation of the language while the indirect ones are used to support and manage learning without necessarily requiring language itself (Cohen & Macaro, 2007). Memory strategies, cognitive strategies and compensation strategies are the sub-categories of the direct strategies, and meta-cognitive strategies, affective strategies and social strategies are those of indirect strategies. As many of SILL's memory strategies are VLS (Takac, 2008) and as some part of it has provided a great base for Schmitt's (1997) VLS taxonomy, which has been used as a research tool in the present study, one of SILL's relevant categories and sub-categories are listed as follows:

Memory Strategies

A. Creating mental linkages
    1. Grouping
    2. Associating/elaborating
    3. Placing new words into a context
B. Applying images and sounds
    1. Using imagery
    2. Semantic mapping
    3. Using keywords
    4. Representing sounds in memory
C. Reviewing well
    1. Structured reviewing
D. Employing action
    1. Using physical response or sensation
    2. Using mechanical techniques (Oxford, 1990, p. 18)

The above mentioned studies seem to be among the most significant ones that have laid the groundwork for the VLS research that began to advance, especially by the 1990s.

2.11.2 Studies on Particular Vocabulary Learning Strategies

There have been a group of studies focusing either on one single VLS or several VLS, or even one category of VLS, the general procedure of which is to introduce the particular VLS to the students first, then get them to practice the VLS through examples, monitor whether and how the students use the VLS during the application stage and finally evaluate the students' comments and opinions after the treatment period in the studies. Some studies have reported that several VLS are more effective when used together while others have come to conclusions by comparing two different VLS.

2.11.2.1 The Keyword Method

Among above mentioned studies is one on a mnemonic strategy, the keyword method, by Raugh and Atkinson (1974, p. 1), which is a two-stage process: the first requires to find a keyword in L1 that is similar in sound to part of the target word in the L2 and so creates an "acoustic link", and the second requires the student to form a mental image that "interacts" with the L1 keyword, creating a mental image, a "mental link". Thus, it may be said that the keyword method is a combination of an acoustic and mental link to help the students remember the L2 words. Raugh and Atkinson (1974) report that the keyword method proved to be highly effective when the results compared were 72 % to 46 % in favour of the keyword method. Another study with similar results

is Pressley, Levin and Delaney's (1982, p. 62), where they provide an example to demonstrate how the keyword method works in their study in which L1 is English and L2 is Spanish:

> For example, cart is a good keyword for the Spanish word *carta*. Then a meaningful interaction involving the keyword (here, *cart*) and the vocabulary word's definition (here, *postal letter*) is constructed. This can be in the form of a word provided interactive illustration, or the learner can generate an interactive visual image. Thus, for *carta* a reasonable picture/image would be that of a postal letter inside a shopping cart. Alternatively, a meaningful sentence can be used to link the keyword to the vocabulary word's definition, as in *The cart transported the letter*.

Jenpattarakul (2012) carried out a study to investigate the effectiveness of the keyword method as a vocabulary retention technique in a Bangkok University context and explore the attitudes of students towards the keyword method with significant positive results and conclusions that this particular VLS helped the students to commit words to memory and retrieve them, provided them with motivation to learn English and contributed to their imagination and creativity. Another study conducted to find out whether learner's vocabulary learning levels are affected by strategy training is Baykul's (2010) in a Turkish EFL context, focusing on three memory VLS, namely, one of which is the keyword method, others being imaging word form and grouping words, all found to be conducive to vocabulary achievement. Another comparative study between the three VLS – keyword method, semantic mapping and keyword-semantic combined – by Brown and Perry (1991) revealed that keyword method was facilitative of lower-proficiency students' vocabulary learning when cued-recall test was given immediately after the treatment and that the combined keyword-semantic strategy resulted in increases in students' vocabulary retention in delayed tests on both recognition and cued-recall tests of vocabulary.

2.11.2.2 Dictionary Use

Another important particular VLS that has received exclusive attention is the dictionary use, "an independent vocabulary acquisition strategy" (Sökmen, 1997, p. 155). It is commonly admitted that most EFL learners tend to prefer bilingual dictionaries over monolingual ones, and electronic or online dictionaries are favoured over traditional paper dictionaries for their assumed practicality and quickness to serve the purpose.

Baxter (1980), whose study entitled *The Dictionary and Vocabulary Behavior: a Single Word or a Handful?*, concentrates on students' dictionary use habits and vocabulary behaviour in the classroom in relation to their success in meeting their communicative needs, argues that the choice of a monolingual dictionary might be more supportive in their foreign language improvement as what bilingual dictionaries offer is a single vocabulary item whereas it is the definition that is provided in a monolingual dictionary, which encourages students to use the definition in classroom conversation and take advantage of the various resources offered in spoken English. In his questionnaire, the students were asked what type of dictionary should be chosen for students' use, monolingual or bilingual and why and it was reported that they preferred bilingual dictionaries because of the ease with which they are used and because of definitions in monolingual dictionaries being difficult to understand (Baxter, 1980). It is concluded that students should make use of a "judicious combination of the two types of dictionaries" to learn as many vocabulary items as they can since their aim is to express their meaning – "hitting the target" – either with one single word as offered by bilingual dictionaries or a handful of them as in definitions offered by monolingual dictionaries (Baxter, 1980, p. 335).

In a study done by Hsien-jen (2001) with English-speaking learners of Spanish, the subjects were divided into three groups: the first was given a monolingual, the second a bilingual and the third was given neither serving as the control group. The conclusions were that while students preferred to look up words in a bilingual dictionary instead of guessing meaning from context when dictionaries are at their disposal, the group with bilingual dictionaries looked up words more frequently than the group with monolingual dictionaries and that the group with bilingual dictionaries did not attempt to use other strategies whereas the group with monolingual dictionary access only were pressed by need to use several other strategies such as using English cognates and guessing meaning from the context. This compensatory behaviour was attributed to the relatively lower lexical level of the students that is insufficient to understand the definitions provided in the monolingual dictionaries.

Laufer and Kimmel (1997, p. 362) mention a "paradox" between the fact that users say the monolingual dictionary is more useful and the fact that they prefer bilingual dictionaries in action; namely "the paradox between dictionary usefulness and

dictionary usability". In their study, they set out to investigate how learners really used bilingualised dictionaries, which present both the monolingual information about each word and its L1 translation and their research question was simply, "What part of the entry do learners read when they look up an unfamiliar word: the monolingual, the bilingual, or both?" (Laufer & Kimmel, 1997, p. 361) Working with 70 Hebrew-speaking EFL learners, they grouped the learner responses into three look-up patterns: Hebrew-motivated, English motivated and Hebrew- and English-motivated. The results of the study reveals that although a minority of the subjects used both the monolingual and bilingual information in the entry and the overwhelming majority used either the L1 or L2 information, it does not undermine the value and suitability of the bilingualised dictionary as it caters for many different individualised look-up patterns such as monolingual look-up for some words, bilingual for others and both for still others; briefly, its efficacy is because of its compatibility with all individual preferences.

Bilingual dictionary use was investigated by Hulstijn, Hollander and Greidanus (1996) along with marginal glosses of unfamiliar words in the form of L1 translations to see which condition would be more conducive to vocabulary recall after reading a story and it was concluded that students tended to make use of marginal glosses and with greater effect while they rarely used the bilingual dictionary apparently because of what might be called "a strong aversion to dictionaries" (Miller & Gildea, 1987, cited in Hulstijn, et al., 1996, p. 335); however, when students consult a dictionary the vocabulary learning results may equal or even be greater than that of marginal glossing. The researchers add that learners of intermediate and advanced levels tend to look up words only when dictionary look up is made as easy as a click on the computer screen and that when they perceive that the word is essentially relevant to comprehension or when it appears multiple times to catch their attention.

2.11.2.3 Guessing Meaning from the Context

One study which stands out amongst many studies concerning contextual vocabulary learning is Clarke and Nation's (1980) where they provide useful guidance for teachers and learners with a five-step procedure , which is summarized by Nation (2001, pp. 395-396) like below.

Step 1: Decide on the part of speech of the unknown word.

Step 2: Look at the immediate context of the word, simplifying it grammatically if necessary

Step 3: Look at the wider context of the word, that is, the relationship with adjoining sentences or clauses.

Step 4: Guess.

Step 5: Check the guess.

Is the guess the same part of speech as the unknown word?

Substitute the guess for the unknown word. Does it fit comfortably into the context.

Break the unknown words into parts. Does the meaning of the parts support the guess.

Look up the word in a dictionary.

Clarke and Nation (1980) argue that a student with a vocabulary size of around 3,000 most frequent words usually are able to guess 60-70 % of the unfamiliar words in a reading text, some students may even succeed in 80 %, which may in theory show that if some learners can do this with training and ample practice, all the learners may manage to guess most of the words in a text, if not all, as not all the unknown words can be guessed from context, although they are very few. Citing Honeyfield's (1977) and Wainman's (1979) suggestions that modified cloze tests and standard cloze test in fact test the same thing and practice guessing from context, Clarke and Nation (1980) emphasize that guessing from context is crucial in the reading process and is slightly short of inference and prediction which are characteristic of intelligent reading. Thus, every chance the students are provided with guessing from the contexts makes them successful readers and improves their vocabulary learning while every chance that is ruined by telling them what a word means robs them of practising guessing from context or inferencing and vocabulary growth (Bright & McGregor, 1970, cited in Clarke & Nation, 1980)

Nation and Coady (1988, p. 104) list several variables that facilitate or hinder the use of contextual clues: (i) "density" of unknown words; number of unknown words divided by that of known words, (ii) the frequency of the unknown word's occurrence, (iii) the appearance of the unfamiliar word in a variety of contexts (iv) how essential the unfamiliar word is to comprehend the context it appears in, (v) how close the contextual clues are to the unknown word and (vi) how useful the learner's background knowledge is.

There are numerous studies (Day et. al. 1991; Hulstijn et. al, 1996; Hulstijn, 2001; Lawson & Hogben, 1996) on the relationship between guessing from context under the more general term of incidental learning and vocabulary learning either through extensive or intensive reading.

2.11.2.4 Semantic Mapping

A particular VLS that has caused a considerable controversy among researchers is what is called semantic mapping, semantic networking or semantic sets. Using semantically related sets of words to teach vocabulary is in line with two of Sökmen's (1997) key principles; integrating new words with old and promoting a deep level of processing.

While many researchers have arrived at conclusions in favour of semantically related sets being an effective way of presenting new vocabulary, seemingly compatible with the organisation of the mental lexicon, (Crow, 1986, cited in Nation 1990; Haycroft, 1993, cited in Erten & Tekin, 2008), others (Higa, 1963, cited in Nation, 1990; Tinkham, 1993, cited in Schmitt; 2000; Waring, 1997) have found an impeding effect – "interference" or "cross-association" (Nation, 1990, pp. 45-47) – which is based on the idea that the common features of the similar words lead to difficulty for learners to remember which item refers to which referent, whose consequence is likely to be "confusion rather than useful learning", which is why it is not recommended to simultaneously present opposites, synonyms, free associates, or members of the same lexical sets such body parts, clothing items or kinds of fruit (Nation, 2001, p. 119). It was regarded as one of the myths of vocabulary learning (Folse, 2004).

Stahl and Vancil (1986) define semantic mapping as a procedure where the teacher writes on board key words about the material to be read and terms that are related to the key words are elicited and written on the board, where a map is created and then there is a discussion about the relationships between the key words and the target words and finally students categorize the sections of the map. The study disclosed that the most crucial element in the procedure was discussion that makes semantic mapping effective as it may require students to process meanings of words more actively, better connect new vocabulary knowledge to the already existing, and be alert at any time to be called upon to participate in the discussion by the teacher.

Semantic mapping has been found to be more efficient than the traditional vocabulary learning technique by Dilek and Yürük's (2012) study which set out to investigate a possible relationship between university students' beliefs about VLS and their preferred VLS, and particularly to compare the effects of semantic mapping on vocabulary learning in a Turkish EFL context. Another study with a similar research design by Yıldız (2012) with young EFL learners yielded contrary results – revealing that semantic mapping procedure did not produce better gains in vocabulary knowledge than the traditional technique.

In their study, Morin and Goebel (2001, p.11) follow Tinkham (1997, cited in Morin & Goebel, 2001) in what they take semantic mapping to be; for them it is "thematic clustering", differentiated from "semantic clustering"; the former involving different parts of speech relating to a particular schema, such as in the thematic cluster, *school, learn, classmates, lesson, hard* and the latter based on semantic and syntactic similarities such as in the semantic cluster, *school, class, lesson, teacher, student, classroom*. It was concluded that the subjects in the experimental group who were provided with semantic mapping in addition to communicative tasks did not gain a significant advantage over the control group; however, they were able to categorize more words under thematic headings.

In a replication of Tinkham (1993, cited in Waring, 1997), Waring (1997) underscores the fact that word lists given to students in semantic sets, which are items of a superordinate concept, causes some negative interference with the learning of those words while presenting word lists in semantically unrelated sets appear to produce better vocabulary gains. In the same vein, Erten and Tekin (2008) point to the same negativity of presenting words in semantic sets mentioning the interference effect that results from cross-association, which may even hamper students' vocabulary learning. Both studies mention the approach of popular course books to presenting vocabulary in semantic sets and assert that using thematic sets rather than semantically too related words may be more conducive to students' learning of vocabulary.

According to Nation (1990) cross-association can be avoided by (i) reducing the similarity between items, (ii) teaching opposites or strongly associated items separately in time, (iii) teaching the more frequent item first as it is easier for the brain to process

it, (iv) teaching the other item only after the first item is well learned, and (v) reducing the similarity between items by using different contexts, pictures or objects.

2.11.2.5 Vocabulary Notebooks

Especially with the advent of learner autonomy, that is, learning independently (O'Malley & Chamot, 1990; Oxford, 1990) notebooks specifically aimed at learning vocabulary have received some research attention recently, (Bozkurt, 2007; Fowle, 2002; Gu & Johnson, 1996, 2003; Hirchel & Fritz, 2013; Nation, 1990, 2001; McCrostie, 2007; Schmitt, 1997, 2000; Schmitt & Schmitt, 1995, Sökmen, 1997; Uzun, 2013); some focused theoretically on how keeping a vocabulary notebook is useful for building and expanding L2 vocabulary, others practically on how to design a vocabulary notebook while still others empirically on whether applying this particular VLS resulted in significant vocabulary gains when compared to control groups.

Keeping a vocabulary notebook can be considered a perfectly individualised way of storing and retrieving encountered words which may be totally unfamiliar, partly familiar, partially-known, or even well-known and prioritised words – a way each and every learner interacts with the word store of the L2, finding a personalised style of expressing their process of accumulating a vocabulary of their own, which is in a way as unique as their fingerprint, assuming that what is known to one learner may not be known to another or the extent a word is known by one learner may not be same as that of another.

It is in line with Graves' (1987, cited in Lawson & Hogben, 1996, p. 106) suggestion that it should be sensible to encourage learners "to adopt personal plans to establish their vocabularies over time" taking into account that the largest part of the vocabulary learning task is done independently by learners themselves. In the same vein, Sökmen (1997, p. 159) describes below the nature of the vocabulary acquisition task, one great way of which is vocabulary notebooks:

> … a task that involves their active participation, collaborating with classmates and also requiring *personal, quiet, self-reflective* periods (Rubin *et al*., 1994). When new words are integrated with past knowledge, learners realize that their past experiences are valuable and that they have the skills to process degrees of meaning, image, and make concrete a huge body of words in another language. (*emphasis added*)

In their successful attempt to provide teachers with some practical guidelines on how to help their students to start keeping "well-organized and pedagogically-sound" personal vocabulary notebooks, Schmitt and Schmitt (1995, pp. 133-137) listed eleven principles to be take into account, which are as follows:

1. The best way to remember new words is to incorporate them into language that is already known.
2. Organized material is easier to learn.
3. Words that are very similar should not be taught at the same time.
4. Word pairs can be used to learn a great number of words in a short time.
5. Knowing a word entails more than just knowing its meaning.
6. The deeper the mental processing used when learning a word, the more likely that a student will remember it.
7. The act of recalling a word makes it more likely that a learner will be able to recall it again later.
8. Learners must pay close attention in order to learn most efficiently.
9. Words need to be recycled to be learnt.
10. An efficient recycling method: the expanding rehearsal.
11. Learners are individuals and have different learning styles.

Deriving from the principles above, Schmitt and Schmitt (1995) explain that learners may follow a course of actions with a growing complexity; start by doing simpler tasks on their vocabulary notebook and continue with more complex ones which normally builds up on what has already be done, showing the incremental way of learning vocabulary.

A typical course of actions is likely to be in this order, even though there might be some individual differences between learners: (i) have an easy-to-carry vocabulary notebook either in the form of a loose-leaf binder, and index card binder or cards in a box, (ii) write L2-L1 word pairs and try to remember L1 by looking at L2 word, (iii) switch the order to L1/L2 synonym-L2 as recall involves deeper processing than recognition, (iv) enrich word knowledge by adding different aspects of the word such as collocations, semantic maps, hierarchical diagrams to show the superordinate or subordinate words, tallies of the frequency of encountering the word, other word family members together with roots, derivatives and affixes, pronunciation and stylistic aspects, (v) recycle the words, a method for which could be going back in the vocabulary notebook entries and adding those aspects of words on a regular basis, (vi) add some personalised touch by collecting information about the words from resources like dictionaries, text books, classmates or even teachers, (vii) do expanding rehearsal; deal with newly added words or partially-learned words more and less with words that

are retrieved more readily at regular intervals of time and perhaps located at a section entitled ‘learned’ (Schmitt & Schmitt, 1995).

The above mentioned procedure is recommended to be checked by teachers for purposes of checking errors (Kramsch, 1979, cited in Schmitt & Schmitt, 1995) and learning about their students’ progress in vocabulary learning as well as their problems (McCarthy, 1990)

In Turkish EFL contexts, studies by Bozkurt (2007) and Uzun (2013) provide empirical support for vocabulary notebooks having a beneficial effect on students’ vocabulary learning task; the former study showed keeping vocabulary notebooks aided both receptive and productive vocabulary acquisition, and the latter observed that students had a positive attitude towards vocabulary notebook keeping and that instructor input and feedback resulted in more vocabulary gains.

In a Japanese EFL context, McCrostie (2007) examined first year English majors’ vocabulary notebooks and found that (i) students selected words to a great extent from their textbooks, (ii) prefer to choose certain parts of speech, and (iii) have problems spotting high frequency words and thus rank all unknown words equally important. Hirschel and Fritz (2013) compared the short and long-term effectiveness of vocabulary notebooks and a Computer Assisted Language Learning (CALL) program with a spaced repetition with first-year ESL students. Both groups gained statistically similar significant results against the control group in short term; however, the CALL group was observed to do slightly better in the long term.

2.11.2.6 Metacognition

A great deal of research has investigated several particular VLS as a group, or more precisely, the category of metacognitive strategies. Oxford (1990) defines metacognitive strategies as actions that transcend cognitive actions per se and with which learners themselves can manage the coordination of various processes in their learning. Chamot, (1993) states that while cognitive strategies require mental or physical manipulations on the material that is to be learnt, metacognitive knowledge means being aware of what the demands of a particular task are, of what one did when doing similar tasks before and of what strategies would work for the task at hand and thus concisely put that “metacognitive strategies are executive processes used to plan,

monitor, and evaluate a learning task" (p. 311). Flavell (1979, cited in in Rahimi & Katal, 2012, p. 75) point to how metacognition positively affects learning in general:

> I believe metacognitive knowledge can lead you to select, evaluate, revise, and abandon cognitive tasks, goals, and strategies in light of their relationships with one another and with your own abilities and interests with respect to that enterprise. Similarly, it can lead to any of a wide variety of metacognitive experiences concerning self, tasks, goals, and strategies, and can also help you interpret the meaning and behavioural implications of these metacognitive experiences.

Thus, metacognition comprises of "declarative knowledge (self-knowledge, task knowledge, strategy knowledge) and procedural knowledge (planning for learning, monitoring a learning task while it is in progress, and evaluating a task once the task has been completed)" (Chamot, 2005, pp. 124-125). Strategically developed students being metacognitively-equipped have "the ability to orchestrate the strategies that best meet the task demands and their own learning strengths" (Chamot: 2004, p. 15); however, those who are not are not "skilled at matching strategies" (Chamot, 2005, p. 116) that are appropriate to the task being worked on.

Hsiao and Oxford (2002, p. 369) suggest that from a Vygotskian perspective, after having been assisted by competent adults or peers through the social interaction between them , learners gradually become more independent and "self-regulated" – that is, more metacognitively aware. Vice versa, Lam (2009), in her intervention study, examining the effects of metacognitive strategy instruction on the oral performance and strategy use of secondary school EFL students in Hong Kong, concludes that the experimental group performed better than the control group in the discussion task at hand.

In pursuit of an answer to their research question of whether explicit metacognitive strategies instruction significantly increases the lexical knowledge of Iranian EFL students, Rasekh and Ranjbari (2003) found that their experimental group gained significantly better results than the control group in the post-tests. Zhao (2009), whose study aimed to investigate whether metacognitive strategy training can facilitate vocabulary learning of Chinese EFL college students, reports that the treatment proved to be effective and the students receiving metacognitive strategy training outperformed those who did not in the post-training vocabulary test. In a study whose subjects were 130 third year students, teacher trainees in an English department who were provided with metacognitive strategies in a five week program, Çubukçu (2008) highlights the

impact of metacognition and proposes that in order for students to facilitate their vocabulary learning as well as their reading comprehension, teachers may help them make use of various metacognitive strategies.

It transpires that students who do not have metacognitive orientations are basically learners with no clear direction or who do not create opportunities to check their progress, achievements, and future goals (O'Malley, Chamot, Stewner Manzanares, Russo & Küpper, 1985) and that metacognition fuels learner autonomy with more self-knowledge and in turn it fuels student progress which contributes positively to learners' motivation and self-esteem and thus the whole process is further accelerated by this intertwined interaction, for the dynamism of which the enhancement of metacognition plays the most crucial role. (Victori & Lockhart, 1995)

2.11.3 Studies on Overall Vocabulary Learning Strategies

There have been a number of studies taking a holistic approach to the VLS as opposed to the "narrowly-focused approach" of the studies on particular VLS that compared the effectiveness of a few strategies on vocabulary growth, which serve as a "logical complement" (Schmitt, 1997 p. 217). The forerunner of the approach considering VLS as a whole is Ahmed (1989, cited in Meara, 1992; Fan & Nyikos, 2007), who classified the 38 strategies that his 300 Sudanese learners were observed to use and they themselves reported to have used into five macro-strategies of memorization, practice, dictionary use, note-taking, and group-work and after a complex cluster analysis, concluded that good learners made use of a much bigger variety of strategies and utilised other resources such as dictionaries whereas poor learners employed a fewer number of strategies like note-taking or ignoring unfamiliar words and showed a lack of strategies requiring L2 use.

Another definitive study is Sanaoui's (1995) where the researcher examined the daily written records of the things done by both ESL and FSL (French as a Second Language) to learn vocabulary (VLS), over a 4-week period and categorized the adult language learners into two groups; learners who have a "structured approach" to vocabulary learning and those with an "unstructured approach" (p. 24), where learners were thought to be on a continuum of five different aspects in vocabulary study as tabulated below.

Table 2.6. Features of a Structured and an Unstructured Approach to Vocabulary Study (Sanaoui, 1995, p. 24)

Structured Approach ⟷ Unstructured Approach	
Opportunities for learning vocabulary	
Self-created Independent study	Reliance on course Minimal independent study
Range of self-initiated activities	
Extensive	Restricted
Records of lexical items	
Extensive (tend to be systematic)	Minimal (tend to be ad hoc)
Review of lexical items	
Extensive	Little or no review
Practice of lexical items	
Self-created opportunities in and outside classroom	Reliance on course

With a large sample of 707 students in Alabama University, Stoffer (1995, cited in Kudo, 1999, p. 6) set out to cluster the 53 VLS in her VOLSI (Vocabulary Learning Strategy Inventory) into categories using a factor analysis that resulted in 9 different categories as listed below.

1. Strategies involving authentic language use
2. Strategies used for self-motivation
3. Strategies used to organize words
4. Strategies used to create mental linkages
5. Memory strategies
6. Strategies involving creative activities
7. Strategies involving physical action
8. Strategies used to overcome anxiety
9. Auditory strategies

Another major large-scale study with a sample of 850 non-English major students is Gu and Jonhson's (1996), whereby questionnaire items concerning VLS are first categorized into dimensions, then further into variables and finally into specific VLS, which sought to explore how Chinese learners of English extend their vocabulary size and improve their general English proficiency in relation to their frequency of VLS use and their beliefs towards vocabulary learning in general. The questionnaire devised for the study (VLQ Version 3), whose Version 1 and Version 2 were used in the pilot study and whose latest update is VLQ Version 5 by Gu and Hu (2003, cited in Gu, 2010) with a reduced number of 90 items in total, contains 17 items for beliefs about vocabulary learning and 91 items of VLS is summarized below (Gu & Johnson, 1996, pp. 673-679) with its dimensions, variables and number of items.

Beliefs About Vocabulary Learning (17items): Words should be memorized (8)*;* Words should be acquired in context: bottom-up (4)*;* Words should be studied and put to use (5)

Metacognitive Regulation (12 items): Selective attention (7)*;* Self-initiation (5)

Guessing Strategies (12 items): Using background knowledge / wider context (7)*;* Using linguistic cues / immediate context (5)

Dictionary Strategies (17 items): Dictionary strategies for comprehension (4)*;* Extended dictionary strategies (8)*;* Looking-up strategies (5)

Note-taking Strategies (9 items): Meaning-oriented note-taking strategies (5)*;* Usage-oriented note-taking strategies (4)

Memory Strategies: Rehearsal (12 items): Using word lists (6)*;* Oral repetition (3)*;* Visual repetition (3)

Memory Strategies: Encoding (24 items): Association / elaboration (4)*;* Imagery (4)*;* Visual encoding (3)*;* Auditory encoding (3)*;* Word-structure (3)*;* Semantic encoding (3)*;* Contextual encoding (4)

Activation Strategies (5 items)

Gu and Johnson (1996) conclude that rather than a particular VLS being effective, several combinations of VLS are a better predictor of improvement in vocabulary size and general English proficiency of learners, which shows that there may be different approaches to vocabulary learning which in the case of their study were 5 different approaches; "readers" (p.662), "'active strategy users" (p. 663), "non-encoders" (p. 665), "encoders" (p. 665) and "passive strategy users" (p. 666).

Acknowledging a "lack of a comprehensive list or taxonomy of lexically focused strategies", Schmitt (1997, p. 199) proposed "the most comprehensive typology of (exclusively)" (Takac, 2008, p. 67) VLS, which he partly based on Oxford's SILL (1990), and partly devised originally using the "Discovery / Consolidation distinction" from some a priori research (Schmitt, 1997, p. 207). Schmitt's taxonomy, one of the most commonly used, adapted and referred to, among other influential classification systems of VLS, was compiled as a result of extensive research whose preliminary analysis was reported in a previous study by Schmitt and Schmitt (1993) with a large research sample of 600 Japanese EFL learners from four different age groups; junior and senior high school, university students and adult learners. With its two main divisions of Discovery and Consolidation Strategies and five sub-categories of Determination, Social, Memory, Cognitive, and Metacognitive Strategies, Schmitt's VLS Taxonomy will be discussed in detail in the following section.

Schmitt's taxonomy has provided Kudo (1999) with a basis for the 56-item questionnaire designed for the study aimed at describing and categorizing the VLS of

Japanese senior high school EFL learners and the factor analysis resulted in four rather clearly loaded categories; namely, memory, cognitive, social, and metacognitive from each of which 3 items were deleted as seen not fitting, reducing the number of this reasonably reliable questionnaire's items to 44 in total. Kudo's (1999) study supported Schmitt's findings that strategies which are more demanding cognitively are less popular than those that are cognitively shallower as in the case of keyword method versus verbal repetition, which may be explained by the age group and cognitive maturity of the learners, and also reflected Oxford's (1990) strategy classification in her study in Alabama, refuting the claims of several researchers that strategies are culture-specific.

Kojik-Sabo and Lightbown (1999) investigated how learners' use of VLS differed depending on the learning contexts of ESL and EFL and how their VLS approach related to their vocabulary size and general English proficiency by means of a questionnaire they devised adapting that of Sanaoui's (1995). It contained "five criterion variables": (i) "time", (ii) "learner independence", (iii) "vocabulary notes", (iv) "review", and (v) "dictionary use" (p. 179), meant to distinguish several learner types with regard to approach to vocabulary learning. It was concluded that despite some significant differences in the VLS use of the students in the two contexts, other parts of their strategic behaviour were far from different, that higher achievers tended to be those with more frequent and elaborate strategy use while poor achievers were the ones reporting lack of effort, and also that the variables that related most to success in vocabulary learning was time and learner independence. It was added that especially the EFL learner needs to take initiative to put extra effort into the learning process both in and outside the classroom in order to compensate for the lack of the target language environment that gives an important head start to the ESL learner.

Instead of listing items of individual VLS as a comprehensive taxonomy, Hatch and Brown (1995, pp. 373-391) proposed a five-step vocabulary learning procedure which they call "a series of sieves" illustrated as five sieves placed one under another through any of which if students or teachers were able to pass more words the resulting vocabulary gain would be bigger. These steps are (i) "encountering new words", (ii) "getting the word form", (iii) "getting the word meaning", (iv) ""consolidating word form and meaning in memory, and (iv) "using the word". As is explained, each of the

five steps may have a wide variety of activities, strategies, and techniques and learners need all five for full knowledge of the words they choose to learn at least minimally; however, if the goal in learning a word is solely receptive, then step 5 may not be as much essential.

In Nation's (2001, p. 353) taxonomy, students' learning processes and sources where vocabulary knowledge is gained from are attempted to be separated from the aspects of vocabulary knowledge, that is, what is involved in knowing a word. The following table shows how these elements are divided.

Table 2.7. A Taxonomy of Kinds of Vocabulary learning Strategies (Nation, 2001)

General class of strategies	Types of strategies
Planning: Choosing what to focus on and when to focus on it	Choosing words Choosing the aspects of word knowledge Choosing strategies Planning repetition
Sources: Finding information about words	Analysing the word Using context Consulting a reference in L1 or L2 Using parallels in L1 and L2
Processes: Establishing knowledge	Noticing Retrieving Generating

2.11.4 A Taxonomy of Vocabulary Learning Strategies

Of all the VLS classifications to date, Schmitt's (1997) taxonomy appears to have been an influential reference for many research studies conducted in the area of VLS such as those of Fan (2003), Barcoft (2009b), Karakoç (2011), Kimsesiz (2012) Nalkesen (2011) , Tezgiden (2006), and Yıldız (2012) just to name a few. As well as in those studies, it is also used as a data collection tool in the studies of Alamdari (2010), Asgari (2011) Bennet (2006), Bozgeyik (2011), Çelik (2010), Demirtaş (2014), Hamzah, Kafipour and Abdullah (2009), and Hong (2008), not to mention those studies where the researchers themselves propose alternative taxonomies as in the case of Gu (2010) and Nation (2001).

The reason why Schmitt's taxonomy has most probably been widely used is concisely put by Catalan (2003, p. 60) as follows:

- It can be standardized as a test.
- It can be used to collect the answers from students easily.

- It is based on the theory of learning strategies as well as on theories of memory.
- It is technologically simple, which allows for ease in coding, classification and managing of the data in computer programs.
- It can be used with learners of different ages, educational backgrounds and target languages.
- It is rich and sensitive to the variety of learning strategies.
- It allows comparison with other studies, among them Schmitt's own survey.

Schmitt's VLS taxonomy was compiled in various steps. First, a lot of different sources were made use of in order to make sure the list of VLS included as many VLS as possible. For this purpose, various reference books and textbooks were scanned to form the list of the major VLS. Second, some VLS were added as a result of the data gathered from the reports of intermediate-level Japanese students describing the way they study vocabulary. Thirdly, teachers were asked to examine the list and add further VLS from their own experience, resulting in 40 VLS (Schmitt & Schmitt, 1993). The survey conducted in 1997 on a sample of 600 EFL learners revealed 6 more VLS and still others were added after some more subsequent reading, introspection and conversations held with other teachers. This detailed procedure yielded the final taxonomy of 58 items which "should not be viewed as exhaustive, but rather as a dynamic working inventory which suggests the major strategies" (Schmitt, 1997, p. 204).

When categorizing the specific items in his list of VLS, Schmitt (1997) made a judicious use of the existing classifications such as Stoffer's (1995, cited in Schmitt, 1997) and it was found to be an empirically sound base to assign categories, and especially Oxford's (1990) as it seemed "best able to capture and organize the wide variety of vocabulary learning studies identified" (Schmitt, 1997, p. 205). He used four of the categories in SILL suiting the needs; namely, (i) Social, (ii) Memory, (iii) Cognitive, and (iv) Metacognitive; however, the taxonomy still needed another category type that was not contained in SILL, which fell short of "the kind of strategies used by an individual when faced with discovering a new word's meaning without recourse to another person's expertise" (Schmitt, 1997, p. 205) and thus the Determination category was added. Another inadequacy about Oxford's strategies was that some seemed to fit into more than one category; it was especially difficult to clarify whether some were Memory or Cognitive strategies. To this end, Purpura's (1994, cited in Schmitt, 1997,p. 205) division of six areas of storing and memory strategies – (i) repeating, (ii) using mechanical means, (iii) associating, (iv) linking with prior knowledge, (v) using

imagery, and summarizing – was utilized; Schmitt's taxonomy labelled VLS that are closest to (i) and (ii) as Cognitive strategies as they are more loosely connected to mental manipulation, and those closest to (iii), (iv) and (v) as Memory strategies as they are quite similar to traditional mnemonic techniques. Still, it was acknowledged that there was an "imprecision in categorization" to some extent.

The taxonomy is "further refined" (Tseng, Dörnyei, & Schmitt, 2006, p. 84) by dividing the VLS into two "overarching categories" (Fan & Nyikos, 2007, p. 254) of Discovery and Consolidation strategies following the distinction made by Cook and Mayer, and Nation (Schmitt, 1997, p. 206). The Discovery dimension covers VLS that are usually used initially to discover the meaning of a word and the Consolidation dimension contains VLS that are used to remember and retain a word after it has been encountered (Schmitt, 2000, p. 135). Nonetheless, as some of the strategies may serve both purposes of Discovery and Consolidation, Schmitt (1997) admits that in fact nearly all Discovery strategies could well be used as Consolidating strategies; however, those that are the most obvious to be used for both purposes are contained in both sections of the taxonomy.

It may be concluded that Schmitt's taxonomy has been well-grounded and serves both as a reference source and as a data collection tool for researchers in the area of VLS.

2.11.4.1 Determination Strategies

Determination strategies are those in the Discovery dimension of Schmitt's (1997) taxonomy which learners tend to employ on their very first encounter with a word they do not know, some of which are attempting on their own, without help from a peer or a teacher, to use their knowledge of the language, clues in the immediate context, or reference materials for the purpose of figuring out the meaning of the unfamiliar word. Below is the list of Determination strategies (Schmitt, 1997, p.207).

DET Analyze part of speech
DET Analyze affixes and roots
DET Check for L1 cognate
DET Analyze any available pictures and gestures
DET Guess from textual context
DET Bilingual dictionary
DET Monolingual dictionary
DET Word lists
DET Flash cards

2.11.4.2 Social Strategies

Social strategies are those some of which are included in the Discovery section and some of which in the Consolidation section. As Schmitt (1997) explains, there is another alternative way of discovering the meaning of a new word besides students' own efforts, which is by asking someone else's help, usually the teacher's or naturally at other times their classmates', in a number of ways, as listed below (Schmitt, p. 207)..

DIS/SOC Ask teacher for L1 translation
DIS/SOC Ask teacher for paraphrase or synonym of new word
DIS/SOC Ask teacher for a sentence including new word
DIS/SOC Ask classmates for meaning
DIS/SOC Discover new meaning through group work activity
CON/SOC Study and practice meaning in a group
CON/SOC Teacher checks students' flashcards or word lists for accuracy
CON/SOC Interact with native speakers

Schmitt (1997) adds that in terms of consolidating word knowledge, cooperative group work in class not only aids active information processing by way of group members' modelling and / or imitation, but it also motivates the members thanks to the social contexts it provides with less intervention from the instructor where the class time learners actually use and manipulate language is increased, which in turn may lead learners to outside activities done in teams.

2.11.4.3 Memory Strategies

Memory strategies, the category with the most VLS in number in Schmitt's taxonomy, also known as mnemonics, are used for retaining the newly learned information or the word that is encountered by relating it to already existing knowledge or already learned words with the help of several kinds of imagery or grouping (Schmitt, 1997). As Thompson (1987, cited in Schmitt, 1997, p. 211) states, "… a retrieval plan is developed during encoding, and mental imagery, both verbal and visual, is used. They help individuals learn faster and recall better because they aid the integration of new material into existing cognitive units and because they provide retrieval cues". Also, the deeper mental processing that Craik and Lockhart's (1972, cited in Schmitt, 1997, p. 211) "Depth of Processing Hypothesis" requires takes place to ensure long term retention. Below is the list of Memory strategies, which evidently shows that "a new word can be integrated into many kinds of existing knowledge (Schmitt, 2000, p. 135).

MEM Study word with a pictorial representation of its meaning
MEM Image word‘s meaning
MEM Connect word to a personal experience
MEM Associate the word with its coordinates
MEM Connect the word to its synonyms and antonyms
MEM Use semantic maps
MEM Use ‘scales’ for gradable adjectives
MEM Peg Method
MEM Loci Method
MEM Group words together to study them
MEM Group words together spatially on page
MEM Use new word in sentences
MEM Group words together within a storyline
MEM Study word spelling
MEM Study the sound of a word
MEM Say new word aloud when studying
MEM Image of word form
MEM Underline initial letter of the word
MEM Configuration
MEM Use Keyword Method
MEM Affixes and roots
MEM Parts of speech
MEM Paraphrase the word’s meaning
MEM Use cognates in study
MEM Learn words of an idiom together
MEM Use physical action when learning a words
MEM Use semantic feature grids
(Schmitt, 1997, pp. 207-208)

Schmitt (2000) describes the nature of memory strategies and how best to benefit from them. It might be time-consuming, impractical and hence unwise to try using memory strategies for all types of vocabulary, for instance, the low frequency vocabulary that the learners are not likely to encounter very often in a text and therefore will not increase the text coverage for the learner. However, it is not the case for other types of vocabulary as is explained by Schmitt (Schmitt, 2000, p. 135):

> It is worth noting that memory strategies generally involve the kind of elaborative mental processing that facilitates long-term retention. This takes time, but the time expended will be well spent if used on important words that really need to be learned, such as high-frequency vocabulary and technical words essential in a particular learner’s field of study. A learner may not have time to “deeply process” every word encountered, but it is certainly worth attempting for key lexical items

2.11.4.4 Cognitive Strategies

Cognitive strategies are those characterized by their function of "manipulation or transformation of the target language by the learner" (Oxford, 1990, p. 43). As mentioned earlier, because of the fact that a perfectly clear-cut distinction between strategy categories is hard to make, it appears that Cognitive strategies are not too different to Memory strategies; however, they are still different in that they are not exclusively focused on manipulative mental processing. Rather, Cognitive strategies depend on repetition and using more mechanical ways, which are listed as follows (Schmitt, p. 208):

COG Verbal repetition
COG Written repetition
COG Word lists
COG Flash cards
COG Take notes in class
COG Use the vocabulary section in textbooks
COG Listen to tape of word lists
COG Put English labels on physical objects
COG Keep a vocabulary notebook

Schmitt (1997) states that different kinds of repetition are deeply-rooted in many parts of the world and that students are not willing, and are even resistant, to stop using them even when they are introduced other strategies to try. It is also added that in spite of the fact that this appears to contradict the Depth of Processing Hypothesis, admittedly, there seems to be a great number of learners who have reached high levels of proficiency using these strategies based on repetitious rote learning (Schmitt, 1997; Nation, 2001; Read, 2004, cited in Bennet, 2006).

2.11.4.5 Metacognitive Strategies

Metacognitive strategies are those "beyond-the-cognitive" (Oxford and Crookall, 1989, p. 404) which learners use to steer their own way through the course of their learning in general and vocabulary learning in particular. Even though metacognitive strategies do not appear in other VLS taxonomies worded explicitly as "metacognitive" except for in Gu and Johnson's (1996) and Schmitt's (1997), they are evidently present in most of them worded differently such as "overlook", "ask for a test" and "self-test"; "independence " and "review" ; "planning"; "management" (Ahmed, 1989; Kojik-Sabo & Lightbown, 1999; Nation, 2001; Fan, 2003, all cited in Ruutmets, 2005, p. 48). As Schmitt (2000, p. 136) concisely puts:

> …Metacognitive strategies (MET) involve a conscious overview of the learning process and making decisions about planning, monitoring, or evaluating the best ways to study. This includes improving access to input, deciding on the most efficient methods of study/review, and testing one-self to gauge improvement. It also includes deciding which words are worth studying and which are not, as well as persevering with the words one chooses to learn.

It is further explained by Schmitt (1997) efficient learners increase their exposure to L2 through books, magazines, newspapers and movies in the English medium as well as interaction with native speakers, test themselves either to reinforce or switch the strategies being used depending on their effectiveness, practise in a well-planned way by scheduling the times of practice starting from short intervals to gradually longer ones, know which words not to concentrate on as L2 learners need to use their time and resources wisely when learning vocabulary, and consciously create opportunities to be exposed to words that are chosen to learn or partly learnt. These strategies are listed as follows (Schmitt, 1997, p. 208).

MET Use English language media (songs, movies, newscasts, etc)
MET Testing oneself with word tests
MET Use spaced word practice
MET Skip or pass new word
MET Continue to study word over time

2.11.5 Contextualized and Decontextualized Vocabulary Learning Strategies

The distinction between learning words in or out of context has previously been dealt with under the heading of 'intentional and incidental' learning, where the terms were used interchangeably with explicit and implicit' and 'direct and indirect', the last of which is concisely defined by Nation (1980, p. 15) as is given below.

> In direct vocabulary learning, a conscious effort is made to learn vocabulary either in *context* or in isolation, for example, by learning lists of word forms and their meanings, by doing vocabulary learning exercises, or by studying affixes and roots. In indirect vocabulary learning, new words are learned incidentally while reading or listening, usually as the result of information provided by the *context*. (*emphasis* added)

As is seen above, even direct or decontextualized learning is not completely devoid of context; therefore, the need arises to understand what context is; "context may be viewed as morphological, syntactic, and discourse information given in a text" (Nation & Coady, 1988, p. 102) and inferences based on context are facilitated by (i)

"linguistic", (ii) "world", and (iii) "strategic knowledge". In contrast, decontextualized VLS such as wordlists, note-taking, dictionary use and flashcards (Ekmekçi, 1999) "remove the word as completely as possible from any communicative context that might help the learner remember and that might provide some notion as to how the word is actually used as a part of the language" (Oxford & Crookall, 1990, cited in Nation, 2001, p. 468)

Nation (2001) states that word form-word meaning association is evidently enhanced by the presence of sentence context; yet, there is the possibility of learning a great number of words out of context in a short span of time and of their long-term retention. It is stated that the argument put forward by L1 researchers that it would be inefficient to teach the quite large amount of vocabulary in a direct, decontextualized way in the limited class time has had a negative overgeneralization effect of discouraging teachers from teaching their students direct VLS, despite the fact that the criticism was mostly directed to L2 vocabulary teaching (Nation, 2001). After all, L1 learners start school already equipped with several thousand words, which is certainly not the case for non-native learners of English who lack even the highest frequency words, let alone their immediate need to quickly learn the lower frequency words (Hsueh-Chao & Nation, 2000; Nation, 2001). Therefore, contextualized learning in the form of incidental learning through reading will not suffice alone and the time spent on decontextualized VLS, teaching them to beginning students who lack enough lexical coverage might enable them to use the context well enough and in turn it will pay off a lot in the teaching and learning of EFL when considered in terms of cost-benefit (Nation, 2001).

Sökmen (1997, pp.152-153) points to the fact that "no one is advocating throwing out contextual guessing" but draws attention to the inefficiency of an approach that is exclusively based on implicit vocabulary learning listing several reasons why: (i) it is a "slow process", (ii) it is "error-prone" with low-level proficiency students, (iii) may cause low level of comprehension because of inadequate vocabulary knowledge "even when trained to use flexible reading strategies", (iv) it places "too much emphasis on inference skills" although different learners may be good at using other different means such as using word lists or a dictionary, and (v) it "does not necessarily result in long-term retention" even when the context is rich with a lot of clues. Nation and Coady

(1988, p.101) explain below how contextual guessing based on contextual clues is not necessarily likely to result in word learning:

> Indeed the very redundancy or the richness of information in a given context which enables a reader to guess an unknown word successfully could also predict that that same reader is less likely to learn the word because he or she was able to comprehend the text without knowing the word.

In spite of the fact that there are several studies (Day, Omura & Hiramatsu, 1991; Pitts, White & Krashen, 1989; Horst, Cobb & Meara, 1998) concluding that contextual guessing through incidental learning during reading is a contributing factor to students' vocabulary growth at least at a modest degree if not very significant, there are other studies which report that using context clues is not a much favoured or not as an effective VLS as it is expected. One such study is Lawson and Hogben's (1996), where the students did not use the given contextual clues on two thirds of the new words, and when on one third of the times they used the contextual cues, it did not result in successful recall of the word meanings. One of the thing they attribute this result seems to be that when the need for comprehension is met by the rich contextual clues, then the students want to direct their attention to the rest of the text (Lawson & Hogben, 1996).

Cohen and Aphek (1978) point to the differential ease with which learners of different levels choose to use contextualized and decontextualized VLS, concluding that beginners prefer tasks with word lists to those with contextualized words while the opposite is true for more advanced learners. This is in line with the necessity of a certain level of English with which the learner can "develop contextual guessing strategies and pave the way for vocabulary acquisition through reading" (Gu, 1994, p. 17), or a "threshold level of L2 skills" (Gu & Johnson, 1996, p. 645) without which deeper strategies prove useless for most L2 learners as "L2 learners in general, due to their inadequate grasp of the target language skills, are less effective guessers and less effective incidental learners of English vocabulary" (Gu, 2003b, p. 4)

Fan and Nyikos (2007) mention that most of the VLS are decontextualized, and they can be grouped as memorization, repetition, associative strategies and the keyword mnemonic. Among these decontextualized strategy groups, the most frequently used ones appear to be simple memorization and repetition, most probably because they do not require too much effort and cognitively less demanding as reported by Schmitt

(2000). On the other hand, although the keyword method is usually found useful by learners, there are several drawbacks listed by Fan and Nyikos (2007, pp. 261-262) which may be briefly put as follows:

- Time consuming and sometimes frustratingly difficult to create images
- Inconvenient when the L2 is not related to the L1 in terms of pronunciation and orthographic system
- Inapplicable to some words, especially abstract ones

Nattinger (1988) draws attention to the fact that students can be encouraged to use mnemonic devices to assist them to commit vocabulary into their memory as students from almost everywhere in the world use them any way and appreciate their helpfulness regardless of the resistance their teachers, and educational programs in their countries have towards memory techniques. There are two studies comparing contextualized and decontextualized VLS. The first is by Qian (1996, cited in Laufer, 2009) with higher retention results on the part of the decontextualized VLS and the second is by Mondria and Mondria-De Veries (1994, cited in Laufer, 2009), who combined memorization of words on cards with repetitive retrievals over longer intervals and concluded that it produced better results being more flexible than the wordlists. The newest trend of using complementary ends together in vocabulary learning and teaching is interpreted as below.

> Most recent approaches to vocabulary learning attach less importance to the source of learning, and more to the quality of elaboration of word information, task involvement, and frequent rehearsals. It is also believed that different aspects of word knowledge may be affected differently by different conditions of learning. Finally, a growing number of empirical studies suggest that input together with engaging word-focused activities and frequent rehearsals are likely to yield the best results. (Laufer, 2009, 341-342)

It is apparent then that an EFL learner make use of both decontextualized VLS during direct instruction in class and vocabulary study outside class, especially at the initial stages of the learning process when language proficiency level is low and lexical text coverage is relatively low due to small vocabulary size (less than 2/3K) and contextualized VLS during intensive and extensive reading of either academic or pleasure reading, especially at the optimal stages of the learning process when language proficiency is relatively higher and lexical coverage is high enough to be conducive to be able to make contextual inference possible without erroneous guessing, which does not exclude the availability of both types in combination at any stage of learning.

2.11.6 Vocabulary Learning Strategies and Gender

Gender has come to the forefront as an essentially important individual difference factor in relation to VLS among second and foreign language learners alongside with many such as aptitude, motivation, learning background, learning styles, academic major, personality type, age, culture, brain hemisphere dominance, career orientation, beliefs, and degree of awareness (Catalan, 2003; Ehrman & Oxford, 1988; Green & Oxford, 1995; Gu, 2002, 2003b; Nyikos, 1990; Oxford,1989, 1990, 1993, 2003; Oxford, Nyikos & Ehrman, 1988, Üster, 2008) although some research is reported by Ehrman and Oxford (1988) and Oxford, Nyikos, and Ehrman (1988) to have dismissed gender considering it minor. However, since the late 1980s, there has been a growing research interest investigating into how gender might relate to language learning in general and vocabulary learning in particular; how it affects specific and overall strategy choices, how it relates to the frequency of use of specific VLS and / or categories of VLS, whether the frequency and the variety of use of VLS may be predicted by gender, and whether gender could be a predictor of language proficiency, vocabulary proficiency or vocabulary size.

A great many of the research studies conducted for the above-mentioned purposes reveal that gender plays an important role and their results show that females not only use strategies with a higher frequency but they also use a wider range of them. Oxford, Nyikos and Ehrman (1988) state that the women in their sample used a much greater variety of strategies than their male counterparts and that the strategies known to facilitate the process of developing communicative competence; namely, social category of strategies, were employed far more frequently by the women. Another study, by Green and Oxford (1995), shows that the strategies were used more by the more successful students and it was the women who showed higher levels of strategy use. Catalan's (2003) study demonstrates how the male and female participants' patterns of VLS use differ both through the significant difference between the average numbers of strategies used by the two groups and through that of their reported percentages of overall VLS use despite the fact that 8 out of 10 most frequent VLS were shared.

Similar results are also reported by the more recent studies in different contexts. Üster (2008) with a specific focus on brain-based gender differences on VLS choices concludes that female university prep students in a Turkish context use a wider variety

of VLS than male students and that the former use determination, social and cognitive categories more often, the latter employs only memory category more frequently and the two genders use metacognitive strategy with a non-significant frequency difference. Gender has been found to be predictive of both general language proficiency and vocabulary proficiency. Aslan (2009) reports that Turkish female subjects used significantly more LLS and were significantly more successful in language learning, Shadikah, Fauziati and Supriyadi (2017) state that their Indonesian female subjects employed more VLS and achieved more vocabulary mastery, and Gu (2002) concludes that his Chinese female subjects, who used more VLS, performed significantly better than their male counterparts both in a general language proficiency test and a vocabulary size test, showing the link between gender, use of VLS and vocabulary development.

There are several research studies, however, that conclude inconsistent results with the above-mentioned ones. Kalaycıoğlu (2001), who set an experimental study in a Turkish pre-school context, where picture vocabulary games were used, reports that the effect of gender was non-significant. A similar non-significant gender effect is reported in Pana and Afghari's (2015) experimental study of the particular VLS, the keyword method, in their Iranian context. Noormohamadi, Amirian and Hesabi (2015) state that in spite of some commonalities in the most and least frequently used particular VLS, their subjects did not show a significant difference in relation to gender.

In brief, a clear consensus has not been reached on the issue of VLS and gender, which may be due to the differences in research design, contexts, sample size, and data collection tools. This body of research studies seem to underscore the value of gender-based differences and the gender effect in VLS.

2.11.7 Vocabulary Learning Strategies Instruction

Although learners are observed to use several strategies for dealing with the task of learning new vocabulary, it is evident that they are not equally successful in making maximal use of strategic resources at their disposal (McCarthy 1990). The implications of the results of a number of experimental studies either on one or sometimes a few particular VLS concerning their application in the classroom in the form of strategy

instruction show that VLS instruction appears to be a need since learners are observed not to be making an efficient use of the VLS even in their own supply (Takac, 2008).

The fact that learners tend to appreciate the value of strategies they have not yet tried to use was revealed by the high helpfulness ratings of less than half of Schmitt's (1997, p. 221) participants illustrates that "learners may be willing to try new strategies if they are introduced to and instructed in them". Similarly, Chamot (2005) gives the example of Fan's (2003) descriptive study on the reported frequency of use and usefulness ratings of VLS, where the strategies perceived as useful were used more often than those which were not, and even those strategies not perceived as useful were used significantly more frequently by the students with higher vocabulary proficiency and emphasizes that "students might use more learning strategies if teachers were to first convince students of their usefulness" (p. 121).

Tezgiden (2006), whose study investigated the change in university preparatory class students' reported VLS use and perceptions of usefulness after a three-week VLS instruction of seven strategies along with their and their teachers' attitudes towards strategy instruction, found that reported strategy use was positively affected by the treatment; however, a significant change in their perceptions of helpfulness did not occur, which was attributed to the relatively short period of strategy instruction, and that both learners and teachers developed positive attitudes towards VLS and VLS instruction.

In a study focusing on student responses to strategy instruction, Chamot (1993) concludes that most of the students expressed their beliefs that their learning was positively affected by strategy instruction and that this effect extended to independent use of the strategies when doing homework assignments. Another study similar in focus was carried out to examine the attitudes towards VLS and reading strategies of adult EFL learners in a Turkish context who mainly preferred matching L2 words with L1 equivalents and translating every sentence to understand a reading text and revealed positive results in terms of attitudes towards both VLS and reading strategies after the treatment in the form of several vocabulary and reading activities (Döner, 2005).

Atay and Özbulgan (2007) conducted an experimental study investigating the effects of memory strategy instruction on the vocabulary knowledge of Turkish EFL

learners in addition to the normal course of learning through context and found that the experimental group had better vocabulary gains. Likewise, another study (Sözler, 2012) in an Austrian Public Secondary School aimed to measure the effect of memory strategy training on students' vocabulary growth, and after pre-, post- and long-term retention tests, memory strategy training proved to be more effective than word lists in producing better vocabulary development.

Pressley and Harris (1990, p. 32) point to the two main characteristic features of strategy instruction namely "teacher modelling and self-regulated use of the procedure". The essence of the matter about learner strategy training lies in Rivers' words (1983, cited in Tezgiden, 2006, p. 33), which clearly explains the roles of the learner and the teacher.

> *Vocabulary cannot be taught.* It can be presented, explained, included in all kinds of activities, and expressed in all manner of associations (visual, auditory, kinaesthetic, tactile, olfactory if one wishes), but ultimately it is learned by the individual. As language teachers, *we must arouse interest in words* and a certain excitement in personal development in this area … We can help our students by giving them ideas on how to learn, each will finally learn a very personal selection of items, organized into relationships in an individual way.

Referring to Brown's term 'strategic investment', Akın and Seferoğlu (Brown, 2001, cited in 2004, p. 88), stress the need for learners "to invest their time and effort and develop their own unique and individual pathways" under the mediation of the teacher.

As a majority of the VLS are applicable to a wide spectrum of vocabulary, and are beneficial at the beginning, intermediate, advanced stages of vocabulary learning, and also in between them, training learners in strategy choice and use seems almost imperative taking into consideration the fact that VLS are tools with which learners steer their own learning saving time and effort for the teacher to direct their focus on other things and the fact that not all the learners are equally skilful at using the VLS at their disposal (Nation, 2001, p.358). The researcher lists the requirements of making strategy training a planned part of a programme as follows:

1. deciding which strategies to give attention to
2. deciding how much time to spend on training the learners in strategy use
3. working out a syllabus for each strategy that covers the required knowledge and

provides plenty of opportunity for increasingly independent practice
4. monitoring and providing feedback on learners' control of the strategies

Chamot (2004; 2005) states that most researchers emphasize the importance of the explicitness of the VLS instruction, which necessitates student awareness of their own strategy repertoire, teacher modelling of how to think strategically, identifying strategies and naming them, practising with the newly introduced strategies, self-evaluating how the strategy was used, trying to transfer the strategies to new tasks, which they agree is much more effective than simply suggesting that students use more strategies in a cursory manner. However, it is stated that although there is not a complete agreement on whether to integrate strategy instruction into the language curriculum or exclude it, the majority seems to advocate the integration as it is considered that students get more opportunities to practise the strategies with more authentic language learning tasks. In this respect, Muzimoto and Takeuchi's (2009, p. 443) study seems to support the efficiency of explicit VLS instruction integrated in the regular course of classroom teaching and learning, whose results are listed below.

1. Explicit teaching of VLSs results in improved vocabulary test scores.
2. Explicit teaching of VLSs results in increases of strategy use among learners with lower and moderate levels of such use.
3. Explicit teaching of VLSs may result in little change among learners with high levels of use; however, their teaching can confirm already held beliefs about their effectiveness.
4. Some VLSs are quickly rejected due to their time-consuming nature or being perceived as inefficient in other ways.
5. Explicit teaching of VLSs may result in more intrinsically motivated learners.

Torun (2010), having conducted a study on whether explicit instruction of VLS helps Turkish EFL learners' improvement in vocabulary knowledge, reports that there were significant differences between the experimental and the control group in terms of vocabulary proficiency after the treatment and the number of VLS used; not only did the experimental group increase their vocabulary knowledge but they were also observed to use a greater number of VLS.

Among a number of models developed to be used for strategy instruction is Oxford's (1990, p. 204) model with eight steps listed below.

1. Determine the learners' needs and the time available.
2. Select strategies well.
3. Consider integration of strategy training.
4. Consider motivational issues.
5. Prepare materials and activities
6. Conduct "completely informed training."
7. Evaluate the strategy training.
8. Revise the strategy training.

Three of the strategy instruction models have been gathered in a chart by Chamot (2004, p. 22) adapted from Harris (2003, p. 7) in order to draw the similarities between them; that is, their being "solidly based on developing students' knowledge about their own thinking and strategic processes and encouraging them to adopt strategies that will improve their language learning and proficiency", as shown below.

Table 2.8. Models of Strategy Instruction

SSBI* Model (Cohen, 1998)	CALLA** Model (Chamot, 2005, Chamot et al., 1999)	Grenfell & Harris (1999)
Teacher as diagnostician: Helps students identify current strategies and learning styles.	Preparation: Teacher identifies students' current learning strategies for familiar tasks.	Awareness raising: Students complete a task., and then identify the strategies they used.
Teacher as language learner: Shares own learning experiences and thinking processes.	Presentation: Teacher models, names, explains new strategy; asks students if and how they have used it.	Modeling: Teacher models, discusses value of new strategy, makes checklist of strategies for later use.
Teacher as learner trainer: Trains students how to use learning strategies	Practice: Students practice new strategy; in subsequent strategy practice, teacher fades and reminders to encourage independent strategy use.	General practice: Students practice new strategies with different tasks.
Teacher as coordinator: Supervises students' study plans and monitor difficulties.	Self-evaluation: Students evaluate their own strategy use immediately after practice.	Action planning: Students set goals and choose strategies to attain those goals.
Teacher as a coach: Provides ongoing guidance on students'	Expansion: Students transfer strategies to new tasks, combine strategies into clusters, develop repertoire of preferred strategies.	Focused practice: Students carry out action plan using selected strategies; teacher fades prompts so that students use strategies automatically.
	Assessment: Teachers assesses students' use of strategies and impact on performance.	Evaluation: Teacher and students evaluate success of action plan; set new goals; cycle begins again.

*Styles and Strategies-Based Instruction **Cognitive Academic Language Learning Approach

Although Gu (1996) draws attention to the fact that a more extensive empirical evidence base has to be established before claiming strategy instruction is effective, posing a number of questions that have to be answered such as, among others, whether strategy training results in new strategies, what criteria can be used to evaluate its effectiveness or whether it positively influences the self-image of unsuccessful students. Oxford, Crookall, Cohen, Lavine, Nyikos and Sutter contend that not only does the

strategy training improve the language learning process – learner strategies/behaviours and the affective aspects – but also the product of language learning; that is, the resultant language performance, and that it does have remarkable positive effects on the teachers themselves as well (Rasekh & Ranjbari, 2003), as explained below.

> Teachers who use strategy training often become enthusiastic about their roles as facilitators of classroom learning. Strategy training makes them more learner-oriented and more aware of their students' needs. Teachers also begin to scrutinize how their teaching techniques relate (or fail to relate) to their students' learning strategies and sometimes teachers choose to alter their instructional patterns as a result of this scrutiny (Oxford et. al., 1990, p. 210, cited in Rasekh & Ranjbari, 2003, p. 5)

Cohen and Weaver (2005) state that *Strategies-Based Instruction: A teacher-training manual* (Weaver, 1997) has been revised with added feedback from the users of the publication and *Styles- and Strategies-Based Instruction: A Teacher's Guide* (2005) is intended for use of L2 teachers and provides background information about SSBI, hands-on tasks showing teachers how to implement SSBI with their own students, and understand better what the individual needs of their students are. In more general terms, it is a teacher's guide that "will provide the participating teachers with ideas about how to embed strategies into everyday class activities, how to positively reinforce the effective use of strategies, and how to encourage their students to find ways to take more responsibility for language learning" (Cohen & Weaver, 2005, p. 3)

To conclude, it seems highly likely that what the teachers do in VLS instruction and how they do it will definitely affect what learners learn and how they do their learning both in the VLS instruction period and onwards, with benefits for both parties, showing that teachers and learners are clearly the co-operators of a complex process of which vocabulary learning is just one constituent but an importantly essential one.

2.11. 8 New Trends in Vocabulary Learning

Corpus linguistics has made a considerable headway since the frequency count studies first started (discussed in 2.5) in the 1940s utilizing both written and spoken corpora. Over the course of this progressive experience, approaches to lexis, lexicology and lexicography have evolved accordingly with the findings of various lines of research. The following sections will focus on three of such recent trends that particularly relate to vocabulary learning in general and VLS in particular; namely, collocation and colligation, new generation dictionaries and vocabulary learning apps.

2.11.8.1 Collocation and Colligation

As was discussed earlier lexis was cast a secondary role compared to grammar for a period (see 2.1.1) until it began to receive some due interest (see 2.1.2) in the 1970s, which was followed by the emergence of Lexical Approach when vocabulary gained equal status to grammar and hence the term "lexicogrammar" began to be used in order to signify the partnership between the two concepts (Schmitt, 2000, p. 14). What Sinclair underscored in the 1990s was the centrality of lexical units beyond the level of the word when his corpus data disproved the primacy of syntax and the irregularity of lexis showing clearly the ubiquity of collocational patterns, which were as important as syntax in terms of constructing meaning (Sinclair, 2004). According to Sinclair (2004), who emphasizes that the size of the corpora used affects the representative quality and the quality of evidence, meaning and form are inseparable from one another and each lexical pattern chosen to be used determines the structure to be used, which is evident in the corpus data. Similarly, Hoey (2005) asserts that he is arguing for a new theory of lexicon, which even puts forward a new language theory, reversing the long-held primacy of grammar over lexis to primacy of lexis over grammar, claiming that it is lexis that is structured in a complex and systematic way and it is grammar that is dependent on the lexis.

The two terms collocation and colligation are related concepts which are used to describe the "distributional properties of linguistic items in actual language use" (Lehecka, 2015, p. 1). While the former is the probability of occurrence of two or more lexical items in proximity with one another, the latter is that of grammatical categories such as parts of speech or syntactic functions; "the syntagmatic attraction" (Lehecka, 2015, p. 2/5) between those items. In other words, both lexical items and grammatical categories have their own idiosyncratic preferences and avoidances (Hoey, 1998, cited in Hunstan, 2001; Lehecka, 2015), which constitute their "behavioural profile" (Gries & Divjak, 2009), that is manifested in the corpora. Colligation is defined by Hoey (1998, cited in Hunstan, 2001, p. 15) as below:

(a) The grammatical company a word keeps (or avoids keeping) either withnin its own group or at a higher rank
(b) The grammatical functions that the word's group prefers (or avoids)
(c) The place in a sequence that a word prefers or (avoids)

One study about collocations and colligations is Yamasaki's (2008) study, looking into how particular collocations and colligations are associated with discourse functions of unspecific anaphoric nouns. It shows that the unspecific anaphoric nouns like *problem, reason, idea* and *fault,* sum up and substitute some length of discourse preceding them. They are not only used as cohesive devices to categorize again their specific meanings but they also prefer specific syntactic environments according to the discourse function, showing that unspecific nouns favour different syntactic patterns and different pre-modifiers used in each. Another study that focuses on the two concepts is Jianzhong's (2003), which concludes that the inefficiency of Chinese English learners in terms of the depth of word knowledge is primarily relevant to their inadequate command of the typical collocations and colligations of frequently used words.

In brief, the text needs to be regarded as the common ground where words and structures occur and co-occur regulating both their own preferences and avoidances and one another's (Hunstan, 2001). Therefore, the larger corpora, the better quality evidence (Sinclair, 2004) on how lexical items and grammatical structures behave, which appears to be a very valuable way of progressing in the mastery of EFL.

2.11.8.2 New Generation Dictionaries

Dictionaries have traditionally used a set of criteria in what to include since the beginning of the twentieth century, the most primary of which was word frequency as was elaborated in section 2.5. Over the course of the past century and into the new, new generation dictionaries have transformed themselves from paperback to electronic, online and mobile incorporating innovative features into their design and content.

One such innovation in dictionaries of the present day is the use of frequency information gained from updated corpora to arrange the entries alongside with the alphabetical order. Rayson and Davies state in their preface to the series of *A Frequency Dictionary of...* several languages, including *A Frequency Dictionary of Contemporary American English* (Davies & Gardner, 2010), that the earlier lists of most frequent words were derived from literary works of such as Defoe and Austen, and can no longer represent the contemporary language, whereas the 385-million-word new corpus is made up of 150,000 texts gathered both from spoken and written sources such

as radio and TV shows, books, movie scripts, magazines, newspapers and academic journals. It is stated that the frequency dictionary has 31 thematic word lists where the words are ranked in the order of frequency, which makes the new generation dictionary "an engaging and efficient source enabling students of all levels get the most out of their study of vocabulary" (Davies & Gardner, 2010, p. 1)

Another novelty that has been recently incorporated into the dictionaries is the tagging of the words' with their CEFR levels; namely, A1, A2, B1, B2, C1, and C2. As is detailed in the framework document of the Common European Framework of Reference for Languages (Council of Europe, 2001), vocabulary size was shown to be "a useful metric" in formulating the level descriptors with broad implications that learners' knowledge of vocabulary and how well they use it would increase in accordance with the increase in the language level (Milton, 2010). The vocabulary range description below shows how this increase is reflected in the document.

Table 2.9. Vocabulary range criteria from Council of Europe (2001, p. 112)

VOCABULARY RANGE
C2 Has a very good command of a very broad lexical repertoire including idiomatic expressions and colloquialisms shows awareness of connotative levels of meaning.
C1 Has a good command of a broad lexical repertoire allowing gaps to be readily overcome with circumlocutions; little obvious searching for expressions or avoidance strategies. Good command of idiomatic expressions and colloquialisms.
B2 Has a good range of vocabulary for matters connected to his or her field and most general topics. Can vary formulation to avoid repetition, but lexical gaps can still cause hesitation and circumlocution.
B1 Has a sufficient vocabulary to express him/herself with some circumlocutions on most topics pertinent to his/her everyday life such as family, hobbies and interests, work, travel and current events.
A2 Has sufficient vocabulary to conduct routine, everyday transactions involving familiar situations and topics. Has a sufficient vocabulary for the expression of basic communicative needs. Has a sufficient vocabulary for coping with simple survival needs.
A1 Has a basic vocabulary repertoire of isolated words and phrases related to particular concrete situations

In an attempt to confirm the above-mention assumption, Milton (2010) used the evidence from the vocabulary size tests and put forward suggestions of actual amounts of vocabulary that correspond to each language level of the CEFR that are given below:

Table 2. 10. Approximate vocabulary size scores associated with CEFR levels (adapted from Meara & Milton, 2003, p. 8, cited in Milton, 2010, p. 224)

CEFR Levels	Cambridge exams	XLex (5000 max)
A1	Starters, Movers and Flyers	<1500
A2	Kernel English Test	1500 - 2500
B1	Preliminary English Test	2750 - 3250
B2	First Certificate in English	3250 - 3750
C1	Cambridge Advanced English	3750 - 4500
C2	Cambridge Proficiency in English	4500 - 5000

Milton (2010) concludes that for those who want to connect language performance to the CEFR, whether they are learners, teachers and others who use CEFR, the above information is certain to prove useful. One of those parties is the makers of new generation dictionaries whose ultimate aim is to assist learners not only in vocabulary learning but also language proficiency as well.

The CEFR levels serves as a base for the *English Vocabulary Profile (EVP),* made available by Cambridge University Press (CUP) free of charge to anyone interested in language learning, teaching or doing research in the field all around the globe, and it provides information about which words and particularly, which sense of those words are at each level of the CEFR, from A1 to C2 (www.englishprofile.org). CUP has made use of the EVP based on CEFR levels in order to empower students to be able to prioritize their study of vocabulary (www.cambridge org/9781107619500) in several of their dictionary titles. One of those titles is *Cambridge Advanced Learner's Dictionary* (CUP, 2013), where the words are mapped to the CEFR band levels. Capel (2010; 2012) describes the process of producing the A1-B2 and C1-C2 EVP wordlists in detail.

Without doubt, there are many other novelties integrated into dictionaries such as auditory phonetic representation, voice recording to test how close a learner's pronunciation is to the model, thesaurus assistance, differences between British and American usages, writing assistance, examples from different types of English, for

example, Indian or Australian, common errors by learners of English, and so forth; however, only the ones closely related to the present study has been elaborated above.

2.11.8.3 Vocabulary Learning Apps

The advances in computer technology, the internet and mobile devices have brought a new outlook on language learning as on many other things, as a result of which terms like Computer Assisted Language Learning (CALL), Online Learning, Mobile Learning (m-Learning) (Godwin-Jones, 2011) and Mobile-Assisted Language Learning (MALL) (Kim & Kwon, 2012) have appeared. This also affected the ways of self-study in EFL as a countless number of online resources have become available with just a click in an instant. Among those resources are numerous vocabulary learning applications of many different kinds, some of which have incorporated several VLS in one app and therefore deserve a brief mention in terms of their relevance to the present study.

One such vocabulary learning app is the *Oxford English Vocabulary Trainer App* by Oxford University Press (OUP). As an adaptive app, it is aimed to facilitate the way students learn vocabulary by helping them to better understand the words they want to learn through personalised, intelligent feedback. It is stated that it not only provides learners with practice with keywords from several OUP textbooks but also allows them to customise their vocabulary learning by creating their own word lists using vocabulary from the Oxford Dictionary, i.e. the Oxford 3000™. The key features of the app are stated to be as follows:

- **Practise daily:** the app tests your knowledge, guiding you to the right answers with personalized feedback and hints, including picture clues, definitions, anagrams and audio
- **Get instant visual feedback** on **spelling**, **grammar**, **meaning** and **word usage**. Collect knowledge and experience points with each answer
- Statistics help you **track your progress** and show you where you are improving
- The app includes a **multilingual dictionary** with support for English, Arabic, Catalan, Chinese (Orthodox), Chinese (Simplified), Czech, French, German, Hungarian, Italian, Polish, Portuguese (Brazilian), Portuguese (Portugal), Russian, Spanish (Latin America), Spanish (Spain), Thai and Turkish, with more languages coming soon
- The app makes use of **spaced repetition**: words are practised at the point when the learner is likely to forget them. This reinforces learning and helps to put words into long-term memory

(https://elt.oup.com/catalogue/items/global/dictionaries/9780194705455?cc=tr&selLanguage=en)

As can be seen above several of the VLS in Schmitt's (1997) taxonomy, such as MEM Study word's spelling, DET Analyse part of speech, DET Word Lists, DET Monolingual dictionary, DET Bilingual dictionary, MET Use spaced word practice, MET Continue to study over time, MEM Image word's meaning, appear to have been put to use in juxtaposition in the same vocabulary learning app.

Another online vocabulary learning application featuring several VLS utilized together is the *Vocabulary Learning Techniques App* (VoLT*).* The app aimed to enable the students who aspire to improve their English, especially those who aspire to pass standardised tests such as TOEFL and IELTS among others, to remember difficult words in English easily with several innovative techniques. VoLT appears to use the Keyword Method and several other VLS in Schmitt's (1997) VLS taxonomy in combination; that is, difficult words are first linked to pictures and memory keys that are designed to help remember the meaning in a fun and a faster way, then the meaning, synonym, antonym and various usages are provided. (https://play.google.com/store/apps/details?id=com.rrpublication.volt.volt&hl=tr). As is seen, with the Keyword Method in the centre, several VLS such as MEM Connect the word to its synonyms and antonyms, MEM Use new words in sentences, MET testing oneself with word tests, MET Use spaced word practice, and MET Continue to study over time are put together in one app for learners to use and improve their vocabulary knowledge and vocabulary size.

In sum, it is clear that VLS prove to be essential in all contexts; in the classroom, on the computer, on mobile devices, either using simpler instruments like paper and pencil, or technological apps like online or mobile apps.

CHAPTER 3

METHODOLOGY

3.0 Introduction

This chapter portrays the methodology of the study describing respectively the research design, the participants, the instruments, the data collection and data analysis procedures.

3.1 Research Design

This study aimed at examining the learners majoring English Language and Literature at Erciyes University in terms of (i) their prior experiences of explicit VLS learning, (ii) their current preferences in VLS with regard to the frequency of use, (iii) whether their frequency of VLS use changes according to prior experiences of explicit VLS learning, VS, and gender, (iv) whether their frequency of VLS use has an effect on their VS, and (v) their ideas about the integration of explicit VLS teaching in language classrooms and the curricula. Descriptive and interpretive statistics were used to fulfil the aims of the study, which made use of two instruments (i.e. VLSQ, adapted from Schmitt, 1997, and VST, Nation and Beglar, 2007) to collect data, which were then quantitatively analysed with various tests.

3.2 Participants

The study has a sample of 149 participants in total consisting of English Language and Literature students from the year 2013-2014 studying at five different grade levels; namely, English Language and Literature Preparatory Class, First Grade, Second Grade, Third Grade and Fourth Grade. Table 3.1 shows the distribution of participants in each grade level in number and percentage of representation.

Table 3.1. Number of Participants in Grade Levels and Their Percentage of Representation

Grade Level	Number of participants	% of representation
ELL Prep Class	42	28,2
First Grade	30	20,1
Second Grade	29	19,5
Third Grade	18	12,1
Fourth Grade	30	20,1
Total	149	100

As shown in Table 3.1, the representative power of each grade level either ideally approximates to 20% such as first and fourth grades at 20.1% and second grade at 19.5 or is more than 20% in the case of preparatory class with 28.1 %, except for the third grade level with the least representative power of 12,1% due to the limited number of students available for data collection.

Table 3.2 shows the age range, the gender distribution, the range of number of years spent studying English, the experience of preparatory class before starting faculty and the experience of having spent time in an English-speaking country of the participants.

Table 3.2. Background Information about the Participants

Age Range	Gender		Years of Eng. Study		Prep. Class before faculty		Time in an Eng-speaking country	
	Female	Male	Up to 10	More Than 10	Yes	No	Yes	No
18-45	115	34	74	75	101	48	21	128

Table 3.2 transpires that the whole sample, 115 female and 34 male, has participants with an age range from 18 to 45, differing in the number of years of studying English that range from less than 10 years to some more than 11 years, 101 participants with an experience of a pre-faculty preparatory class and 48 without, and

that while 128 participants have not spent any time in an English-speaking country, 21 participants have differing amounts of time spent in such an environment.

There is a main reason why the sample of the study was chosen to be students majoring ELL, ranging from those in their preparatory class to those in the fourth year. As was mentioned earlier in 1.5, the participants of the present study need far higher VS, receptive at the least if not productive, than the learners of other departments at Erciyes University who do not receive their education completely through the medium of English. Thus, VLS, admittedly providing the learners with mechanisms to enlarge their VS, and VS carry utmost importance especially for the participants of the present study, who are expected to read and understand unsimplified authentic texts of different genres on their own. For them, larger VS through the use of VLS mean more lexical text coverage and that means more comprehension with more likelihood of success in their major.

As is apparent from the names of the grade levels of the participants, the grade levels differ in terms of their curricular programmes with an expected increase in the degree of the requirements of their corresponding programmes and an assumption that each grade level entails the mastery of a previous grade level.

Different grade levels in the study have different curricula with different purposes and courses. As is announced on its web page (SFL Web Page) English Language and Literature Preparatory Programme at Erciyes University School of Foreign Languages provides students with a pre-faculty General English course designed to develop students' language skills to an exit level of B2 of the CEFRL.

On the other hand, receiving students who have already completed their Preparatory English Programme or those who have passed the pre-academic year English Proficiency Exam, as is documented on its web page (ELL Web Page), English Language and Literature Department follows a field-specific curriculum that comprises of courses of four different categories, namely:

(i) general service courses such as Turkish Language, Ataturk's Principles and the History of the Turkish Revolution and Information Technology,

(ii) language proficiency courses such as Reading/Advanced Reading Skills, Writing/Advanced/Academic Writing Skills, Advanced Listening and Speaking Skills, Pronunciation and several others,

(iii) linguistics courses such as Contextual Grammar, Advanced English Grammar, Comparative Grammar, Introduction to Linguistics, Linguistics, Applied linguistics and Translation, and

(iv) literary courses such as Mythology and Literature, Introduction to English Literature, Introduction to Drama, Story Analysis, 18th / 19th / 20th Century English Novel, 17th / 18th / 19th / 20th Century English Literature, Shakespeare, Selections from English Verse, 20th Century English Drama, and Literary Criticism.

The English Language and Literature Department gradually places increasing importance on more advanced, academic and literary courses, which is evident in their curricular courses chart online that shows all the courses provided in all eight semesters.

3.2.1 English Language and Literature Preparatory Class Students

The preparatory class students were administered an English Proficiency Exam that was benchmarked to CEFRL B2 and were not found at or above the pass grade, 70%, from all or some of the four stages of the exam (Use of English, Listening, Writing and Speaking) prior to their 25-hour intensive General English course. All the students were placed as pre-intermediate and continued their learning in a non-modular programme to finish the academic year with upper-intermediate; however, classes were re-arranged according to students' average grades after the first three of the four main exams, which led to classes with students having approximately the same or similar exam scores. The 42 students who are used as preparatory class subjects happened to be from the daytime class K1 and the evening class L1, the classes with higher average grades than those in their respective school times, due to the researcher's availability for data collection.

The course the preparatory class participants attended consisted of 13 hours of main course carried out using a four-skills-integrated course book, 4 hours for the separate skills for reading and writing each and 4 hours for the paired skills of listening and speaking. The students were given various types of quizzes at short intervals and two main exams for each term, most of which included vocabulary sections along with

all other components of language, and they were also required to keep a vocabulary notebook where the vocabulary items chosen by the course instructors needed to be recorded with their parts of speech, dictionary definitions, synonyms, antonyms, collocations and a sample sentence with each vocabulary item.

3.2.2 English Language and Literature Grade One Students

The 30 participants from ELL first grade level were required to take 11 courses in the first semester and 14 courses in the second. Of these courses, excluding (i) the service courses, (ii) language proficiency courses and (iii) linguistics courses, the students took four literary courses; Mythology and Literature and Introduction to English Literature 1 in the first term and Introduction to English Literature 2 and Introduction to Drama in the second term, all of which required at least adequate unassisted comprehension of introductory texts or lectures about literary genres, where students not only made use of their existing receptive VS and also needed to build on it when reading unsimplified texts either about literary texts or the parts of literary texts themselves.

3.2.3 English Language and Literature Grade Two Students

The 29 participants from ELL second grade level had 18 courses in total, 6 of which were literary ones. In the first term they took Story Analysis 1, 18th Century Novel and 17th Century English Literature and in the second term, Story Analysis 2, 18th Century Novel 2 and 18th Century English Literature. All six courses engage students with reading original, authentic, literary texts for which bigger receptive vocabulary sizes highly likely brought more ease with comprehension. One important difference of the second year participants from that of the preparatory class and the first grade level is that they encountered many more literary terms, or literary uses of standard words; words or phrases outside the high frequency lexical items and even outside the AWL. In addition, they had already had the experience of their previous two years, namely, their preparatory year and first year, with an assumed accumulation of general course knowledge as well as lexical knowledge.

3.2.4 English Language and Literature Grade Three Students

The 18 third year students studied 15 courses altogether, 3 in the first term and 4 of in the second were literary courses. They were 19th Century English literature 1 / 2, 19th Century English Novel 1 / 2, Shakespeare 1 / 2, and Selections from English Verse. These courses required a great deal of effort on the part of the learner as the texts were not written in the Standard English way but with rhetoric eloquence and artistic mastery. Therefore, the importance of a large vocabulary size was even more evident for the third year students, who had not received a pre-faculty preparatory General English programme. However, they had the experience of the first and second years of their study at the ELL department. As data collection period coincided with an exams period, only 18 students were available for the application of the VLSQ and the VST.

3.2.5 English Language and Literature Grade Four Students

The 30 participants from the fourth grade level at ELL department had 16 courses in total, 8 of which were literary; four per each term; namely, 20th Century English Drama 1 / 2, 20th Century English Literature and Literary Criticism 1 / 2. For these students to understand these text and lectures, the size of their vocabulary played a great part just as it was for the third grade level as participants in the fourth grade level had not received a preparatory year before they began to study at ELL; however, likewise, they had the most advantage as they had experienced all the previous three grade levels.

3.3 Instruments

The two instruments utilized to collect data for the present study were the Vocabulary Learning Strategies Questionnaire (VLSQ), adapted from Schmitt's (1997) Vocabulary Learning Strategies Taxonomy, and the Vocabulary Size Test (VST), developed by Nation and Beglar (2007) and validated by Beglar (2010).

3.3.1 Vocabulary Learning Strategies Questionnaire (VLSQ)

The VLSQ used in the present study was adapted by the researcher from the taxonomy of vocabulary learning strategies by Schmitt (1997). Several reasons among many why Schmitt's taxonomy is chosen to be used may be listed as its (i) popularity as a reference taxonomy in a great many studies, (ii) wide use as a data collection tool, (iii)

provision of inspiration for alternative taxonomies to appear, (iv) practicality of use, (v) wide range of sources and feedback during the stages of forming and categorizing its parts, and (vi) further refinements, which are all elaborated on elsewhere above (see 2.11.4 A Taxonomy of Vocabulary Learning Strategies).

Schmitt's (1997) taxonomy (Appendix I) has two dimensions; the first is strategies for the discovery of a new word's meaning and the second is strategies for consolidating a word once it has been encountered. The Discovery Strategies (14 items) are further categorized as Determination (DET: 9 items) and Social (SOC: 5 items) and the Consolidation Strategies (44 items) are further categorized as Social (SOC: 3 items), Memory (MEM: 27 items), Cognitive (COG: 9 items) and Metacognitive (MET: 5 items).

The VLSQ (see Appendix II for the Turkish version and Appendix III for the English version) has three main parts: (i) the first part is where participants are asked 7 demographic questions about their background such as their age, gender and years of studying English, (ii) the second part is where participants are asked to circle the best alternative that indicates their frequency of use of the 40 VLS on a 5-Likert scale of 1 Never, 2 Seldom, 3 Sometimes, 4 Usually, and 5 Always and (iii) the third part is where participants are asked to answer 5 questions related to their prior experiences and ideas about explicit teaching of VLS, which all add up to 52 items in total.

The second part of the VLSQ was reduced to 40 items on a few grounds in mind. Primarily, as Schmitt himself acknowledges, some of the categories have overlapping strategies since "several strategies have value as both Discovery and Consolidation Strategies" (1997, p. 206). Similarly, Schmitt (1997) points out that the decision of which variations of strategies to include in the final version needed to rest on "the author's subjective judgement" (p. 204). Combining these grounds with a few considerations concerning the application of the VLSQ along with the second research instrument, VST with 140 vocabulary questions, which would require a considerable amount of the participants' time, the researcher of the present study opted to eliminate several items from several categories totalling to 18 items. These items are shown in Table 3.3 below.

Table 3.3. The Strategies from Schmitt's (1997) Taxonomy not Included in the VLSQ

Str. No	Category	Strategies
8.	DET	Word Lists (-)
9.	DET	Flash cards (-)
14	SOC	Discover new meaning through group work activity
16.	SOC	Teacher checks students' flashcards or wordlists for accuracy
25.	MEM	Peg Method (-)
26.	MEM	Loci Method (-)
28.	MEM	Group words together spatially on a page (-)
32.	MEM	Study the sound of a word*
33.	MEM	Say new word aloud when studying
34.	MEM	Image word form
35.	MEM	Underline initial letter of the word (-)
36.	MEM	Configuration (-)
41.	MEM	Use cognates in study
42.	MEM	Learn the words of an idiom together
44.	MEM	Use semantic feature grids (-)
50.	COG	Use the vocabulary section in your text book
51.	COG	Listen to tape of word lists (-)
52.	COG	Put English labels on physical objects (-)

*this item was combined with 31 MEM

As can be seen from Table 3.3, the strategies marked with a minus (-) are 10 of the 18 strategies that Schmitt (1997) added after the application of his original survey. While the researcher of the present study was selecting the above strategies to exclude from the VLSQ, a set of criteria was secured rather than a purely subjective judgement: (i) reappearance of a strategy elsewhere as in the case of DET 8 and 9, which appear as COG 47 and 48, or DET 3 reappear as MEM 41, (ii) core element being shared such as MEM 23 and MEM 44 (semantic map/grid), and MEM 27, MEM 28 and MEM 42 (grouping word), (iii) being a smaller part of a more general strategy such as MEM 31 and, MEM 34, MEM 35, MEM 36 (study spelling and e.g. underlining initials) or SOC 13 and SOC 14 , (iv) not necessarily being initiated by students such as SOC 16 and

COG 50, and (v) the highly unlikelihood of knowledge of the strategies by students such as MEM 25 and MEM 26 (the Peg and Loci Methods).

After eliminating the items in Table 3.3, the second part of the VLSQ comprises of 7 items of Determination (DT), 6 items of Social (SD 4 items & SC 2 items), 16 items of Memory (MM), 6 items of Cognitive (CG) and 5 items of Metacognitive (MT) Strategies. All the items were translated into Turkish as well as the language of the definitions was made clearly understandable to the Turkish learner, occasionally with elaborations. Examples created by the researcher of the present study were provided in 19 of the items for the respondents to understand better what strategy is being described. The VLSQ was measured reliable with Cronbach's alpha value at 0,88.

3.3.2 Vocabulary Size Test (VST)

The VST (Appendix IV) is designed to measure the written receptive vocabulary size of both native and non-native speakers in the English language, where the test items measure (i) written word form, (i) the form-meaning connection, and to a lesser extent (iii) concept knowledge through a single non-defining context which requires the decontextualized knowledge of the word, as is explained by Nation (2012). It is further emphasized that the VST is clearly meant to measure written receptive vocabulary knowledge only, that is, the vocabulary knowledge required for reading, not the vocabulary knowledge for other skills such as listening, speaking, writing or the reading skill per se (Nation & Beglar, 2007; Nation, 2012).

The 14,000 version utilized in the present study has 140 multiple-choice items, with 14 selections of 10 lexical items representing each 1,000 of the 14K word family levels, where each correct answer estimates the written receptive knowledge of 100 word families (Nation & Beglar, 2007; Nation, 2012). The multiple-choice format used has an item stem and 4 choices. In the item stem, the word is written and then a very simple sentence that contains the word is given in a context-independent non-defining way; however, the sentence has several roles to play such as (i) showing what part of speech the word is, (ii) determining which sense of the word is meant in cases of e.g. homographs, and (iii) providing slight hints of meaning with the example of use given. The format can be seen below through item 6 from the 6^{th} 1000 level:

6. THESIS: She has completed her **thesis**.

a. long written report or study carried out for a university degree
b. talk given by a judge at the end of a trial
c. first year of employment after becoming a teacher
d. extended course of hospital treatment

Since the VST is focused on vocabulary knowledge in itself rather than any other types of knowledge, the definitions in the choices are worded in much simpler language than the target word (Nation, 2012), which may be seen below from item 3 of the 12th 1000 level:

3. SOLILOQUY: That was an excellent **soliloquy**.

a. song for six people
b. short clever saying with a deep meaning
c. entertainment using lights and music
d. speech in the theatre by a character who is alone

The items in the VST are designed in such a way that learners do not have to have a precise knowledge of what the word means, that is, partial knowledge may suffice to get a test item correct. This is done by having distractor definitions not have the core meaning elements with the correct definition. To illustrate, the learner does not have to distinguish between a number of plants; rather, only the knowledge that *azalea* is a plant suffices (Nation, 2012), in the item 9 below of the 7th 1000 level:

9. AZALEA: This **azalea** is very pretty.

a. small tree with many flowers growing in groups
b. light material made from natural threads
c. long pieces of material worn by women in India
d. seashell shaped like a fan

Nation (2012) advises allowing for guessing assuming that learners do not make wild guesses and acknowledging that the VST is a partially sensitive test and therefore interpreting the final vocabulary size score not as a perfectly accurate number of known words by a learner but as slightly more than that learner's real written receptive VS.

In brief, the test is easy to use and mark, efficient, with many items carefully designed to measure what it is supposed to from a very wide range of frequency levels and is validated with Rasch reliability measures of 0.96 by Beglar (2010, p.101).

3.4 Procedures

The procedures of piloting the two research instruments, the VLSQ and the VST, and the subsequent data collection are dealt with.

3.4.1 Piloting

There were four fundamental aims of the application of the piloting procedures. First and foremost, piloting the VLSQ was essential in order to (i) ensure all the items in the questionnaire were easily comprehensible to the participants, as it was adapted by the researcher of the present study by translating the items into Turkish, adding explanations and/or examples to most of them during revisions with the help of the informal feedback received from several students, (ii) determine the amount of time to be allotted to the completion of all the 52 items, (iii) to test whether participants would show any sign of fatigue and/or disinterest when answering the 140-item VST, which is stated to typically take approximately 40 minutes by Nation (2012), followed by the 52-item VLSQ, and (iv) see the reliability measure of the adapted VLSQ as the VST is already a validated test with Rasch indices of more than .96 Beglar (2010).

The pilot study data were collected at the beginning of the spring semester in one class of 22 participants at Erciyes University School of Foreign Languages English Language and Literature Preparatory Programme thanks to the permission granted by the School Director and the results of the pilot study revealed that (i) the participants in the pilot sample did not have any problems understanding the items, explanations or examples, (ii) a little more than 10 minutes was satisfactory for the administration of the questionnaire, (iii) participants did not show any significant sign of fatigue and/or disinterest as the duration was almost equal to a class period that they were accustomed to and as they were explained by the researcher that their attention, sincerity and cooperation were crucial to the results of the study, and (iv) the Cronbach's Alpha for the VLSQ was measured, which is shown below in Table 3.4.

Table 3.4. The Cronbach's Alpha value for the VLSQ

Reliability Statistics	
Cronbach's Alpha	N of Items
,88	40

As Table 3.4 shows the internal reliability of the VLSQ was tested in the piloting stage of the present study and was found ,88 by Cronbach's alpha. Considering the internal reliability needs to be over 0,70, the Cronbach's alpha value of ,88 shows that the research instrument is reliable.

3.4.2 Data Collection

Having been granted the permission to gather data from all four grade levels of the English Language and Literature Department and the Preparatory Programme at School of Foreign Languages at Erciyes University, the data collection procedures of the main study were started towards the end of the spring semester, considering that participants at each grade level were likely to have had the most of what they had been offered by their respective courses through the academic year.

One of the professors at ELL department was asked to administer the data collection procedures at each of the four levels, thinking that the participants would be less disturbed than being given the tools to complete by the researcher, who they are not familiar with, and that they would take it more seriously. On the other hand, the participants in the Preparatory Programme were given the data collection tools by the researcher, who was familiar to them.

The VLSQ and the VST were attached together and each bundle was numbered according to grade level and the number of participant for later ease of organising the data; that is, the Preparatory Programme participants' bundles were tagged 0.1, 0.2, 0.3 and so on representing the first, the second, the third participant and so on, 1.1, 1.2, 1.3, and so on for First Grade level participants and so forth.

All the participants were presented with a bar of chocolate at the start of the data collection session to minimize any sign of fatigue and/or disinterest and for their kind cooperation with the researcher. The data collection sessions were completed without any problems except for limited number of available Third Grade Level participants.

3.5 Data Analysis

The data collected through the two research instruments were analysed by SPSS 22.00. First, the reliability of the VLSQ was tested through Cronbach's alpha and the internal reliability was measured at ,88. The second instrument, the VST, a standardised

receptive vocabulary size test prepared by Nation and Beglar (2007) was formerly validated with Rasch reliability measures of 0.96 by Beglar (2010, p.101). Following the procedure of securing the reliability of the research instruments, both descriptive and interpretive statistics were used to analyse the data.

In order to answer the first research question, inquiring about the prior experiences of the learners concerning the explicit teaching of VLS, the frequency distributions of the three closed questions, the second and third of which are intended to follow up the first to arrive at fuller data, as part of the second section of the VLSQ, were computed.

To answer the second research question concerning the preferences of learners VLS use, first, the overall frequency of VLS use of all the participants was found by computing the mean scores of all VLS items, which were later used to determine the overall mean score to conclude whether the participants of the study are low, medium, or high users of VLS in the VLSQ. To detail the number of high, medium and low VLS users, a frequency distribution analysis was done. In order to show the participants' most and least preferred VLS categories, the mean scores of the VLS categories were ranked from the highest to the lowest. Likewise, the mean scores of particular VLS items were listed from the most frequently used to the least.

Several statistical tests were run in order to analyse the data for the three sub-questions of the third research question exploring the possible differences in the learners' frequency of VLS use according to three different variables: (a) a Mann Whitney U test was done to find whether there is a difference between the frequency of VLS use of learners with and without prior explicit VLS learning, a Kruksal Wallis H test was applied to find the difference in the frequency of VLS use in relation to prior experiences of explicit VLS teaching**,** a t test was run for the difference in the frequency of SOC VLS use in relation to prior experiences of explicit VLS teaching, and a Mann Whitney U test was done for the difference in the frequency of SOC VLS use in relation to prior experiences of explicit VLS teaching, (b) before a t test was run for the Difference in Frequency of VLS Use in relation to VS**,** the frequency distribution of VS and the mean score of VS were computed, and (c) before a t test was done for the difference in frequency of VLS use in relation to gender, the frequency distribution of participants' gender was computed.

As for the fourth research question concerning the effect of the frequency of VLS use on the learners' VS, a multiple regression analysis was made.

For the fifth research question, the frequency distributions of learners' ideas on the necessity of explicit VLS teaching in the classrooms and on the integration of explicit VLS teaching in language programmes were computed.

CHAPTER 4

RESULTS

4.0 Introduction

This chapter is spared to present the results of the analysis of the data gathered through the research instruments, the VLSQ and the VST, in order to answer the research questions of the current study. To this end, results for each research question will be given and interpreted respectively. In the first place, the prior experiences of the learners majoring in English Language and Literature at Erciyes University concerning the explicit teaching of VLS will be reported. Next, the learners' preferences in terms of their VLS use with regard to frequencies will be shown. Then whether the frequency of VLS use of the learners differs according to such variables as the prior experiences about the explicit teaching of VLS, VS, and gender will be detailed. Further, whether the frequency of VLS use has an effect on the VS of the learners will be looked at. Finally, the ideas of the learners about the integration of explicit teaching of VLS in language classrooms and the curriculum will be described.

4.1 Results of the Study

The analysis of the data revealed the following results in reply to the aforementioned research questions.

4.1.1 Prior Experience of Explicit VLS Learning

In order to answer the first research question, what the prior experiences of the learners concerning the explicit teaching of VLS are, the participants were asked three questions as part of the VLSQ, to probe into their background, if any, in having been taught VLS explicitly. The second and third questions are an extension of the first question and are meant to provide a more complete description of the participants' prior experiences with explicit VLS learning and their present thoughts. The answers to these three questions are tabulated below respectively using descriptive statistics, namely frequency distributions and percentile figures.

1. The Learners With and Without Prior Explicit VLS Learning

The participants were asked to provide either an affirmative or a negative answer to the question asking whether they had been explicitly taught any of the VLS in the VLSQ (by explaining what the strategy is, how it is used, and their examples) during their English language learning experience and Table 4.1 below shows the frequency distribution of the answers by providing the numbers and percentages of students with and without prior explicit VLS learning.

Table 4.1. The Frequency Distribution for Prior VLS Learning/Teaching

Prior Explicit VLS Teaching	**F**	**%**
Yes	122	81,9
No	27	18,1
Total	149	100,0

As is reflected on Table 4.1, in reply to the question of whether they had been explicitly taught any of the 40 VLS in the VLSQ with an emphasis on the description of the VLS, how to use them, and their examples, 122 out of 149 participants, 81,9%, answered, "Yes" ,and 27 out of 149, 18,1%, answered, "No" .

2. The Learners With Varying Number of VLS Explicitly Taught

The second question was exclusively aimed at the participants who replied to the first question affirmatively, that is, 122 learners who reported having received explicit teaching of some of the VLS, in order to learn the varying numbers of VLS they were explicitly taught by providing participants with four choices; 'around 10' VLS, 'around 20' VLS, 'around 30' VLS, and 'around 40' VLS. Table 4.2 below shows the frequency distributions of the participants who reported to have received explicit VLS teaching in each of the four quantities as expressed in the four options.

Table 4.2. The Frequency Distribution of Learners with Varying Number of VLS Explicitly Taught

The approximate number of VLS explicitly taught	**F**	**%**
Around 10	64	52,5
Around 20	43	35,2
Around 30	11	9,0
Around 40	4	3,3
Total	122	100,0

Table 4.2 shows that in response to the question asking approximately how many of the VLS listed in the VLSQ they had been explicitly taught during their previous studies, 64 participants out of 122 (52,5%) reported having been taught around 10 VLS, about a quarter of the VLS in the VLSQ, 43 participants out of 122 (35,2%) reported having explicitly learned around 20 VLS, about half of the VLS, 11 out of 122 (9,0 %) reported having been taught around 30 VLS, about three quarters of the VLS and 4 out 122 (3,3%) reported having been introduced to around 40 VLS, nearly all or the whole set of VLS.

3. The Learners Wanting to Have Been Taught VLS Explicitly

The third question was exclusively aimed at the participants who replied to the first question negatively, that is, 27 learners who reported not having received explicit teaching of any of the VLS, in order to learn about their present thoughts about whether they would like to have received explicit teaching of the VLS listed on the VLSQ. Table 4.3 below shows how participants responded to the question providing frequency distribution of the students with positive and negative answers and their percentile figures.

Table 4.3. The Frequency Distribution of Learners Willing to Have Been Taught VLS Explicitly

Willingness to Have Been Taught VLS Explicitly	**f**	**%**
Yes	26	96,3
No	1	3,7
Total	27	100,0

As indicated in Table 4.3, upon being asked the question of whether they would like to have been explicitly taught the VLS listed in the VLSQ, 26 (96, 3%) of those 27 participants, who reported not having explicitly learned any VLS, answered positively and 1 (3,7%) answered negatively.

4.1.2 The Frequency of VLS Use

The second research question concerning the preferences of the participants about the VLS strategy use has 4 sub-questions as follows:

4.1.2.1 The Overall Frequency of VLS Use

In order to answer the research question 2a, what the overall frequency of VLS use of the learners is, the means and the standard deviations of all the 40 VLS items were computed, which were in turn used to determine whether the participants of the study are low, medium, or high users of VLS in the VLSQ, basing the categorisation on Oxford's (1990) system, where there is a scale of 1-5 and a mean score between 1-2.4 shows low strategy use (seldom and/or never use), one between 2.5-3.4 shows medium strategy use (sometimes use) and one between 3.5-5 shows high strategy use (often and/or always). The results can be seen in Table 4.4 below.

Table 4.4. The Mean Score of General Frequency of VLS Use

Category	N	Minimum	Maximum	M	SD
General Frequency of VLS Use	149	2,25	4,13	3,16	,43

As is seen in Table 4.4, the minimum score in terms the frequency of VLS use is 2,25 and the maximum score is 4,13 and thus the general mean score is 3,16. It appears that the learners majoring English Language Literature at Erciyes University are medium users of VLS.

4.1.2.2 The Percentage of High, Medium and Low Users of VLS

As to the research question 2b, what the percentage of high, medium and low users of VLS is, Table 4.5 below shows the number of students with the various levels of VLS use.

Table 4.5. The Frequency Distribution of Learners with Different Frequency of VLS Use

Frequency of VLS Use	F	%
High	35	23,5
Medium	106	71,1
Low	8	5,4
Total	149	100

As shown in Table 4.5, 35 out 149 participants are high VLS users (23,5%), 106 out of 149 are medium VLS users (71,1%) and 8 out of 149 (5,4%) are low users.

4.1.2.3 The Most Frequently used VLS Category

To answer the research question 2c, what the most frequently used VLS category is, the mean scores of learners' use of the five different categories in the VLSQ are computed in order to find the highest frequency of use and Table 4.6 shows the results.

Table 4.6. The Mean Scores of VLS Categories' Frequency of Use

Category	N	Minimum score	Maximum score	M	SD
DT	149	2,43	5,00	3,84	,51
SOC	149	1,17	4,17	2,67	,60
MM	149	1,31	4,50	3,09	,58
CG	149	1,17	4,67	3,22	,90
MT	149	1,20	4,40	2,95	,61

(The definition of abbreviations can be found in section 3.3.1 on page 94.)

Table 4.6 shows that the minimum score in terms the frequency of DT category VLS use is 2,43 and the maximum score is 5,00 and the general mean score is 3,84. It can be stated that the participants are high users of the DT category of VLS. The minimum score in terms the frequency of SOC category VLS use is 1,17 and the maximum score is 4,17 and the general mean score is 2,67, which shows that the participants are medium users of the SOC category of VLS. The minimum score in terms the frequency of MM category VLS use is 1,17 and the maximum score is 4,67 and the general mean score is 3,09 showing that the participants are medium users of the MM category of VLS. The minimum score in terms the frequency of CG category VLS use is 1,31 and the maximum score is 4,50 and the general mean score is 3,22, and it can be stated that the participants are medium users of the CG category of VLS. The minimum score in terms the frequency of MT category VLS use is 1,20 and the maximum score is 4,40 and the general mean score is 2,95, which shows that the participants are medium users of the MT category of VLS.

4.1.2.4 The Most Frequently Used Particular VLS

VLS questionnaire data show that learners use each VLS in the VLSQ in varying frequencies. Below, Table 4.7 lists the VLS from the most frequently used to the least, which shows the learners' preferences for particular VLS.

Table 4.7. The Mean Scores of the Most and Least Used VLS

No		Items of VLS	N	M
1	DT-5	Guess from textual context	149	4,19
2	MT-1	Use English-language media (songs, movies, newscasts, etc.)	149	4,19
3	DT-4	Analyse any available pictures or gestures	149	4,03
4	CG-5	Take notes in class	149	3,93
5	MM-15	Paraphrase the word's meaning	149	3,86
6	DT-6	Use and English to Turkish or Turkish to English dictionary	149	3,84
7	DT-1	Analyse the part of speech	149	3,81
8	DT-2	Analyse affixes and roots	149	3,79
9	MM-14	Make use of part of speech	149	3,79
10	DT-3	Check if a similar word exists in Turkish	149	3,75
11	MM-2	Create a mental image – visualise – the meaning of the word	149	3,70
12	MM-3	Connect the word to a personal experience	149	3,60
13	CG-3	Make word lists and study words on them	149	3,52
14	MM-9	Use the new words in sentences	149	3,51
15	DT-7	Use English to English dictionary.	149	3,45
16	MM-5	Connect the word to its synonyms and antonyms	149	3,41
17	MM-4	Associate the word with its coordinates	149	3,35
18	MM-11	Study the spelling and sound of the word	149	3,35
19	SOC-4	Ask my classmates for the meaning of the new word	149	3,33
20	MM-13	Make use of the affixes and roots	149	3,28
21	CG-6	Keep a vocabulary notebook	149	3,21
22	MT-5	Continue to study over time	149	3,20
23	CG-1	Repeat the word aloud several times	149	3,14
24	MM-8	Group words together and study them	149	3,13
25	SOC-2	Ask my teacher for a paraphrase or a synonym	149	3,06
26	CG-2	Write the word down several times	149	2,86
27	MM-16	Use physical action	149	2,83
28	SOC-6	Interact with native speakers of English	149	2,82
29	MM-6	Use semantic maps	149	2,68
30	CG-4	Make flash cards and study words on them	149	2,66
31	MT-2	Test myself with word tests	149	2,66
32	MM-12	Use the Keyword Method	149	2,56
33	MT-3	Use spaced word practice	149	2,48
34	SOC-3	Ask my teacher for a sentence including the new word	149	2,37
35	MM-7	Use "scales" for some groups of words	149	2,37
36	MM-10	Use a group of words together in a storyline	149	2,28
37	SOC-1	Ask my teacher for a Turkish translation	149	2,25
38	MT-4	Skip or pass a new word	149	2,21
39	SOC-5	Study and practice the meaning of a word in a group	149	2,19
40	MM-1	Draw pictures that I connect to the word's meaning	149	1,77

In categorising the frequency of VLS use, a VLS frequency score that falls between 3.5-5.0 means that the VLS score is high; therefore, the first 14 VLS items in Table 4.7 appear to be highly used; likewise, scores between 2.41 and 3.50 are classified as medium, which shows that VLS items numbered 15-33 are used with medium frequency and those VLS items that have frequency scores of 1.0-2.40 are in the category low, namely, the ones numbered 34-40, having the least frequent use.

Table 4.7 shows that the highest mean score is 4,19 for DT-5 and MT-1, and the lowest is 1,77 for MM1 and that the five most frequently used VLS are DT-5 (Guess from textual context), MT-1 (Use English-language media), DT-4 (Analyse any available pictures or gestures), CG-5 (Take notes in class) and MM-15 (Paraphrase the word's meaning).

4.1.3 The Difference in the Frequency of VLS Use According to Different Variables

In order to find answers to the third research question of whether the frequency of learners' VLS use differs according to (a) the prior experiences of learners concerning explicit teaching of VLS, (b) VS, and (c) gender, several statistical analysis were employed for each of the three variables and their results are respectively reported below.

4.1.3.1 The Frequency of VLS Use in Relation to the Prior Experiences of Learners Concerning Explicit VLS Teaching

This research question set out to explore whether there is a difference between the frequencies of VLS use of learners with varying prior experiences of having been taught VLS explicitly, where the varying prior experiences were described as not having been taught any of the VLS, having been taught around 25% (around 10), 50% (around 20), 75% (around 30), and 100% (around 40) of the 40 VLS listed in the VLSQ. First, a Mann Whitney U test was done in order to determine whether there is a difference in the frequency of VLS use of learners who report having been taught varying quantities of VLS and those who report not having been taught any VLS, whose results are shown in Table 4.8. Then in order to determine the existence of such a difference in the learners' frequency of VLS use according to the quantity of the VLS the learners report having been explicitly taught, a number of tests were applied. A Kruksal Wallis H test was done to identify any likely difference in a category/categories of VLS. Then a t test and a Mann Whitney U test were carried out to probe into the likely cause of the difference. Table 4.8 below shows the results of the Mann Whitney U test that compared the VLS use of learners with and without a prior experience of an explicit VLS learning.

Table 4.8. Mann Whitney U Test Results for the Difference in the Frequency of VLS Use in Relation to the Existence of Prior Experience of Explicit VLS Learning

Category	Existence of Prior Explicit VLS Teaching	N	Mean Rank	Sum of Ranks	U	p
DT	Yes	122	79,75	9729,00	**1068,00***	**,004**
	No	27	53,56	1446,00		
SOC	Yes	122	75,56	9218,50	1578,50	,735
	No	27	72,46	1956,50		
MM	Yes	122	76,62	9348,00	1449,00	,329
	No	27	67,67	1827,00		
CG	Yes	122	75,10	9162,00	1635,00	,953
	No	27	74,56	2013,00		
MT	Yes	122	76,34	9313,50	1483,50	,418
	No	27	68,94	1861,50		
General	Yes	122	77,34	9435,50	1361,50	,159
	No	27	64,43	1739,50		

As can be seen in Table 4.8, 122 of the participants reported having had prior explicit teaching of the VLS and 27 of them reported not. According to the results, there is not a significant difference in the frequency of use of SOC, MM, CG, MT categories of VLS as well as overall VLS between learners with and without a prior experience of being taught VLS explicitly. However, as Table 4.8 shows, the mean score of learners who reported having been taught VLS explicitly is 79,75 and the mean score of those who reported not is 53,56, and the U value (U=1068,00, p>,05) computed to test the significance of the difference between the two groups show that the difference is significant at ,05. Based on these results, it can be stated that the frequency of use of DT category of VLS is higher for those students who have had a prior experience of being taught VLS explicitly than those who have not.

Of the 122 participants reporting having been taught VLS explicitly, not all of them reported having been taught the same quantity of the VLS in the VLSQ. Table 4.9 below shows the results of the Kruksal Wallis H test that was done to transpire any differences between learners with varying prior experiences.

Table 4.9. Kruksal Wallis H Test Results for the Difference in the Frequency of VLS Use in Relation to Prior Experiences of Explicit VLS Teaching

Categories	The Quantity of VLS Explicitly Taught	N	Mean Rank	SD	X^2	p
DT	Around 10	64	60,03	3	1,813	,612
	Around 20	43	59,78			
	Around 30	11	71,14			
	Around 40	4	77,00			
SOC	Around 10	64	53,25	3	**13,308***	**,004**
	Around 20	43	72,84			
	Around 30	11	51,64			
	Around 40	4	98,75			
MM	Around 10	64	61,27	3	1,471	,689
	Around 20	43	58,45			
	Around 30	11	71,95			
	Around 40	4	69,13			
CG	Around 10	64	60,70	3	0,157	,984
	Around 20	43	61,93			
	Around 30	11	62,36			
	Around 40	4	67,38			
MT	Around 10	64	57,51	3	3,271	,352
	Around 20	43	62,53			
	Around 30	11	75,82			
	Around 40	4	74,88			
General	Around 10	64	57,80	3	2,610	,456
	Around 20	43	62,99			
	Around 30	11	70,36			
	Around 40	4	80,38			

As Table 4.9 shows, there does not appear to be a significant difference in the learners' frequency of VLS use of categories DT, CG, MM, MT and frequency of VLS use in general between the groups of learners with the varying quantities of the VLS they report having been explicitly taught. However, it is shown that a significant difference exists in the learners' frequency of VLS use of the category SOC between the groups of learners with varying quantities of prior explicit VLS learning. In order to determine the cause of the difference, each of the 4 groups was compared with one another for independent groups through t test and Mann Whitney U test. The results that are gained are shown in Table 4.10 and 4.11.

Table 4.10. t Test Results for the Difference in the Frequency of SOC VLS use in Relation to Prior Experiences of Explicit VLS Teaching

Category	The Quantity of VLS Explicitly Taught	N	M	SD	T	p
SOC	Around 10	64	2,53	,536	**-3,249***	**,002**
	Around 20	43	2,90	,619		,050

In Table 4.10, it can be seen that the significant difference in the frequency of use of VLS in the SOC category, which was evident after the comparison of all the four groups of the learners with varying prior experiences of explicit VLS learning, is caused by the varying VLS use of the group reporting having been taught around 10 VLS and the group reporting having learned around 20 VLS. When the difference between the group with a prior teaching of around 10 VLS and the with around 20 VLS is examined, it is seen that the mean score of the former is 2,53, whereas the mean score of the latter is 2,90, and the t value (t=-3,249; p<,05) computed to test the significance of the difference between the mean scores of the two groups shows that the difference is significant at ,05. Based on these results, it may be stated that the frequency of learners' VLS use in the SOC category is higher in the group of learners with a prior experience of explicit teaching of around 20 VLS than those learners with that of around 10 VLS.

Table 4.11. Mann Whitney U Test Results for The Difference in the Frequency of SOC VLS use in Relation to Prior Experiences of Explicit VLS Teaching

Category	The quantity of VLS Explicitly Taught	N	Mean Rank	Sum of Ranks	U	P
SOC	Around 10	64	38,12	2439,50	344,50	,910
	Around 30	11	37,32	410,50		
SOC	Around 10	64	32,95	2108,50	**28,50***	**,009**
	Around 40	4	59,38	237,50		
SOC	Around 20	43	29,45	1266,50	152,50	,070
	Around 30	11	19,86	218,50		
SOC	Around 20	43	23,24	999,50	53,50	,213
	Around 40	4	32,13	128,50		
SOC	Around 30	11	6,45	71,00	**5,00***	**,025**
	Around 40	4	12,25	49,00		

When Table 4.11 is examined, it can be seen that the significant difference in the frequency of use of VLS in the SOC category, which was evident after the comparison of all the four groups of the learners with varying prior experiences of explicit VLS learning, is caused by the varying VLS use of (i) the group reporting having been taught around 10 VLS and the group reporting having learned around 40 VLS as well as

by (ii) the group reporting having been taught around 30 VLS and the group reporting having learned around 40 VLS. When the difference between the group reporting having been taught around 10 VLS and the group reporting having learned around 40 VLS is examined, the mean score of the former is found as 32,95 and that of the latter is seen as 59,38. The U value (U=28,50; p<,05) of the Mann Whitney U Test computed to test the significance of the difference between the two groups shows that the difference is significant at ,05. With regard to these results, it may be stated that the frequency of learners' VLS use in the SOC category is higher in the group of learners with a prior experience of explicit teaching of around 40 VLS than those learners with that of around 10 VLS.

When the difference between the group reporting having been taught around 30 VLS and the group reporting having learned around 40 VLS is examined, the mean score of the former is found as 6,45 and that of the latter is seen as 12,25. The U value (U=5,00; p<,05) of the Mann Whitney U Test computed to test the significance of the difference between the two groups shows that the difference is significant at ,05. Considering these results, it may be stated that the frequency of learners' VLS use in the SOC category is higher in the group of learners with a prior experience of explicit teaching of around 40 VLS than those learners with that of around 30 VLS.

4.1.3.2 The Frequency of VLS Use in Relation to VS

This research question aimed at learning about a possible difference according to the frequencies of VLS use of learners with varying VS, where the varying VS were determined as either below or above the LT (Lexical Threshold) by administering the VST. In order to answer the research question, first, the frequency distribution of the participants with VS below and above the lexical threshold was found, which was, then, followed by a t test to determine the existence of a significant difference between the frequencies of VLS use of the two groups. Table 4.12 shows the frequency distribution of the learners below and above the LT.

Table 4.12. The Frequency distribution of VS

VS	F	%	Group	%
4300,00	1	,7		
4800,00	1	,7		
5000,00	2	1,3		
5700,00	1	,7		
5800,00	1	,7		
5900,00	2	1,3		
6000,00	1	,7		
6100,00	2	1,3		
6200,00	7	4,7		
6300,00	3	2,0		
6400,00	3	2,0		
6500,00	1	,7		
6600,00	3	2,0		
6700,00	8	5,4	BELOW the LT	75,2
6800,00	3	2,0		
6900,00	11	7,4		
7000,00	7	4,7		
7100,00	7	4,7		
7200,00	7	4,7		
7300,00	10	6,7		
7400,00	4	2,7		
7500,00	4	2,7		
7600,00	7	4,7		
7700,00	4	2,7		
7800,00	4	2,7		
7900,00	8	5,4		
8000,00	6	4,0		
8100,00	1	,7		
8200,00	4	2,7		
8300,00	3	2,0		
8400,00	3	2,0		
8500,00	2	1,3		
8600,00	3	2,0		
8800,00	3	2,0		
8900,00	3	2,0	ABOVE the LT	24,8
9300,00	2	1,3		
9400,00	1	,7		
9600,00	1	,7		
10000,00	1	,7		
10100,00	1	,7		
10400,00	1	,7		
10500,00	1	,7		
11500,00	1	,7		
Total	149	100,0	149	100,0

As can be seen from Table 4.12, 75,2% of the participants in the study have a receptive vocabulary size that is below the LT of 8,000 word families, ranging from 4,300 to 7,900,and 24,8% of the participants are above the LT with VS of between 8,000 to 11,500 word families. Table 4.13 below shows the mean score of the VS of all the participants.

Table 4.13. The Mean Score of VS

Variable	N	Minimum	Maximum	Mean	SD
VS	149	4300,00	11500,00	7405,3691	1076,01525

As can be seen in Table 4.13, the average score of all the 149 participants of the study is 7405,3691 and can be rounded as 7405 word families. The t test results applied in order to see whether there is a difference between participants' frequencies of VLS use according to their VS are tabulated in Table 4.14 below.

Table 4.14. The t Test Results for the Difference in Frequency of VLS Use in relation to VS

VS	**Categories**	**N**	**M**	**SD**	**T**	**p**
Below LT	DT	112	3,82	,52	-,469	,640
Above LT		37	3,87	,49		
Below LT	SOC	112	2,71	,59	1,446	,150
Above LT		37	2,55	,62		
Below LT	MM	112	3,08	,57	-,277	,782
Above LT		37	3,11	,59		
Below LT	CG	112	3,28	,87	1,374	,171
Above LT		37	3,04	,97		
Below LT	MT	112	2,94	,60	-,335	,738
Above LT		37	2,98	,64		
Below LT	General	112	3,17	,42	,431	,667
Above LT		37	3,14	,44		

When Table 4.14 is analysed, it can be seen that in the DT category the mean score of frequency of VLS use the of participants with VS below LT is 3,82 and that of participants with VS above LT is 3,87. The t value (t=-,469, p>,05) computed to test the significance of the difference between the mean scores of the two groups shows that the difference is not significant at ,05. Based on these results, it may be stated that the frequency of learners' VLS use in the DT category is higher in the group of learners

with VS above the LT than those learners with VS below the LT but the difference is not statistically significant.

Table 4.14 also shows that in the SOC category the mean score of frequency of VLS use the of participants with VS below LT is 2,71 and that of participants with VS above LT is 2,55.The t value (t=-,469, p>,05) computed to test the significance of the difference between the mean scores of the two groups shows that the difference is not significant at ,05. Considering these results, it may be expressed that the frequency of learners' VLS use in the SOC category is higher in the group of learners with VS below the LT than those learners with VS above the LT but the difference is not statistically significant.

As can be seen in Table 4.14, in the MM category the mean score of frequency of VLS use the of participants with VS below LT is 3,08 and that of participants with VS above LT is 3,11. The t value (t=-,277, p>,05) computed to test the significance of the difference between the mean scores of the two groups shows that the difference is not significant at ,05. These results show that the frequency of learners' VLS use in the MM category is higher in the group of learners with VS above the LT than those learners with VS below the LT but the difference is not statistically significant.

Table 4.14 further shows that in the CG category the mean score of frequency of VLS use the of participants with VS below LT is 3,28 and that of participants with VS above LT is 3,04. The t value (t=1,374, p>,05) computed to test the significance of the difference between the mean scores of the two groups shows that the difference is not significant at ,05. Considering these results, it may be stated that the frequency of learners' VLS use in the CG category is higher in the group of learners with VS below the LT than those learners with VS above the LT but the difference is not statistically significant.

It can also be seen in Table 4.14 in the MT category the mean score of frequency of VLS use the of participants with VS below LT is 2,94 and that of participants with VS above LT is 2,98. The t value (t=-,335, p>,05) computed to test the significance of the difference between the mean scores of the two groups shows that the difference is not significant at ,05. These results show that the frequency of learners' VLS use in the

MM category is higher in the group of learners with VS above the LT than those learners with VS below the LT but the difference is not statistically significant.

Table 4.14 finally shows that in terms of overall VLS (all five categories of DT; SOC, MM, CG, and MT) the mean score of frequency of VLS use the of participants with VS below LT is 3,17 and that of participants with VS above LT is 3,14, The t value (t=,431, p>,05) computed to test the significance of the difference between the mean scores of the two groups shows that the difference is not significant at ,05. According to these results, it can be stated the frequency of overall VLS use is higher in the group of learners with VS below the LT than those learners with VS above the LT but the difference is not statistically significant.

4.1.3.3 The Frequency of VLS Use in Relation to Gender

This research question aimed at exploring the likelihood of a difference between the frequencies of VLS use of learners with different genders as, male and female participants. In order to answer the research question, first, the frequency distribution of the participants in terms of gender was computed. Then a t test to determine the existence of a significant difference between the frequencies of VLS use of the two groups, male and female was carried out. Table 4.15 shows the frequency distribution of the male and female participants.

Table 4.15. The Frequency Distribution of Participants' Gender

Gender	f	%
Male	34	22,8
Female	115	77,2
Total	149	100,0

As can be seen from table 4.15, of the 149 participants in the current study, 115 (77,2%) are female and 34 (22,8%) are male.

Table 4.16 below summarizes the t test results of both the frequency of category-specific VLS use and frequency of overall VLS as compared between male and female groups.

Table 4.16. The t Test Results for the Difference in Frequency of VLS Use in relation to Gender

Gender	Categories	N	M	SD	T	p
Male	DT	34	3,76	,51	-,919	,359
Female		115	3,85	,50		
Male	SOC	34	2,48	,59	**-2,101***	**,037**
Female		115	2,72	,59		
Male	MM	34	2,99	,60	-1,088	,279
Female		115	3,11	,56		
Male	CG	34	2,60	,91	**-4,874***	**,000**
Female		115	3,40	,82		
Male	MT	34	2,86	,59	-,911	,364
Female		115	2,97	,61		
Male	General	34	2,98	,48	**-2,851***	**,005**
Female		115	3,21	,40		

On examining Table 4.16, it can be seen that there is not a significant difference between the two groups, male and female participants, in terms of their frequency of VLS use in the categories DT, MM, and MT.

Table 4.16 shows that in the SOC category, the mean score of frequency of VLS use the of the male participants is 2,48, and that of female participants is 2,72. The t value (t=-2,101, p<,05) computed to test the significance of the difference between the mean scores of the two groups shows that the difference is significant at ,05. Based on these results, it may be stated that the frequency of learners' VLS use in the SOC category is higher in the group of female learners than in the group of male learners.

As is shown in Table 4.16, in the CG category, the mean score of frequency of VLS use the of the male participants is 2,60, and that of female participants is 3,40. The t value (t=-4,874, p<,05) computed to test the significance of the difference between the mean scores of the two groups shows that the difference is significant at ,05. These results show that the frequency of learners' VLS use in the CG category is higher in the group of female learners than in the group of male learners.

Table 4.16 further shows that in terms of overall VLS (all five categories of DT; SOC, MM, C, and MT) the mean score of frequency of VLS use the of the male is 2,98 and that of the female participants is 3,21. The t value (t=-2,851, p<,05) computed to test the significance of the difference between the mean scores of the two groups shows

that the difference is statistically significant at ,05. According to these results, it can be stated the frequency overall VLS use is higher in the group of female learners than in the group of male learners.

4.1.4 The Effect of Learners' Frequency of VLS Use on the Learners' VS

In order to answer the fourth research question, whether the learners' frequency of VLS use has an effect on their VS or not, a multiple regression analysis was made, whose results are shown below in Table 4.17.

Table 4.17 . The Results of Multiple Regression Analysis for the Effect of Frequency of VLS Use on VS

Variable	B	Standart D. $_B$	B	T	p	Paired r	Partial r
Constant	6889,804	752,535		9,155	,000		
DT	207,377	195,972	,098	1,058	,292	,086	,088
SOC	-104,556	157,440	-,059	-,664	,508	-,056	-,055
MM	50,986	184,551	,027	,276	,783	,034	,023
CG	-197,274	108,739	-,166	-1,814	,072	-,118	-,150
MT	161,804	162,521	,092	,996	,321	,062	,083
R=,195	**R^2=,038**						
$F_{(1,126)}$	**p=,349**						

Table 4.17 shows that when the paired and partial correlations between the predictive variables and the dependent variable (VS) are examined, the following results can be stated:

- There is a positive and low level of relationship (r=,086) between the frequency of DT category VLS use and VS; however, when the other variables are examined, the correlation between the two variables is computed as r=,088.

- There is a negative and low level of relationship (r=-,056) between the frequency of SOC category VLS use and VS; however, when the other variables are examined, the correlation between the two variables is computed as r=-,055.

- There is a positive and low level of relationship (r=,034) between the frequency of MM category VLS use and VS; however, when the other variables are examined, the correlation between the two variables is computed as r=,023.
- There is a negative and low level of relationship (r=-118) between the frequency of CG category VLS use and VS; however, when the other variables are examined, the correlation between the two variables is computed as r=-,150.
- There is a positive and low level of relationship (r=,062) between the frequency of MT category VLS use and VS; however, when the other variables are examined, the correlation between the two variables is computed as r=,083.

The frequency of learners' DT, SOC, MM, CG and MT category VLS use taken together appears to account for 3,8% of the learners' VS (R=,195, R^2=,038, p>,05). The order of importance of the predictive variables based on the standardised regression coefficient (β) is as follows:

1. CG (-,166)
2. DT (,098)
3. MT (,092)
4. SOC (-,059)
5. MM (,027)

When the results of the t test done to check the significance of the regression coefficients are examined , it can be stated that the variables, the frequency of DT, SOC, MM, CG, MT categories of VLS use, do not appear to have a significant effect on the learners' VS.

4.1.5 The Learners' Ideas on the Explicit Teaching of VLS in Language Classrooms

In order to answer the fourth research question, what the ideas of the learners are concerning the integration of explicit teaching of VLS in language classrooms and the curriculum, the participants were asked two questions as part of the VLSQ. The answers to these two questions are tabulated below respectively, using descriptive statistics, namely frequency distributions and percentile figures.

1. The Learners' Ideas on the Necessity of Explicit VLS Teaching

The participants were asked to provide either an affirmative or a negative answer to the question asking whether they think it is necessary to explicitly teach VLS in class and Table 4.17 below shows the frequency distribution of the answers by providing the numbers and percentages of students who think explicit teaching of VLS in classrooms is necessary.

Table 4.18. The Frequency Distribution of Ideas on the Necessity of Explicit VLS Teaching

The Necessity of Explicit VLS Teaching	**F**	**%**
Yes	141	94,6
No	8	5,4
Total	149	100,0

As indicated in Table 4.18, upon being asked the question of whether they think it is necessary to explicitly teach VLS in class, 141 (94, 6%) of the 149 participants answered positively and 8 (5,4%) answered negatively.

2. The Learners' Ideas on the Integration of Explicit VLS Teaching into Language Programs

The participants were asked to provide either an affirmative or a negative answer to the question asking whether they would like programme planners to include VLS teaching in their programmes. Table 4.19 below shows the frequency distribution of the answers by providing the numbers and percentages of students who want the integration of explicit teaching of VLS in language programmes.

Table 4.19. The Frequency Distribution of Ideas on the Integration of Explicit VLS Teaching in Language Programmes

The Integration of Explicit VLS Teaching in Language Programmes	**F**	**%**
Yes	134	89,9
No	15	10,1
Total	149	100,0

As is shown on Table 4.19, in reply to the question of whether they would like programme planners to include VLS teaching in their programmes, 134 out of 149 participants, 89,9%, answered, "Yes" ,and 15 out of 149, 10,1%, answered, "No".

CHAPTER 5

DISCUSSION AND CONCLUSION

5.0 Introduction

This chapter is reserved for the conclusions drawn through the discussion of the results of the present study, the summary of the conclusions, the implications of the study, the limitations of the study and suggestions for further research.

5.1 Conclusions

This section is aimed at discussing the results of the analyses that were made in order to answer the specific research questions concerning VLS use, where the discussion of the results of several research questions and their sub-questions will fall under the scope of three broader headings. Firstly, the learners' familiarity with the VLS in the past and their present practices concerning the VLS use will be discussed within the scope of the 1st and 2nd research questions. Secondly, the correlational variables for VLS use will be scrutinized within the scope of the 3rd and 4th research questions. And finally, the learners' attitudes towards the explicit teaching of VLS will be reviewed within the scope of the 5th research question. Through in-depth discussions, the results of the present study will be compared to the relevant studies to draw attention to the overlaps and parallels as well as differences and contrasts and conclusions will be drawn.

5.1.1 The Learners' Past Familiarity and Present Practices Concerning VLS

As part of the exploratory concern of the present study, the participants majoring English Language and Literature at Erciyes University were asked three questions about their familiarity with VLS in their prior learning experiences. The last two were extensions to the primary question of whether they had been explicitly taught any of the VLS. The results of the analysis revealed that a substantial majority of the sample (81,9%) reported having been taught VLS explicitly; that is, with an emphasis on the

description of the VLS items, how to use them and their examples while less than one fifth of the participants (18,1%) answered negatively.

On the face of it, it may be concluded that most of the subjects were familiarized with the VLS in the VLSQ in their prior language learning experience and that only one in five lack background knowledge on the VLS. However, given the fact that the question was carefully worded as "Have you been explicitly taught *any* of the vocabulary learning strategies above during your English language learning experience?" to first capture the general picture of the learners' prior experiences with any hints of explicit VLS learning before probing into the degrees of familiarity with the VLS, the result may not be as favourable as it first seems and it needs to be reconsidered.

When looked at from a different angle, it may be said that approximately one in five learners are unfamiliar with the VLS and those who reported having been introduced to the VLS in their language learning background may not be fully-equipped with all the strategies they need to use to cope with the demands of learning a foreign language in general and vocabulary of that language in particular and surviving in the academic environments requiring the mastery of receptive skills as well as the productive skills.

In order to have a close-up picture of the learners' prior VLS learning, the second question, "If your answer is "yes" for the 1st question, approximately how many of the above vocabulary learning strategies were you explicitly taught?", zoomed in the degrees of familiarity with VLS in the backgrounds of the 122 learners, who answered the first question positively. As was revealed in the frequency distribution figures, 64 learners (52,5%) reported having learned around 10 VLS, 43 learners (35,2%) around 20 VLS, 11 learners (9,0%) around 30 VLS and 4 learners (3,3%) around 40 VLS.

As can be seen from the percentile figures, the trend appears to have reversed; although a great majority of the sample reported a past familiarity with the VLS, more than half said they learned only up to a quarter of the VLS in the VLSQ, more than one third said they were taught up to half of the VLS. When taken together, they form 87,7% of the 122 learners who reported to have been taught VLS explicitly. On the other hand, only 11 learners reported having learned more than half of the VLS in the

VLSQ and surprisingly few learners, only 4, reported having learned nearly all the VLS in the VLSQ. And if taken together, the learners having been most favourably-equipped with VLS, being over the equal dividing line, form only 12,3% of the learners with a prior VLS background. When the percentage figure for the last two groups is recalculated within the whole sample (N=149), it decreases to 10.1% (7,4% and 2,7% respectively).

The percentage figures of the learners' prior experience of explicit VLS learning is in the form of an inverted pyramid. Learners with the least number of prior explicit VLS learning are high in percentage while those with the most are low in percentage, which may be expected to some extent. VLS instruction is a relatively new concern in language classrooms and for teachers when compared to more established concerns such as the teaching of grammar and the four skills of language. Vocabulary teaching in general and VLS in particular were considered as the "Cinderella" (Lewis, 1993, p. 89) of language learning in research literature and it was left to look after itself. It may be said that the sample were familiarized with the strategies to improve vocabulary learning with differing degrees, ranging from no explicit focus on teaching VLS to favourable amounts of explicit VLS teaching. However, there does not seem to have been enough systematic emphasis on VLS instruction in the language programmes the participants of the present study were involved in.

One of the underlying reasons behind the lack of enough systematic focus on explicit VLS teaching could be traced back to the teachers' own learning backgrounds with "least systematised and the least catered for aspect" (McCarthy, 1990, p. viii) of their learning experience in which they themselves, too, were left alone to their own means to cope with the lexical needs of their studies (Richards, 1976; Chacón-Beltrán, 2010) and thus learned to find their own way with the limited VLS that they were aware of and knew worked for themselves. Therefore, the teachers may not have taken great pains or placed the necessary importance on the explicit teaching of VLS. Another underlying reason could be the language programme itself, which may not have spared any or enough room and time for explicit VLS learning under the broader concept of learner autonomy; because any unit of time spent on learner autonomy, explicit VLS instruction in the present case, would pay off by saving class time spent on actually teaching specific vocabulary items or practising to consolidate them (Nation, 2001).

Still another reason might have been connected to the teaching materials, which both the teachers and the language programme are accounted for. Teaching materials might have been those which did not provide VLS tips under the broader concept of study skills.

Participants who reported not having had any explicit instruction of VLS in their language learning background were asked about their current willingness as to whether they would like to have been taught the VLS explicitly and out of the 27 subjects, an overwhelming majority of 26 (96,3%) gave an affirmative answer, while only 1 subject (3,7%) rejected the idea.

Upon being asked the third question as follow-up after answering the primary question negatively, a "Yes" answer might seem like a simple ready-made answer. The learner may have thought that as he/she did not receive any explicit teaching of VLS before and now it is being asked, then it must have been a necessity and hence gave the positive answer without really paying enough attention to it. However, the opposite is high likely to be the case; the 26 participants felt that had they been taught all those VLS explicitly, their language learning burden in general and that of vocabulary in particular might have been lightened through shortcuts (Nation, 2001). In the case of the 1 subject, who gave the only "No" answer among the 27 participants, the learner is either a learner who thinks apathetically that explicit VLS teaching would not make any difference to his/her language learning or a learner who is autonomous enough to have learned about the VLS on his /her own and does not need any more assistance with VLS.

As for the exploratory concern of how the participants' past familiarity with the VLS is reflected in their present practices, several sub-questions under a more general research question concerning the VLS preferences of the participants with regard to the frequencies VLS use were raised and answered. The results of the VLSQ analysis show that the participants of the present study are medium users of overall VLS, with an overall mean score of 3,16 in a scale of 1 to 5, where medium falls between 2,5 and 3,4 as determined by Oxford (1990). When the mean score of the participants' frequency of VLS use is considered, it appears to be considerably closer to the upper end of the range than it is to the lower end and it may be said that the learners use the VLS moderately, at least to a favourable extent, if not optimally or maximally.

On the one hand, the result could partly be attributed to the lack of interest in vocabulary teaching and learning in general, the lack of explicit focus on VLS teaching in the classrooms, the content of language programmes and the teaching materials as mentioned elsewhere earlier and thus it is not so high. On the other hand, the result may also be connected to the explicit focus placed by the teachers, teaching materials and programme planners as they may have attached a certain amount of importance on the teaching of VLS and thus it is not low but medium.

When it comes to the learner, in fact, so much rests on the learners themselves (Nation, 1998); whether they are explicitly taught the VLS or not, it is the learners who decide whether to use the VLS or not or how often to use them. In other words, a learner may know all the VLS but employs only a few frequently, or another learner may know only a few VLS but applies them very frequently, or still another learner may know quite a lot of VLS and uses them moderately; all these scenarios may amount to a medium VLS use.

The results of the VLSQ analysis also showed that the participants of the study differed in the frequency of VLS use. There were high and low VLS users among the sample; 35 out of 149 (23,5%) were high and 8 (5,4%) were low; however, the majority, 106, (71,1%) was medium (mean = 3,16) VLS users. Considering the low percentage of low VLS users it may be argued that the sample of the present study reported using VLS to a considerable extent and that, overall, they have a positive attitude to the VLS and an inclination to use them at a moderate level. This could be attributed to the reported fact that most of the participants were familiarized with VLS during their prior learning experiences to differing extents through explicit focus. One curious result is that although 27 participants reported not having had prior experience of explicit VLS learning, only 8 learners were analysed to be low VLS users, underscoring the fact that VLS does not necessarily depend on explicit teaching but is also dependent on the level of learner autonomy and the fact that the participants are pro-VLS learners.

The present study has found parallel results with several studies concerning the frequency of VLS use. Tanyer and Öztürk (2014) with a mean score of 3,16, Alsadik (2014) with a mean of 2,62, Kafipour, Yazdi, Soori and Shokrpour (2011) with a mean of 2,99 and Hamzah, Kafipour and Abdullah (2009) with a mean of 3,22 found that their samples were medium users of the overall VLS. One study surveyed that had a

mean score of 3,62 is Kalajahi and Pourshahian's (2012), where the sample is high users of VLS by only a slight difference (0,12) from the dividing line between medium and high, 3,50. This similarity between the frequencies of VLS use of different samples in different studies shows that learners may use the VLS to some extent in almost all contexts but what particular strategies or strategy groups they use may change from one research context to another.

One such result revealed by the VLSQ was the order of VLS categories in terms of their frequency of use by the participants. The most frequently used category is determination (DT), followed by cognitive (CG), memory (MM), metacognitive (MT) and social (SOC) with mean scores of 3,84, 3,22, 3,09, 2,95, and 2,67 respectively. The participants of the present study seem to have opted for the determination strategies under the discovery dimension of Schmitt's (1997) taxonomy, which learners tend to use when they first come across a word they do not know. While using discovery strategies, learners try to understand the meaning of the word without asking a peer or a teacher; they use their own knowledge of the language, clues in the immediate context, or reference materials. The reason why the participants most frequently used determination strategies could be their underlying belief that vocabulary learning is primarily individual and "self-directed" (Oxford, 1990, p. 8) and they first need to use their own means before they have to get others' help and that one learns new things basing them on their already existing knowledge referring to the nearest reference sources such as dictionaries.

The second most preferred VLS category by the participants of the current study is cognitive strategies under the broader dimension of consolidation strategies. Cognitive VLS are deemed to be more simplistic in that they depend primarily on doing something with the target language such as repetition, making word lists, taking notes and so forth based on more mechanical ways and less manipulative mental processing as opposed to the metacognitive VLS (Oxford, 1990; Schmitt, 1997; 2000). These cognitive strategies are so strongly established that language learners commonly use them worldwide without any intention of giving them up despite the presence of strategies with deeper processing (Schmitt, 1997). Learners who are not equipped with enough skills and those who are not mature or proficient enough in the target language tend to use simpler, less interactive and non-communicative strategies (Schmitt, 1997;

Alsadik, 2014). Why the subjects used cognitive VLS second most frequently may well be associated with the above mentioned arguments for two reasons. First, the sample consists of a variety of learners ranging from preparatory class students to fourth-graders, which might account for a likely difference in the level of language proficiency, maturity, and skills. Secondly, a great majority of the subjects reported having been taught a small number of the VLS explicitly and one in every five subjects reported not having been taught any, which may also explain why they preferred to use simpler strategies requiring less skill and experience.

Among the categories of VLS, the memory strategies seem to be on the dividing line (Mean score=3,09; sometimes) in terms of frequency of use, above which there are the categories of determination and cognitive strategies and below which are the categories of metacognitive and social strategies. Being a category under the consolidation dimension, this set of mnemonics is used by employing a number of mechanisms of imagery and grouping during which deeper mental processing is required. In order to commit the newly or recently encountered lexical items into memory for long term retention, these mechanisms help learners learn in a faster way and recall words more easily by forming cues for retrieval of the new words by linking them to already existing knowledge of several kinds during encoding meaning (Schmitt, 1997; 2000).

The fact that the subjects of the study reported medium use of the memory strategy may be interpreted in two ways. First, being among the more mentally-demanding types of strategies, memory strategies might be preferred to be used less frequently than those more easily-applied or more obviously needed at the very first encounter with an unknown word. To illustrate, when an unfamiliar word comes up during class or self-study, the easiest and/or the most obvious thing a learner would do is highly likely to be analysing its part of speech (DT-1), guessing from textual context (DT-5) , using a bilingual dictionary (DT-6), taking notes in class (CG-5), making word lists (CG-3) rather than using the Keyword Method (MM-12), using semantic maps (MM-6), using a group of words in a storyline (MM-10), which are not as readily applied and require more focused attention in a longer time. Second, the reason why the participants reported using memory strategies relatively less often compared to the determination and cognitive strategies could be that learners tend not to be consciously

aware of the frequency of their use of memory strategies (Oxford, 1990). For instance, when a learner is learning a word that is synonymous with a word he/she already knows, the mental processing could take place so quickly and naturally that the learner might not take it as his/her conscious effort; it might have become a spontaneous strategy use habit without the learner being completely aware.

Among the least frequently used VLS category by the participants is that of metacognitive strategies (mean score=2,95), which is admittedly associated with the autonomous learners with self-knowledge, who can decide what to learn, who know well how to learn; how to manage the procedures of their learning, how to test their learning and how to evaluate their methods / strategies (Chamot, 1993, 2005; Schmitt, 1997, 2000). The result that the participants of the current study reported less frequent use of metacognitive strategies is not far from expected when their inadequate prior familiarity with the VLS and the unsatisfactory number of VLS they were introduced to are taken into consideration. Further, when learners are not very well-equipped with strategies and/or not very skilled at using them, they are less likely to use what is beyond those strategies (Chamot, 2005, Oxford & Crookall, 1989).

The least preferred VLS category by the subjects of the study is that of social strategies (Mean score=2,67), which is still initiated by learners but either a teacher's, a peer's or an L2 native speaker's assistance is sought in several ways through interacting with them. This category contains both discovery VLS such as asking the teacher for L1 translation or consolidation VLS like studying and practising meaning in a group. These communicative, cooperative strategies used in class foster the way learners process information through modelling and imitation, create more relaxed social contexts in the classroom and provide learners with class time to use and work on language (Schmitt, 1997). What lies behind the sample's least preference for social strategies is highly likely their belief that vocabulary is an individual learning process rather than an interactive task. They may prefer to consult a dictionary, which is readily at hand usually in the form of an online dictionary, both mono-lingual and bilingual, and they only resort to social strategies if a dictionary is not available.

It may even be that they take it as a weakness to need to ask somebody else's help, be it a classmate or a teacher. Another reason for the social strategies to have the least frequency rating may be the learners' dissatisfaction with the response they receive

when using this strategy. Classmates may not be able to provide satisfactory enough answers, which may deter the learners' from continuing to use the social VLS, and teachers might be rejecting the learners' requests for word meanings; for example, by directing the learners to dictionaries either to encourage dictionary use or to avoid effort on their own part. All of these are reflected in Oxford's (1990, p. 145-146) explanation that social strategies are "cooperative learning strategies" that entail a "positive interdependence" and a "group spirit" with the "absence of competition" and that unless learners are specially trained and encouraged, learners do not prefer to use social strategies.

The present study bears some similarities to other VLS studies in the research literature. To begin with, Jafari and Kafipour's (2013) study has one-to-one correspondence with the order of frequency of VLS category use in the present study. Another is the study of Bozgeyik (2011), where determination category was found the most frequently used, memory category the third most frequently used and social category the least, the same as what was found in the present study; however, the present study has cognitive category as the second, and metacognitive category as the fourth, while vice versa was what appeared in the other study. The two rankings of categories Tanyer and Öztürk's (2014) study and Alsadik's (2014) study share with the present study are the category of determination as the first most frequently used and social as the least. There is one similarity in the study of Şener (2015), which has determination category as the most preferred. One other study that has a similarity with the present study is Maghsoudi and Golshan's (2017), using Oxford's SILL, which found social categories to be least frequently used. According to the above-mentioned comparisons, it may be claimed that the present study has considerable overlaps with the studies in the area of VLS and several differences from them. The overlaps clearly appear to be the first most frequently used VLS category, seen as determination category, and the least frequently used VLS category, the social category, and the dissimilarities appear to be the second, third and fourth rankings, which seem to differ among studies mentioned.

A further result revealed by the VLSQ was the participants' most frequently used particular VLS. As was shown 14 particular VLS out of the 40 (35%) were reported to be used with high frequency, 19 VLS (47,5%) with medium frequency and 7 VLS (17,5%) with low frequency. The majority of the VLS being used with high and

medium frequency is an indication of the participants' tendency to make use of a wide range of particular VLS in their effort to learn and retain vocabulary. Among the most frequently used particular VLS, there are 6 determination, 5 memory, 2 cognitive, 1 metacognitive and no social VLS, showing that the participants of the study use the particular VLS selectively, opting more for several types of particular VLS than they do for others.

Guessing from textual context (DT-5), using English-language media (MT-1), analysing any available pictures or gestures (DT-4), taking notes in class (CG-5), and paraphrasing the word's meaning (MM-15) are respectively the first five among the most frequently used particular VLS reported by the participants of the study. First, the marked preference for the contextual guessing is not surprising as teachers and research literature in general emphasize the importance of the immediate context of words to reveal a lot about their parts of speech and meaning (Clarke & Nation, 1980; Hulstijn, 2001; Nation, 1990; 2001; Schmitt, 1997). Second, with the rise of the media, learners and teachers alike have begun to place a lot of importance on the exposure to authentic language films, songs, newspapers, television and social networking sites provide them with and also to turn this invaluable source into their advantage not only in teaching but also in learning of a foreign language in general and its vocabulary in particular. Third, referring to accompanying pictures when reading a text or to gestures and other non-verbal clues as to the words spoken in oral communication is almost an essential routine that learners follow not only when learning a foreign language but also when doing language-related tasks in their L1. Fourth, taking notes in class when an unknown word appears has been a truly established student endeavour observed not only in L2 classes but also in content classes. Finally, paraphrasing the word's meaning; that is, describing the words with other familiar words, basing the new word on what is already known, has been a commonly-used way of understanding or showing understanding of the word.

In terms of the most preferred particular VLS, the results of the current study reflect similar results to several other research studies done in the particular area of VLS. Guessing from textual context, taking notes in class, and paraphrasing the word's meaning, found to be the most frequently used in the present study, appeared in the first five of Bozgeyik's (2011) study as well. Tanyer and Öztürk's (2014) study shares two common results with the present study; guessing from textual context is the first most

preferred, as in the present study, and analysing any available pictures or gestures is the fourth, which is the third in the present study. The present study has one most frequently used VLS in common with Schmitt's (1997) study, which found guessing from context as the 4th most frequently used VLS among his Chinese subjects. Similarly, Alamdari (2010) found guessing from context to be the third most frequent, Hamzah and Kafipour (2009) found it to be the second most frequent, and Fan (2003) found it to be the fourth. Guessing from context was also contained in the study of Ekmekçi (1999) under a wider strategy group called contextual encoding. It can be stated that when the first five most frequently used particular VLS are considered, the present study overlaps with the above-mentioned studies, at the intersection of which the determination strategy guessing from textual context sits, being a major strategy widely encouraged by research to be useful in communicative teaching and learning approach (Schmitt, 1997). However, those other most preferred particular VLS in the first five of the present study VLS are revealed to be used differently by the samples of the studies compared.

5.1.2 The Correlational Variables for VLS Use

As another important exploratory concern of the present study, (i) the correlations of the frequency of VLS use with three variables, namely, (a) the prior experience of learners concerning explicit teaching of VLS, (b) VS, and (c) gender, were investigated along with an investigation into (ii) the effect of frequency of VLS use on the learners' VS.

As for the first of the three variables, it was seen in the Mann Whitney U test that there was a significant difference only in the frequency of VLS use of DT category between learners who had a prior experience of explicit VLS learning (N=122) and those who did not (N=27). It may be concluded that learners who were not familiar with and/or were not familiarized with the VLS even tend not to use those most commonly used determination strategies, which fall under the discovery dimension, and which learners apply to discover the meaning when they encounter an unknown word using their own knowledge, contextual clues and reference materials before seeking help from the peers or the teacher. It appears that those determination strategies, which are most readily, most naturally and most frequently used when learners are familiar with them, are not used when learners do not know about them or when they were not explicitly

taught them. The significant difference in the use of DT category VLS between learners with and without explicit VLS teaching draws attention to the fact that explicit teaching of VLS may be important to equip learners with virtually essential VLS in their vocabulary learning. On the other hand, the fact that there is no significant difference in the frequency of use of the other four categories of VLS between the two groups seem to show that explicit VLS instruction does not entail an increase in the frequency of VLS use.

The learners with a prior experience of explicit VLS learning (N=122) reported having been taught varying numbers of the VLS. The results of the Kruksal Wallis H test showed that there was a significant difference only in the frequency of SOC category VLS use between the 4 different groups of learners with varying prior experiences of explicit VLS learning. It does not seem very surprising that the frequency of SOC category VLS use differ significantly according to the varying numbers of VLS known to the learner when the result that SOC category was the least frequently used is taken into consideration. To clarify, the use of SOC category VLS changes considerably depending on the number of VLS learners were taught explicitly in their prior learning experiences most probably because knowing a higher quantity of the VLS may increase the use of all the VLS; however, a unit of increase in the least frequently used VLS category might be statistically more significant than that in other VLS categories.

Having compared all the four groups of learners with varying prior experiences of explicit VLS learning, the results of the t test and the Mann Whitney U test showed that the cause of the difference in the frequency of SOC category VLS use was because of the varying prior knowledge of VLS of three pairs of groups: (i) the group with a knowledge of around 10 VLS and the group with around 20 VLS, (ii) the group with a knowledge of around 10 VLS and the group with around 40 VLS, and (iii) the group with a knowledge of around 30 VLS and the group with around 40 VLS. Considering these results, it may be stated that a prior experience of learning a higher number VLS explicitly is likely to result in a more frequent SOC category VLS use. However, there needs to be a word of caution as the results of the above-mentioned tests also revealed that for some pairs of groups, such a difference was either existent but insignificant or the difference is vice versa. This duality in the results seem to point at the subjective,

personal nature of using VLS; as VLS are learners' own ways of using different means to learn and retain vocabulary, it may be that while some learners feel more willing to use SOC strategies when they know a wide range of VLS thinking that using as many types of VLS is better, others may feel less need to resort to them thinking that they make better use of only some types of VLS. Further, the characteristics of the learning environment such as whether all the learners are accountable for one another's learning or not, whether the learning programme and the teacher encourage learning together or not, whether the amount of competition is conducive to learning or not may have an effect on how much learners prefer to use social strategies (Oxford, 1990). In brief, very much depends on learners' choice, individual differences and the context of learning when it comes to VLS.

As for the question of whether the frequency of VLS use differs in relation to VS, first, the VS of the participants were determined by the VST and the sample was divided into two as learners below and above the lexical threshold (LT) for unassisted reading of unsimplified texts, which was determined as receptive VS of 8,000 word families by Nation (2007) and Laufer and Ravenhorst-Kalovski (2010). 75,2% of the participants were found to be below the LT, 24,8 were above the LT and the mean score of VS of all the sample was 7,504 word families. The results of the t test show that there are two trends in the difference in the frequency of use of VLS categories and overall VLS between the two groups, below LT and above LT. The first trend is that the participants above the LT have slightly higher mean scores in the categories of DT, MM, and MT than those below the LT, and the second trend is that the participants above the LT have slightly lower mean scores in the categories of SOC, CG and overall VLS than those below the LT. However, none of the differences are statistically significant. Based on these results, it may be concluded that the frequency of VLS use do not differ according to the VS of the participants of the present study.

When it comes to the question of whether the frequency of VLS use differs according the gender of the participants of the present study, the t test results showed that the males and the females differed in the frequency of VLS use of all 5 categories and overall VLS use. The female participants reported higher use of VLS both overall and in all of the 5 categories than the males. However, not all of the differences were statistically significant. While the differences in the frequency of use of DT, MM, and

MT categories were insignificant, those in SOC, CG categories and overall VLS use were significant. Based on the results, it may be claimed that the female subjects tend to use VLS more frequently than the male subjects.

Gender is acknowledged to be among the most important individual differences that are in interplay when learner strategies are in question (Gu, 2003b). Although the reasons for the difference between males and females in vocabulary learning are not in the scope of the present study, it might be appropriate to mention that the reasons are manifold; as stated by Na (2016), gender differences may spring from physiology, psychology, social background and personal experience. Oxford, Nyikos and Ehrman (1988) draw attention to the fact that gender is a typically important factor in educational, psychological and linguistic studies, that females are users of a much wider range of strategies than males, and that they are more frequent users of the social strategies, which coincides with the results of the present study. Similarly, Green and Oxford (1995) showed that their female subjects had higher levels of strategy use than males did. Another study with similar results to the present study is Catalan's (2003), where the percentages of total strategy use of females are higher than those of males, showing different patterns of use of VLS between males and females. Gu (2002) found that the female participants not only performed far better than their male counterparts both in a vocabulary size test and a general proficiency test but they also reported using those strategies found to correlate with success significantly more than the males. Na's (2016) study shares with the present study the result that females use cognitive and metacognitive strategies more frequently than males do but it differs from the present study in that males tend to use social strategies more than females. Two studies that conclude no significant difference between males and females are Noormohamadi, Amirian and Hesabi's (2015) regarding overall strategy use and Pana and Afghari's (2015) regarding a particular VLS use – the keyword method.

The research literature present divided results concerning gender differences; however, the present study has parallels in general with those that show different genders with different patterns of VLS use and in particular with those that show females use VLS more frequently than males in all categories although the differences are only significant in SOC, CG categories and overall VLS.

As part of its correlational focus, the present study also enquired into the effect of the frequency of VLS use on the VS of the participants. The very term *vocabulary learning strategies* seems to automatically associate itself with *vocabulary size* as any strategy used to learn vocabulary is normally meant to entail some learning of vocabulary, increasing the existing number of words a learner knows (Nation, 1990; 1998; 2001, McCarthy, 1990, Lawson & Hogben, 1996). And it would easily be presumed that the more the former, the more the latter, which might be the reason why there has been a lot of research interest in this relationship, including the present study.

The results of the multiple regression analysis for the effect of frequency of VLS use on the learners' VS show that the predictive variables do not have any significant effect on the dependent variable VS. To elaborate, both the separate effects of the frequency of use of DT, SOC, MM, CG, and MT categories of VLS and the combined effect of them all (3,8 %) on the VS transpire to be negligible. The present study shares similar results with Bozgeyik's (2011), where also not any of the VLS categories predicted VS. Likewise, Kalajahi and Pourshahian (2012), and Maghsoudi and Golshan (2017) found no relationship between VLS use and VS, either. Unlike the present study, Şener (2015) found that the frequency of meta-cognitive and cognitive VLS use correlated significantly with VS. Alamdari (2010) reported that social and cognitive categories of VLS contribute to success in vocabulary learning. Tanyer and Öztürk's (2014) study showed that the combined effect of the frequency of VLS use accounted for 17.8% of the variation in the VS. In Hamzah, Kafipour and Abdullah's (2009) study the combined correlation and contribution of the nine most frequently used VLS was 34,7%, and similarly, in Kafipour, Yazdi, Soori and Shokrpour's (2011), all five VLS category contributed to VS and their combined contribution was 38.9%. Gu (2010) reported positive and significant correlations for most of the VLS with passive VS.

The inconsistencies between the results of the above-mentioned studies reveal that the frequency of VLS use may not be a predictor of VS at all times, in all contexts and for all subjects. This is evident in Gu's (2003b) remark that the task, the learner and the learning context are very important determinants of the choice, use and effectiveness of the VLS, which may be interpreted as it is not the frequency of use per se that determines the effect on the VS but how effectively the VLS are used. The frequency of VLS use, as a matter of fact, shows how often a learner applies a certain strategy or

strategies but for each learner the actual learning may take differing times of application. Another individual difference could be what frequency each learner perceives when they are given a 5-level Likert scale of frequency adverbs; do the participants all have the same times of application of the strategies when they tick "usually" or "sometimes". The frequency of VLS use may not have an immediately-felt or measured effect when the aspects required to know a word (Nation, 1990) are considered. Similarly, the fact that some words may just be partially learned (Schmitt, 2010b) – as vocabulary is learnt incrementally (Shmitt, 2000) – may lead to some inconsistencies between the frequency of VLS use and VS. Still another reason to account for the lack of effect of the frequency of VLS use on the VS might be the participants' degree of self-awareness in their strategy use reports in the VLSQ. First, as is stated by Oxford (1990), learners may sometimes apply VLS without knowing they are. Second, some participants might exaggerate or understate their real frequency of use, depending on which VLS they find more useful or less useful when they are answering the VLSQ, in spite of the fact that they are asked to be as careful and sincere as possible.

5.1.3 The Learners' Attitudes to Explicit VLS Instruction

As the final part of the exploratory concern of the present study, the attitudes of the participants to explicit VLS instruction were delved into, analysing their answers to the questions of (i) whether they think it is necessary to teach VLS explicitly in class, and (ii) whether they would like programme planners to integrate VLS teaching into programmes. As was shown earlier, both questions were answered affirmatively by the overwhelming majority; the former received 94,6% "Yes" and the latter 89,9%.

At the very first glance, it may firmly be deduced that ELL majoring Turkish EFL learners are positively-oriented towards the explicit teaching of VLS in the language classrooms as an integrated part of the programme. However, 8 out of 149 participants who found explicit VLS unnecessary might have thought either that VLS use is personal, individual and therefore does not require any intervention or that learners could survive with only a few VLS that are already obvious to them without any explicit focus. Likewise, 15 out of 149 participants who reported they would not like the integration of explicit VLS instruction into language programmes might have also thought about the individualistic nature of the vocabulary learning task along with a

consideration of the role of the teachers, as some teachers, in any case, give explicit focus on VLS, be it integrated in the curriculum by programme planners or not. Alternatively, they might have simply thought that such an integration of explicit VLS instruction would add on to their existing learning load.

When given due consideration, this positive attitude to the necessity and the integration of the explicit VLS instruction seems to link well back to their prior experiences concerning the explicit teaching of VLS. For one thing, it is highly likely that the majority of the participants (132 out of 149), who reported they were explicitly taught VLS in varying quantities, benefitted from the practice, leaving a positive impression on them. This influence that is likely to have led to a positive attitude among the participants of the present study is in congruence with those in other studies in the research literature, such as Chamot's (1993), Döner's (2005), and Tezgiden's (2006), which are detailed elsewhere earlier. One difference, to note, of the present study from those mentioned is that it is not an intervention study where a treatment in the form of strategy instruction is given to check for learner attitude. Rather, the prior experiences of being taught VLS or not are taken as a background for the participants' attitude to the necessity and the integration of explicit VLS instruction. For another, 26 out of 27 participants, who reported not having been taught any of the VLS explicitly in their prior learning experiences, expressed their present willingness to have been taught VLS explicitly, which could be interpreted as regret for lost opportunities and a newly-gained awareness of the necessity and the integration of explicit VLS instruction.

As can be seen, the explicit teaching of VLS in the EFL classroom is deemed necessary and its integration in the curricula is wished for by the substantial majority of the participants, regardless of the fact they were made familiar with the VLS in their prior learning or not. It may be concluded, then, that as far as vocabulary learning is concerned, it is a truism that explicit VLS instruction is necessary and needs to be integrated into the curricula, which is a unanimously-formed attitude by researchers, teachers and learners themselves. McCarthy (1990) and Takac (2008) point to the need for learners to be informed and instructed on how to use the strategies even in their own repertoire, let alone those they do not know about. Schmitt's (1997) study reveals that learners appreciated the value of the strategies that they have not yet tried. Pressley and Harris (1990) determine the fundamental features of strategy instruction as modelling

from the teacher and the individualised use of the procedure by the learner, emphasizing the inter-related role of the teacher and the learner.

This co-operative nature of the explicit VLS instruction is where the practice needs to be informed by theoretical and practical findings of the researchers, whose loop starts with data gathered from the practitioners, analysed to reach conclusions with implications on new practices, continues by informing programme planners, is completed by feeding new practices into the classroom through teachers, from where another loop starts. As for the researchers' role, just to name a few, Nation (2001) outlines the requirements of making explicit VLS instruction a part of the programme, Chamot (2004; 2005) emphasizes the activities needed to be done to make the procedure explicit rather than merely suggesting learners to use more strategies, and Muzimoto and Takeuchi (2009) summarize the positive effects of explicit VLS instruction, all of whose studies were elaborated elsewhere above in the review of literature, followed by several researchers with strategy instruction models.

5. 2 The Summary of the Conclusions

The present study had several exploratory concerns within the frame of five research questions probing into the VLS use of learners majoring in English Language and Literature at Erciyes University. The study began with an inquiry into how familiar the participants were made with the VLS in their prior EFL learning through explicit VLS teaching and continued with what their VLS preferences were with regard to frequency of use. Next, whether the participants' frequency of VLS use differed in relation to prior explicit VLS teaching, VS and gender was investigated. Then whether the frequency of VLS use had an effect on the participants' VS was sought for. Finally, what learners think about the integration of explicit VLS teaching in the EFL classroom and the curricula was focused on.

The great majority of the participants were made familiar with the VLS through explicit teaching as was reported; only one in five reported they were not, which was a favourable picture for a start. However, when the number of VLS each participant were explicitly taught was asked, it turned out that although the majority knew about VLS to a basic extent, not many of them had a knowledge of a substantial number of VLS. Those who reported not having been taught any VLS explicitly stated their present willingness to have been taught VLS explicitly, which signalled a positive inclination.

Therefore, it may be concluded that most of the participants were familiar with the VLS to a certain extent thanks to their prior learning experiences although they need to know about more VLS to make better use of them and that there is a present regret for not having had explicit VLS instruction.

The participants of the study were medium strategy users overall; more specifically, 23,5% was high, 5,4% was low; however, the majority, 71,1% was medium VLS users. The order of frequency with which the VLS categories were used was DT, CG, MM, MT, and SOC, where DT is used with high level of frequency and all the other four with medium frequency. The first five most frequently used particular VLS were guessing from textual context (DT-5), using English-language media (MT-1), analysing any available pictures or gestures (DT-4), taking notes in class (CG-5), and paraphrasing the word's meaning (MM-15) respectively. Thus, it may be concluded that the participants of the study are medium users of VLS, who reflect typically similar VLS use habits to the participants of several other studies surveyed in the research literature in that they both use DT category of VLS the most frequently and SOC category of VLS the least frequently, and they share the particular VLS, guessing from textual context (DT-5), in their first five most frequently used particular VLS.

The participants who reported having been explicitly taught VLS in their prior learning experiences and those who reported not differed significantly in their frequency of DT category VLS use, but not in others. The conclusion is, then, that even the most obvious, readily used type of VLS that is typically most frequently used by the majority of the participants is not used as frequently by the participants who are not aware of that VLS category, which may be due to the lack of explicit VLS teaching. It may also be concluded that having or not having had explicit VLS instruction does not cause any significant difference in the frequency of VLS use, which may show that (reported) explicit VLS instruction does not necessarily increase the frequency of VLS use. The participants who were classified into 4 groups according to the number of VLS they reported having been taught explicitly differed significantly in the frequency of their frequency of SOC category VLS use. Having looked at the comparison of pairs of groups to see the cause of the significant difference, it may be concluded that a prior experience of learning a higher number of VLS explicitly may result in using SOC category VLS more frequently. However, for some pairs of groups, such a difference was either existent but statistically not significant or in the reverse direction, which

brings about another conclusion that VLS use is highly personal and depends a lot on learner choice.

The participants, whose average VS overall was 7504 word families, were divided into two groups as above the LT (24,8%) and below the LT (75,2%), taking the LT as a receptive VS of 8,000 through the administration of the VST. When the frequency of VLS use of the two groups were compared, it was found that the group above the LT used DT, MM, and MT categories of VLS slightly more frequently than the group below the LT and that they used SOC, CG categories and overall VLS slightly less frequently but with no statistical significance. Hence, it may be concluded that the frequency of VLS use of the participants of the present study do not differ significantly depending on their VS.

The participants, made up of 22,8% males and 77,2 females, were found to have reported different frequencies VLS use. Females reported higher frequencies of use in all five categories and overall VLS with statistically significant differences in the categories of SOC, CG, and overall VLS. Therefore, it may be concluded that the frequency of VLS use of the participants differ in general depending on gender and the difference is significant in SOC, CG categories, and overall VLS.

The effect of the frequency of VLS use on the VS of the participants was computed to check whether frequency of VLS use predicts the VS and it was found that none of the predictive variables of DT, SOC, CG, MM, and MT categories had any significant effect and even the combined effect of them all was negligible (3,8%). Thus, it may be concluded that it is not the frequency of use of the VLS on its own that produces an effect on the VS although it is admittedly VLS that are used to improve the VS.

Upon being asked about their ideas on the necessity of explicit VLS teaching and its integration in the language classrooms and the curriculum, a substantial majority of participants answered affirmatively, which was highly likely linked with their prior experiences as discussed elsewhere earlier. Therefore, it may be concluded that the participants of this study have a positive attitude towards explicit VLS teaching; they find it necessary and want its integration into the language classroom and the curricula.

5.3 Implications of the Study

With the advent of learner-centeredness that emphasized learner autonomy in ESL and EFL teaching and learning that coincided with due interest and attention eventually directed to vocabulary teaching and learning in the past four decades, research literature has expanded in the area of VLS as a natural extension of that of LLS. There have been proliferating studies some of which focused on one or a few particular VLS using interventional procedures and others focused on overall VLS with exploratory procedures. Some concluded on the superiority of one or a few particular VLS over another or others and some produced VLS taxonomies on which further research has been based. The current study aspires to take its place among the body of studies from which it took its basis by discussing the educational implications that have arisen from the conclusions made following the results of the analyses.

To reiterate, the present study aimed to enquire into (i) prior experiences of the participants concerning explicit VLS teaching, (ii) their present VLS preferences with regard to frequency of use, (iii) whether the experience of prior explicit VLS teaching, VS, and gender caused any difference in the frequency of VLS use, (iv) the effect of frequency of VLS on the VS and finally (v) the attitudes of the participants to the necessity and the integration of explicit VLS teaching.

As for prior explicit VLS teaching, in the current study, the big majority reported having been taught VLS, which looks seemingly pleasing. Upon being asked how many of the VLS listed on the VLSQ they were taught, the participants revealed the truth of the matter; that is, it turned out that it is only the minority of that big majority who reported having been taught more than half of the VLS. It is clear that most learners are familiar with VLS but they are not introduced to many of them or may not even efficiently use the ones they have been taught. Therefore, the obvious implication is that learners with limited knowledge of VLS should be introduced to a wider range of VLS in their EFL learning experience through explicit focus on each particular VLS in a systematized way so that they could be able to choose from or prefer one VLS to another rather than sticking to the few VLS in their repertoire. This need becomes even more pressing in the case of the learners who report not having been taught any of the VLS in the VLSQ explicitly in their prior learning experiences. All those learners with one exception expressed their current willingness to have been taught the VLS, which associates a present regret for not having been given the chance of learning about those

VLS. It seems almost imperative to provide learners with assistance in the way to be more autonomous in their vocabulary learning by making the tool-kit available to them and showing them how, when, why, how best and what with each tool is used until they become accustomed to use them effectively on their own.

When it comes to the participants present VLS preferences with regard to frequency of VLS use, the present study found that the sample is high users of DT and medium users of CG, MM, MT, and SOC categories of VLS, making them medium users of overall VLS characterizes them as typical when compared to the samples of other studies surveyed. One commonly shared property of the participants of the present study with several others' is that DT category VLS is used the most frequently and the SOC category VLS is use the least. The practical implication is seeing that learners typically prefer employing DT category VLS in the first place with the most frequency, teachers may assist them how best to use them showing them the subtleties of each particular DT category VLS in order for the students to make utmost gain from their endeavour. This also applies to all the other four categories of VLS as such assistance is highly likely be beneficial for learners in their vocabulary learning for teacher modelling and teacher encouragement play a great role in how learners direct their own learning. However, such teacher focus seems virtually essential to make learners use SOC category VLS more frequently, not simply because it is the least preferred category of VLS but because language learning in general and EFL learning itself in particular is social. It requires social skills both in the classroom and outside. The teacher has an advantage to foster a co-operative learning environment where the learners feel comfortable with learning from each other in pair and group activities and not intimidated by the presence of unnecessary competition which gives them a sense of group accountability. If this is achieved in the classroom by the encouragement of the teacher it may well be transferred to places outside of the classroom. When teachers combine such learning environments with the explicit teaching of SOC category VLS, learning the target language in general and vocabulary improvement in particular may be enhanced. Another thing this study has in common with others compared is that the first most frequently used particular VLS, guessing from textual context (DT-5), appears in the first five of several studies. This clearly shows that students benefit from this particular VLS. The implication carried here could be that learners may be informed in more detail about the advantages and disadvantages of this particular VLS as research

literature has described the reasons why it might be inefficient (Sökmen, 1997) and how it might be beneficial (Clarke & Nation, 1980) and following this they may be guided by teachers on how best to use it; not just by giving the word a guess, but by following a very well thought out procedure comprising of other strategies used in combination as summarized by Nation (2001).

With respect to whether the experience of prior explicit VLS teaching caused any difference in the frequency of VLS use, this study found no significant differences in the frequencies of use of VLS categories except for DT category between the participant with and without a prior experience of learning VLS. It indicates that providing learners with explicit VLS teaching may not necessarily bring about the increased frequency of use of the VLS, except for those VLS that are almost essential as in the case of DT category. The implication here is that teachers should not only expect increased frequency of VLS use as a result of their explicit VLS teaching. It seems wiser and more beneficial to track whether learners use or report using them appropriately and efficiently. In order to do this, teachers may select activities among ready-made ones or devise their own as part of the vocabulary teaching or practice in the classroom or spare time regularly for VLS teaching and practice. The study also sought for differences among participants who reported having been taught varying numbers of VLS and found a significant difference in the frequency of use of SOC category VLS. Group comparisons showed that prior experience of having been taught a higher number of VLS may cause more frequent use of SOC category VLS; however, this was not applicable for all groups because of the highly personal nature of VLS use. The practical implication of this could be that teachers may provide learners with as many particular VLS as they can in order for learners to choose from and the more number of VLS learners are familiar with they will be able to compare their benefits to them and they will be more likely to see the advantages in SOC category VLS in the cooperative environment of the classroom created by the teacher and the learners.

The present study also explored whether the frequency of VLS use changed according to the participants VS but found no significant differences between the two groups classified as above the LT and below the LT, where LT (8,000 words) was determined by the VST. It indicates that the size of the learners vocabulary do not change the frequency with which they use the VLS. The implication is that regardless of how much vocabulary learners know, they should continue to use the VLS however

frequently they themselves need to use them and teachers should introduce them with a wide range of VLS to use according to their needs.

Whether the frequency of VLS use differed depending on the participants' gender was another relationship that was examined in this study. It was found gender was a factor that caused a difference in frequency of VLS use. Females reported higher frequency of use in all five categories and the differences in the frequencies of SOC, CG categories, and overall VLS were significant. It is clear that whatever the reason females are more frequent users of VLS. The first practical implication is that female learners may be paired or grouped with male learners both in classroom activities and out-of-classroom activities such as regular assignments or projects. The benefit behind this is not necessarily because using VLS more frequently on its own is better than using them less frequently, which may be true for some learners while not for others, however, it is a truism that those opposite genders will be exposed to each other's different patterns of VLS use, which will also add on to the cooperative atmosphere in the classroom as what learners with different genders do may be complementary although may look contradictory. Another practical implication is that teachers may consider gender-specific differences when they are choosing what category of VLS to focus on or when deciding on what particular VLS to encourage among males and females.

The present study was also concerned with the effect of the frequency of VLS use on the participants VS as considerable research has been made on the topic with results not exactly consistent. It may be taken for granted that the more times of endeavours on the part of the learner to learn some particular vocabulary, the more numbers of words are gained. However, in the present study, when the participants' VS were regressed with the frequencies of the five categories of VLS as predictive variables, none of them was shown to have a significant effect on the VS. The combined effect of them was not significant, either. This finding shows that it is not always the frequency of VLS use on its own that determines larger VS; that is there may be other factors such as the individual characteristics of the learners and also that of the learning context. The implication carried by this finding is that when teachers are providing learners with explicit VLS instruction and when learners are using VLS for the purpose of learning vocabulary to increase their VS, both parties should place more importance on how effectively the VLS is being taught, learned and used.

As the final concern of this study, the participants were asked about their attitudes to the necessity of the explicit teach of the VLS and whether they would like it to be integrated in their language classrooms and in the curriculum. The majority expressed the necessity of the practice and demanded its integration in the EFL classes. This shows that the participants of the study are positively-oriented towards the integration of explicit teaching of VLS into EFL curriculum. Therefore, the implication is obvious: explicit teaching of the VLS with which EFL learners can improve their vocabulary learning should be integrated into EFL programmes by curriculum planners. If this is done, most of the class time unnecessarily spent on presenting and practising low-frequency vocabulary that plays an important role in lexical text coverage may be used for more important classroom tasks. Additionally, students will be more autonomous and self-directed, which will add on to their self-confidence. Moreover, teachers will not be criticised for doing one-size-fits-all type of vocabulary study in the classroom as learners themselves will be determining what vocabulary they want to learn according to their own needs.

5.4 Limitations of the Study

The present study has several limitations. First of all, one of the research instruments, the VLSQ, used a 5-level Likert scale to collect data about the participants' frequency of VLS use. This type of questionnaires unavoidably depend on self-reports, which may entail some margin of error because of their reliance on the level of the respondents' comprehension of the items, sincerity, care, attention and awareness. Secondly, as an extension to the VLSQ, a set of five closed questions about explicit VLS teaching with two-choice or four-choice answers was used, which provided the quantitative data needed rather than open ended questions.

Another limitation of the study is that being conducted at Erciyes University, as the present study used the data collected from the preparatory class at School of Foreign Languages, and from the first, second, third, and fourth graders at English Language and Literature Department, its results are only valid for the participants involved in the given context and cannot be generalised for other contexts.

5.5 Suggestions for Further Research

The current study aimed to reflect (i) the participants' prior experiences of explicit VLS learning, (ii) their current preferences in VLS with regard to the frequency

of use, (iii) whether their frequency of VLS use changes according to prior experiences of explicit VLS learning, VS, and gender, (iv) whether their frequency of VLS use has an effect on their VS, and (v) their ideas about the integration of explicit VLS teaching in language classrooms and the curricula.

The instrument to collect the essential data for the above-mentioned research aims was the VLSQ, which comprised of several parts. One part of it was a 40-item 5-level Likert self-report scale of frequency of VLS use, which contains closed items listed rather than asking the participants to specify what VLS they use along with how often and when the need arises. Another part of the VLSQ was a set of 5 questions to quantify the participants' prior experiences about explicit VLS learning, present willingness for having been taught VLS explicitly, and present ideas about the integration of explicit VLS instruction in the EFL classrooms, which also had either a two-choice (Yes / No) or a four-choice (number of VLS in prior learning). This instrument was practical and effective in order to quantitatively mirror the present situation in general; however, further research might use more open-ended question types with which more descriptive details can be accumulated to understand more deeply the preferences of VLS use in terms of frequency, the prior experiences about and present attitudes to explicit VLS instruction. By the same token, the quantitative data may be triangulated with semi-structured interviews or think-aloud protocols either through scenarios or on task.

This study explored whether the frequency of VLS use differed according to three variables listed above and it is recommended that future research focus on other independent variables such as individual learning styles, levels of motivation, fields of academic study, or types of vocabulary needed.

The VST (Nation & Beglar, 2007) was used to determine the participants VS it was detailed elsewhere above that it extrapolates the number of lexical items known by the learner at the reception level only. Further research might be interested in comparing effect of frequency of VLS use on the VS using other tests such as the CATSS-Receptive and Productive (Laufer & Levitzky-Aviad, 2016), and VLT-Productive (Laufer & Nation, 1999).

The current study probed into learners' prior experiences of having been taught the VLS explicitly and the extent to which they were made familiar with the VLS by using their self-reports but, among its several concerns, it was not in the scope of the

present study to investigate what the teachers' prior and present practices about teaching VLS explicitly are . Therefore, future studies might compare the preferences and ideas of learners and teachers to see their common grounds.

APPENDIX I

A taxonomy of vocabulary learning strategies

Strategies for the discovery of a new word's meaning

1. DET Analyse part of speech
2. DET Analyse affixes and roots
3. DET Check for L1 cognate
4. DET Analyse any available pictures or gestures
5. DET Guess from textual context
6. DET Bilingual dictionary
7. DET Monolingual dictionary
8. DET Word Lists
9. DET Flash cards
10. SOC Ask teacher for an L1 translation
11. SOC Ask teacher for a paraphrase or synonym of new word
12. SOC Ask teacher for a sentence including the new word
13. SOC Ask classmates for meaning
14. SOC Discover new meaning through group work activity

Strategies for consolidating a word once it has been encountered

15. SOC Study and practise meaning in a group
16. SOC Teacher checks students' flashcards or wordlists for accuracy
17. SOC Interact with native speakers
18. MEM Study word with a pictorial representation of its meaning
19. MEM Image word's meaning
20. MEM Connect word to a personal experience
21. MEM Associate the word with its coordinates
22. MEM Connect the word to its synonyms and antonyms
23. MEM Use semantic maps
24. MEM use 'scales' for gradable adjectives

25. MEM Peg Method
26. MEM Loci Method
27. MEM Group words together to study them
28. MEM Group words together spatially on a page
29. MEM Use new words in sentences
30. MEM Group words together in a storyline
31. MEM Study the spelling of a word
32. MEM Study the sound of a word
33. MEM Say new word aloud when studying
34. MEM Image word form
35. MEM Underline initial letter of the word
36. MEM Configuration
37. MEM Use Keyword Method
38. MEM Affixes and roots (remembering)
39. MEM Part of speech (remembering)
40. MEM Paraphrase the word's meaning
41. MEM Use cognates in study
42. MEM Learn the words of an idiom together
43. MEM Use physical action when learning a word
44. MEM Use semantic feature grids
45. COG Verbal repetition
46. COG Written repetition
47. COG Word Lists
48. COG Flash cards
49. COG Take notes in class
50. COG Use the vocabulary section in your text book
51. COG Listen to tape of word lists
52. COG Put English labels on physical objects
53. COG Keep a vocabulary notebook

54. MET Use English-language media (songs, movies, newscasts, etc.)
55. MET testing oneself with word tests
56. MET Use spaced word practice
57. MET Skip or pass new word
58. MET Continue to study over time

APPENDIX II

Vocabulary Learning Strategies Questionnaire (Turkish Version)

Sayın katılımcı arkadaşlar,

Bu anketin amacı bilimsel bir çalışma için sizin kelime öğrenme stratejilerinizi araştırmaktır. Bu anketi mümkün olduğunca dikkatli ve samimi bir şekilde doldurmanızı önemle rica ederim. Bu anket bir sınav **değildir** ve doğru veya yanlış cevap yoktur. Bu anket yoluyla toplanan bilgiler tamamıyla gizli tutulacak ve yalnızca bu çalışmanın amaçları doğrultusunda kullanılacaktır. Bu çalışmaya gönüllü olarak katılmayı kabul ediyorsanız lütfen aşağıya imzanızı atınız.
İşbirliğiniz için teşekkür ederim.

İmza:_____

Araştırmacı: Elif Barbaros

KATILIMCIYLA İLGİLİ BİLGİLER

Takma isim : _____
Yaşınız:_____
Cinsiyet: E ___ K ___
Kaçıncı sınıftasınız: Hazırlık ___ 1. Sınıf ___ 2. Sınıf ___ 3. Sınıf ___ 4. Sınıf ___
*Fakülte öncesi hazırlık sınıfı okudunuz mu?: Evet___ Hayır___
(**Bu soruyu hazırlık sınıfındaki öğrencilerin yanıtlaması gerekmemektedir*.)
Kaç yıldır İngilizce öğreniyorsunuz?: _____yıldır
İngilizce konuşulan bir ülkede kaldınız mı? Ne kadar süre?
Evet; _____ay Hayır_____
Evet; _____yıl

KELİME ÖĞRENME STRATEJİLERİ ANKETİ

Her bir stratejiyi ne sıklıkta kullandığınızı en iyi belirten numarayı daire içine alınız.

No	**Kelime Öğrenme Stratejileri**	Hiçbir zaman	Nadiren	Bazen	Genellikle	Her zaman
	Bilmediğim bir kelimeyle karşılaştığımda anlamını keşfetmek için…					
1.	kelimenin türünü (isim, fiil, sıfat, zarf, v.s) belirlerim.	**1**	**2**	**3**	**4**	**5**
2.	kelimenin önekine, sonekine ve köküne bakarım. *Örnek:.undeniably: un-deny-able-ly*	**1**	**2**	**3**	**4**	**5**
3.	benzeri bir kelimenin Türkçede olup olmadığını düşünürüm. *Örnek: protest-protesto*	**1**	**2**	**3**	**4**	**5**
4.	kitap okurken varsa resimleri, film veya video izlerken vücut hareketlerini incelerim. *Örnek: wave goodbye: veda ederken el sallamak*	**1**	**2**	**3**	**4**	**5**
5.	metnin bağlamından - kelimenin çevresindeki kelimeler ve cümlelerden – faydalanarak tahminler yaparım. *Örnek*: *The writer depicts the rural life in contemporary England. depict: betimlemek*	**1**	**2**	**3**	**4**	**5**
6.	İngilizceden Türkçeye veya Türkçeden İngilizceye sözlüğe bakarım.	**1**	**2**	**3**	**4**	**5**
7.	İngilizceden İngilizceye sözlüğe bakarım.	**1**	**2**	**3**	**4**	**5**
8.	öğretmeninden kelimenin Türkçesini isterim.	**1**	**2**	**3**	**4**	**5**
9.	öğretmenimden kelimeyi başka İngilizce kelimelerle anlatmasını veya eş anlamlısını söylemesini isterim.	**1**	**2**	**3**	**4**	**5**
10.	öğretmenimden yeni kelimeyi içeren bir cümle kurmasını isterim.	**1**	**2**	**3**	**4**	**5**
11.	sınıf arkadaşlarıma yeni kelimenin anlamını sorarım.	**1**	**2**	**3**	**4**	**5**

Daha önce karşılaştığım kelimeleri pekiştirmek ve daha iyi hatırlamak için …..						
12.	kelimenin anlamını arkadaşlarımla grup olarak çalışır ve pratik yaparım.	**1**	**2**	**3**	**4**	**5**
13.	ana dili İngilizce olan bireylerle etkileşime girerim; konuşurum, yazışırım.	**1**	**2**	**3**	**4**	**5**
14.	kelimenin anlamıyla ilişkilendirdiğim resimler çizerim.	**1**	**2**	**3**	**4**	**5**
15.	kelimenin anlamıyla ilgili zihinsel bir imge oluştururum – gözümde canlandırırım. *Örnek: hilarious: the image of an audience laughing a lot at the jokes of a comedian*	**1**	**2**	**3**	**4**	**5**
16.	kelimeyi kişisel bir deneyimimle ilişkilendiririm. *Örnek: specialist* *The last time I went to hospital, I was examined by a specialist.*	1	**2**	**3**	**4**	**5**
17.	kelimeyi yanındaki – öncesinde veya sonrasında gelen – diğer kelimelerle bağdaştırır, birlikte aklıma getirim. *Örnek: mystery: murder mystery,* *verdict: the jury's verdict*	**1**	**2**	**3**	**4**	**5**
18.	kelimeleri eş anlamlıları ve zıt anlamlıları ile ilişkilendiririm. *Örnek: anticipate ≈ expect, approve X disapprove*	**1**	**2**	**3**	**4**	**5**
19.	anlamsal haritalar kullanırım; anlamsal olarak bağlantılı kelimeleri görsel gösterim yolları ile ilişkilendiririm – örneğin, otel ortada bir daire içinde oklarla diğer kelimeleri birleştiririm. *→facilities: restaurant – car park – swimming pool – disco* *HOTEL→ managers: general – food and beverage – front desk* *→ staff: receptionist – waiter – waitress – maid*	**1**	**2**	**3**	**4**	**5**
20.	bazı kelime gruplarında (sıfatlar, zarflar, vs.) azalan veya artan sıralamalar kullanırım. *Örnek: boiling-hot-warm, cool-cold-freezing,* *baby-toddler-child-teenager-young adult-adult-elderly,* *village-town-city-metropolitan, etc.*	**1**	**2**	**3**	**4**	**5**
21.	belirli bir ortak özellik taşıyan kelimeleri gruplayarak çalışırım. *Örnek: VERBS OF SENSES: look-sound-smell-taste-feel,* *RED FRUIT: pomegranate- strawberry- sour cherry-raspberry, etc*	**1**	**2**	**3**	**4**	**5**
Daha önce karşılaştığım kelimeleri pekiştirmek ve daha iyi hatırlamak için …..						
22.	yeni kelimeleri cümleler içinde kullanırım.	**1**	**2**	**3**	**4**	**5**

23.	bir grup kelimeyi bir hikâye akışı içinde birlikte kullanırım. *Örnek: pigeon- hairdryer-stay:* *James was on his usual Sunday walk smelling the beautiful wet soil when he heard the painful cry of a* ***pigeon*** *that had been trapped on the roof of a phone box. It was soaked to the skin. James carefully set the bird free from the phone box, quickly took it home, dried it first with a soft towel and then with the* ***hairdryer****. The pigeon* ***stay****ed the night in a cardboard box at James' flat and the next day he let it fly into the blue sky.)*	**1**	**2**	**3**	**4**	**5**
24.	kelimenin yazılış ve söyleniş şeklini çalışırım. *Örnek: analyze: a-n-a-l-y-z-e & analyze:	ˈænəlaız |)*	**1**	**2**	**3**	**4**	**5**
25.	anahtar kelime metodu kullanırım; önce hedef kelimeye ses açısından benzeyen anadilimden bir kelimeyi anahtar kelime seçerim, örneğin "cook-kukla", daha sonra bu iki kelimeyi birlikte kullanarak her iki kelimenin anlamlarının etkileşimine dayanan zihinsel bir imge oluştururum. *Örnek: Kukla aşçı olmuş yemek pişiriyor*	**1**	**2**	**3**	**4**	**5**
26.	kelimenin önekinden, sonekineden veya kökünden faydalanırım. *Örnek: post-war, perceive*	**1**	**2**	**3**	**4**	**5**
27.	kelimenin türünden (isim, fiil, sıfat, zarf, vs.) faydalanırım.	**1**	**2**	**3**	**4**	**5**
28.	kelimenin anlamını başka İngilizce kelimeler kullanarak tanımlarım. *Örnek: immortality: not dying forever*	**1**	**2**	**3**	**4**	**5**
29.	fiziksel hareketler yaparım. *Örnek: shiver, wink, whistle, inhale, exhale, etc.*	**1**	**2**	**3**	**4**	**5**
30.	kelimeyi defalarca yüksek sesle tekrarlarım.	**1**	**2**	**3**	**4**	**5**
31.	kelimeyi defalarca yazarım.	**1**	**2**	**3**	**4**	**5**
32.	kelime listeleri oluştur, listelerimdeki kelimeleri çalışırım.	**1**	**2**	**3**	**4**	**5**
33.	bir yüzünde İngilizce kelime, diğer yüzünde Türkçe karşılığı olan kartlar hazırlar ve kartlarımdaki kelimeleri çalışırım.	**1**	**2**	**3**	**4**	**5**
34.	sınıfta not tutarım.	**1**	**2**	**3**	**4**	**5**
35.	kelime defteri tutarım.	**1**	**2**	**3**	**4**	**5**
36.	İngilizce medyadan faydalanırım (şarkılar, filmler, haberler, vs.)	**1**	**2**	**3**	**4**	**5**
37.	kendimi kelime testleriyle sınarım.					

		1	**2**	**3**	**4**	**5**
38.	aralıklı tekrarlar yaparım; karşılaştığım kelimeleri günlük, haftalık ve aylık olmak üzere tekrar ederim.	**1**	**2**	**3**	**4**	**5**
39.	yeni kelimeyi o an için atlar veya es geçerim.	**1**	**2**	**3**	**4**	**5**
40.	kelimelere çalışmayı zamana yayarak sürdürürüm.	**1**	**2**	**3**	**4**	**5**
Schmitt'in (1997) Kelime Öğrenme Taksonomisinden uyarlanmıştır.						

Lütfen size en iyi uyan seçeneği işaretleyiniz

1. İngilizce öğrendiğiniz süre boyunca yukarıdaki kelime öğrenme stratejilerinden herhangi biri veya bazıları size açık ve net bir şekilde (stratejinin ne olduğu, nasıl kullanıldığı ve örneklemeleri ile) öğretildi mi?

   Evet___ Hayır ___

2. 1. soruya yanıtınız evet ise, yukarıdaki kelime öğrenme stratejilerinden yaklaşık ne kadarı size açık ve net bir şekilde öğretildi?

   Yaklaşık 10 ___ Yaklaşık 20 ___ Yaklaşık 30 __ Yaklaşık 40 ___

3. Yanıtınız hayır ise, yukarıdaki kelime öğrenme stratejilerinden bazılarının size açık ve net bir şekilde öğretilmiş olmasını ister miydiniz?

   Evet___ Hayır ___

4. Sizce kelime öğrenme stratejilerinin derslerde açık ve net bir şekilde öğretilmesi gerekli midir?

   Evet___ Hayır___

5. Program planlayıcıların müfredatlarına kelime öğrenme stratejileri eğitimini dahil etmelerini ister miydiniz?

   Evet___ Hayır ___

APPENDIX III

Vocabulary Learning Strategies Questionnaire (English Version)

Dear participants,

The purpose of the questionnaire is to explore your vocabulary learning strategies for a scientific study. You are kindly asked to complete the questionnaire as carefully and sincerely as possible. As this is **not** a test, there is no right or wrong answer. The information gathered via this questionnaire will be kept strictly confidential and used only for the purposes of the study. If you agree to participate in the study voluntarily, please put your signature below.

Thank you for your cooperation. **Signature: _____**

Researcher: Elif Barbaros

BACKGROUND INFORMATION ABOUT THE PARTICIPANT

Pseudo name: _____

Age:_____

Gender: Male ___ Female ___

Grade: Prep. ___ 1st year___ 2nd year___ 3rd year ___ 4th year___

***Studied at preparatory class before faculty** :Yes___ No___
(**This question need not be answered by preparatory year students)*

Years of studying English: _____years

Time spent in an English-speaking country: Yes; ____months No___
Yes; ____years

VOCABULARY LEARNING STRATEGIES QUESTIONNAIRE							
Please circle the number that indicates best how frequently you use each of the strategies below.							
No	**Category-**	**Strategies**	Never	Seldom	Sometimes	Usually	Always
	When I encounter a word that I don't know, to discover its meaning, I…						
1.	**DT-1**	analyze the part of speech *(noun, verb, adjective, adverb, etc.)*	**1**	**2**	**3**	**4**	**5**
2.	**DT-2**	analyze affixes and roots. *(e.g.undeniably: un-deny-able-ly)*	**1**	**2**	**3**	**4**	**5**
3.	**DT-3**	check if a similar word exists in Turkish *(e.g. protest-protesto)*	**1**	**2**	**3**	**4**	**5**
4.	**DT-4**	analyze any available pictures when reading and gestures when watching films or videos *(e.g. wave goodbye: veda ederken el sallamak)*	**1**	**2**	**3**	**4**	**5**
5.	**DT-5**	guess from textual context – from the words and sentences around it *(e.g. The writer depicts the rural life in contemporary England. depict: betimlemek)*	**1**	**2**	**3**	**4**	**5**
6.	**DT-6**	use an English to Turkish or Turkish to English dictionary.	**1**	**2**	**3**	**4**	**5**
7.	**DT-7**	use an English to English dictionary.	**1**	**2**	**3**	**4**	**5**
8.	**SD-1**	ask my teacher for a Turkish translation.	**1**	**2**	**3**	**4**	**5**
9.	**SD-2**	ask my teacher for a paraphrase or a synonym.	**1**	**2**	**3**	**4**	**5**
10.	**SD-3**	ask my teacher for a sentence including the new word	**1**	**2**	**3**	**4**	**5**
11.	**SD-4**	ask my classmates for the meaning of the new word.	**1**	**2**	**3**	**4**	**5**
In order to consolidate and remember well the words I have encountered before, I….			Never	Seldom	Sometim	Usually	Always
12.	**SC-5**	study and practise the meaning of the word in a group.	**1**	**2**	**3**	**4**	**5**

13.	**SC-6**	interact with native speakers of English; talk and write to them.	**1**	**2**	**3**	**4**	**5**
14.	**MM-1**	draw pictures that I connect to the word's meaning.	**1**	**2**	**3**	**4**	**5**
15.	**MM-2**	create a mental image of – visualise –the meaning of the word. *(e.g. hilarious: the image of an audience laughing a lot at the jokes of a comedian)*	**1**	**2**	**3**	**4**	**5**
16.	**MM-3**	connect the word to a personal experience. *(e.g. specialist: The last time I went to hospital, I was examined by a specialist.)*	**1**	**2**	**3**	**4**	**5**
17.	**MM-4**	associate the word with its coordinates – the words that come before or after it. *(e.g. mystery: murder mystery, verdict: the jury's verdict)*	**1**	**2**	**3**	**4**	**5**
18.	**MM-5**	connect the word to its synonyms and antonyms. *(e.g. anticipate ≈ expect, approve X disapprove)*	**1**	**2**	**3**	**4**	**5**
19.	**MM-6**	use semantic maps; connect words that are related in meaning by using visual displays. *(e.g. →facilities: restaurant – car park – swimming pool* *HOTEL → staff: receptionist – waiter – waitress-maid* *→ managers: general – food and beverage – front desk*	**1**	**2**	**3**	**4**	**5**
20.	**MM-7**	use "scales" for some groups of words. *(e.g. boiling-hot-warm, cool-cold-freezing* *baby-toddler-child-teenager-young adult-adult-elderly* *village-town-city-metropolitan, etc.)*	**1**	**2**	**3**	**4**	**5**
21.	**MM-8**	group words together and study them. *(e.g. VERBS OF SENSES: look-sound-smell-taste-feel, RED FRUIT: pomegranate- strawberry- sour cherry-raspberry, etc.)*	**1**	**2**	**3**	**4**	**5**
22.	**MM-9**	use the new words in sentences.	**1**	**2**	**3**	**4**	**5**
23.	**MM-10**	use a group of words together within a storyline *(e.g. pigeon- hairdryer-stay:* *James was on his usual Sunday walk smelling the beautiful wet soil when he heard the painful cry of a* ***pigeon*** *that had been trapped on the roof of a phone box. It was soaked to the skin. James carefully set the bird free from the phone box, quickly took it home, dried it first with a soft towel and then with the* ***hairdryer****. The pigeon* ***stay****ed the night in a cardboard box at James' flat and the next day he let it fly into the blue sky.)*	**1**	**2**	**3**	**4**	**5**

24.	**MM-11**	study the spelling and sound of the word. *(e.g. analyze: a-n-a-l-y-z-e & analyze: | ˈænəlaɪz |)*	**1**	**2**	**3**	**4**	**5**
25.	**MM-12**	use the Keyword Method; *First I choose an L1 word that is similar to the sound of the target L2 word, e.g. cook (target word)- kukla (keyword): and then I create a mental image based on the interaction of the meanings of both words using the keyword and the target word together. → "Kukla aşçı olmuş yemek pişiriyor"*	**1**	**2**	**3**	**4**	**5**
26.	**MM-13**	make use of the affixes and roots. *(e.g. post-war, perceive)*	**1**	**2**	**3**	**4**	**5**
27.	**MM-14**	make use of part of speech *(noun, verb, adjective, adverb, etc.)*	**1**	**2**	**3**	**4**	**5**
28.	**MM-15**	paraphrase the word's meaning. *(e.g. immortality: not dying forever)*	**1**	**2**	**3**	**4**	**5**
29.	**MM-16**	use physical action. *(e.g. shiver, wink, whistle, inhale, exhale, etc.)*	**1**	**2**	**3**	**4**	**5**
30.	**CG-1**	repeat the word aloud several times.	**1**	**2**	**3**	**4**	**5**
31.	**CG-2**	write the word down several times.	**1**	**2**	**3**	**4**	**5**
32.	**CG-3**	make word lists and study the words on them.	**1**	**2**	**3**	**4**	**5**
33.	**CG-4**	make flash cards and study words on them.	**1**	**2**	**3**	**4**	**5**
34.	**CG-5**	take notes in class.	**1**	**2**	**3**	**4**	**5**
35.	**CG-6**	keep a vocabulary notebook.	**1**	**2**	**3**	**4**	**5**
36.	**MT-1**	use English-language media (songs, movies, newscasts, etc.)	**1**	**2**	**3**	**4**	**5**
37.	**MT-2**	test myself with word tests.	**1**	**2**	**3**	**4**	**5**
38.	**MT-3**	use spaced word practice; I practise the words daily, weekly, and mothly. .	**1**	**2**	**3**	**4**	**5**
39.	**MT-4**	skip or pass the new word.	**1**	**2**	**3**	**4**	**5**
40.	**MT-5**	continue to study over time.	**1**	**2**	**3**	**4**	**5**
Adapted from Schmitt's (1997) Vocabulary Learling Strategies Taxonomy							

Please tick the one that applies to you most.

1. Have you been explicitly taught any of the vocabulary learning strategies above during your English language learning experience?

   Yes___ No ___

2. If your answer is "yes" to the 1st question, approximately how many of the above vocabulary learning strategies were you explicitly taught?

   Around 10 ___ Around 20 ___ Around 30 __ Around 40 ___

3. If your answer is "no" to the 1st question, would you like to have been explicitly taught some of the vocabulary learning strategies above?

   Yes___ No ___

4. Do you think it is necessary to explicitly teach vocabulary learning strategies in class?
   Yes___ No ___

5. Would you like programme planners to include vocabulary learning strategy training in their syllabi?
   Yes___ No ___

APPENDIX IV

Vocabulary Size Test

Vocabulary Size Test

Circle the letter a-d with the closest meaning
to the keyword in the question.

1. SEE: They saw it.
a. cut
b. waited for
c. looked at
d. started

2. TIME: They have a lot of time.
a. money
b. food
c. hours
d. friends

3. PERIOD: It was a difficult period.
a. question
b. time
c. thing to do
d. book

4. FIGURE: Is this the right figure?
a. answer
b. place
c. time
d. number

5. POOR: We are poor.
a. have no money
b. feel happy
c. are very interested
d. do not like to work hard

6. DRIVE: He drives fast.
a. swims
b. learns
c. throws balls
d. uses a car

7. JUMP: She tried to jump.
a. lie on top of the water
b. get off the ground suddenly
c. stop the car at the edge of the road
d. move very fast

8. SHOE: Where is your shoe?
a. the person who looks after you
b. the thing you keep your money in
c. the thing you use for writing
d. the thing you wear on your foot

9. STANDARD: Her standards are very high.
a. the bits at the back under her shoes
b. the marks she gets in school
c. the money she asks for
d. the levels she reaches in everything

10. BASIS: This was used as the basis.
a. answer
b. place to take a rest
c. next step
d. main part

Second 1000
1. MAINTAIN: Can they maintain it?
a. keep it as it is
b. make it larger
c. get a better one than it
d. get it

2. STONE: He sat on a stone.
a. hard thing
b. kind of chair
c. soft thing on the floor
d. part of a tree

3. UPSET: I am upset.
a. tired
b. famous
c. rich
d. unhappy

4. DRAWER: The drawer was empty.
a. sliding box
b. place where cars are kept
c. cupboard to keep things cold
d. animal house

5. PATIENCE: He has no patience.
a. will not wait happily
b. has no free time
c. has no faith
d. does not know what is fair

6. NIL: His mark for that question was nil.
a. very bad
b. nothing
c. very good
d. in the middle

7. PUB: They went to the pub.
a. place where people drink and talk
b. place that looks after money
c. large building with many shops
d. building for swimming

8. CIRCLE: Make a circle.
a. rough picture
b. space with nothing in it
c. round shape
d. large hole

9. MICROPONE: Please use the microphone.
a. machine for making food hot
b. machine that makes sounds louder
c. machine that makes things look bigger
d. small telephone that can be carried around

10. PRO: He's a pro.
a. someone who is employed to find out important secrets
b. a stupid person
c. someone who writes for a newspaper
d. someone who is paid for playing sport etc

Third 1000
1. SOLDIER: He is a soldier.
a. person in a business
b. student
c. person who uses metal
d. person in the army

2. RESTORE: It has been restored.
a. said again
b. given to a different person
c. given a lower price
d. made like new again

3. JUG: He was holding a jug.
a. A container for pouring liquids
b. an informal discussion
c. A soft cap
d. A weapon that explodes

4. SCRUB: He is scrubbing it.
a. cutting shallow lines into it
b. repairing it
c. rubbing it hard to clean it
d. drawing simple pictures of it

5. DINOSAUR: The children were pretending to be dinosaurs.
a. robbers who work at sea
b. very small creatures with human form but with wings
c. large creatures with wings that breathe fire
d. animals that lived a long time ago

6. STRAP: He broke the strap.
a. promise
b. top cover
c. shallow dish for food
d. strip of material for holding things together

7. PAVE: It was paved.
a. prevented from going through
b. divided
c. given gold edges
d. covered with a hard surface

8. DASH: They dashed over it.
a. moved quickly
b. moved slowly
c. fought
d. looked quickly

9. ROVE: He couldn't stop roving.
a. getting drunk
b. travelling around
c. making a musical sound through closed lips
d. working hard

10. LONESOME: He felt lonesome.
a. ungrateful
b. very tired
c. lonely
d. full of energy

Fourth 1000
1. COMPOUND: They made a new compound.
a. agreement
b. thing made of two or more parts
c. group of people forming a business
d. guess based on past experience

2. LATTER: I agree with the latter.
a. man from the church
b. reason given
c. last one
d. answer

3. CANDID: Please be candid.
a. be careful
b. show sympathy
c. show fairness to both sides
d. say what you really think

4. TUMMY: Look at my tummy.
a. cloth to cover the head
b. stomach
c. small furry animal
d. thumb

5. QUIZ: We made a quiz.
a. thing to hold arrows
b. serious mistake
c. set of questions
d. box for birds to make nests in

6. INPUT: We need more input.
a. information, power, etc. put into something
b. workers
c. artificial filling for a hole in wood
d. money

7. CRAB: Do you like crabs?
a. sea creatures that walk sideways
b. very thin small cakes
c. tight, hard collars
d. large black insects that sing at night

8. VOCABULARY: You will need more vocabulary.
a. words
b. skill
c. money
d. guns

9. REMEDY: We found a good remedy.
a. way to fix a problem
b. place to eat in public
c. way to prepare food
d. rule about numbers

10. ALLEGE: They alleged it.
a. claimed it without proof
b. stole the ideas for it from someone else
c. provided facts to prove it
d. argued against the facts that supported it

Fifth 1000

1. DEFICIT: The company had a large deficit.
a. spent a lot more money than it earned
b. went down a lot in value
c. had a plan for its spending that used a lot of money
d. had a lot of money in the bank

2. WEEP: He wept.
a. finished his course
b. cried
c. died
d. worried

3. NUN: We saw a nun.
a. long thin creature that lives in the earth
b. terrible accident
c. woman following a strict religious life
d. unexplained bright light in the sky

4. HAUNT: The house is haunted.
a. full of ornaments
b. rented
c. empty
d. full of ghosts

5. COMPOST: We need some compost.
a. strong support
b. help to feel better
c. hard stuff made of stones and sand stuck together
d. rotted plant material

6. CUBE: I need one more cube.
a. sharp thing used for joining things
b. solid square block
c. tall cup with no saucer
d. piece of stiff paper folded in half

7. MINIATURE: It is a miniature.
a. a very small thing of its kind
b. an instrument to look at small objects
c. a very small living creature
d. a small line to join letters in handwriting

8. PEEL: Shall I peel it?
a. let it sit in water for a long time
b. take the skin off it
c. make it white
d. cut it into thin pieces

9. FRACTURE: They found a fracture.
a. break
b. small piece
c. short coat
d. rare jewel

10. BACTERIUM: They didn't find a single bacterium.
a. small living thing causing disease
b. plant with red or orange flowers
c. animal that carries water on its back
d. thing that has been stolen and sold

Sixth 1000

1. DEVIOUS: Your plans are devious.
a. tricky
b. well-developed
c. not well thought out
d. more expensive than necessary

2. PREMIER: The premier spoke for an hour.
a. person who works in a law court
b. university teacher
c. adventurer
d. head of the government

3. BUTLER: They have a butler.
a. man servant
b. machine for cutting up trees
c. private teacher
d. cool dark room under the house

4. ACCESSORY: They gave us some accessories.
a. papers allowing us to enter a country
b. official orders
c. ideas to choose between
d. extra pieces

5. THRESHOLD: They raised the threshold
a. flag
b. point or line where something changes
c. roof inside a building
d. cost of borrowing money

6. THESIS: She has completed her thesis.
a. long written report of study carried out for a university degree
b. talk given by a judge at the end of a trial
c. first year of employment after becoming a teacher
d. extended course of hospital treatment

7. STRANGLE: He strangled her.
a. killed her by pressing her throat
b. gave her all the things she wanted
c. took her away by force
d. admired her greatly

8. CAVALIER: He treated her in a cavalier manner.
a. without care
b. politely
c. awkwardly
d. as a brother would

9. MALIGN: His malign influence is still felt.
a. evil
b. good
c. very important
d. secret

10. VEER: The car veered.
a. went suddenly in another direction
b. moved shakily
c. made a very loud noise
d. slid sideways without the wheels turning

Seventh 1000

1. OLIVE: We bought olives.
a. oily fruit
b. scented pink or red flowers
c. men's clothes for swimming
d. tools for digging up weeds

2. QUILT: They made a quilt.
a. statement about who should get their property

when they die
b. firm agreement
c. thick warm cover for a bed
d. feather pen

3. STEALTH: They did it by stealth.
a. spending a large amount of money
b. hurting someone so much that they agreed to their demands
c. moving secretly with extreme care and quietness
d. taking no notice of problems they met

4. SHUDDER: The boy shuddered.
a. spoke with a low voice
b. almost fell
c. shook
d. called out loudly

5. BRISTLE: The bristles are too hard.
a. questions
b. short stiff hairs
c. folding beds
d. bottoms of the shoes

6. BLOC: They have joined this bloc.
a. musical group
b. band of thieves
c. small group of soldiers who are sent ahead of others
d. group of countries sharing a purpose

7. DEMOGRAPHY: This book is about demography.
a. the study of patterns of land use
b. the study of the use of pictures to show facts about numbers
c. the study of the movement of water
d. the study of population

8. GIMMICK: That's a good gimmick.
a. thing for standing on to work high above the ground
b. small thing with pockets to hold money
c. attention-getting action or thing
d. clever plan or trick

9. AZALEA: This azalea is very pretty.
a. small tree with many flowers growing in groups
b. light material made from natural threads
c. long piece of material worn by women in India
d. sea shell shaped like a fan

10. YOGHURT: This yoghurt is disgusting.
a. grey mud found at the bottom of rivers
b. unhealthy, open sore
c. thick, soured milk, often with sugar and flavouring
d. large purple fruit with soft flesh

Eighth 1000
1. ERRATIC: He was erratic.
a. without fault
b. very bad
c. very polite
d. unsteady

2. PALETTE: He lost his palette.
a. basket for carrying fish
b. wish to eat food
c. young female companion
d. artist's board for mixing paints

3. NULL: His influence was null.
a. had good results
b. was unhelpful
c. had no effect
d. was long-lasting

4. KINDERGARTEN: This is a good kindergarten.
a. activity that allows you to forget your worries
b. place of learning for children too young for school
c. strong, deep bag carried on the back
d. place where you may borrow books

5. ECLIPSE: There was an eclipse.
a. a strong wind
b. a loud noise of something hitting the water
c. The killing of a large number of people
d. The sun hidden by a planet

6. MARROW: This is the marrow.
a. symbol that brings good luck to a team
b. Soft centre of a bone
c. control for guiding a plane
d. increase in salary

7. LOCUST: There were hundreds of locusts.
a. insects with wings
b. unpaid helpers
c. people who do not eat meat
d. brightly coloured wild flowers

8. AUTHENTIC: It is authentic.
a. real
b. very noisy
c. Old
d. Like a desert

9. CABARET: We saw the cabaret.
a. painting covering a whole wall
b. song and dance performance
c. small crawling insect
d. person who is half fish, half woman

10. MUMBLE: He started to mumble.
a. think deeply
b. shake uncontrollably
c. stay further behind the others
d. speak in an unclear way

Ninth 1000
1. HALLMARK: Does it have a hallmark?
a. stamp to show when to use it by
b. stamp to show the quality
c. mark to show it is approved by the royal family
d. Mark or stain to prevent copying

2. PURITAN: He is a puritan.
a. person who likes attention
b. person with strict morals
c. person with a moving home
d. person who hates spending money

3. MONOLOGUE: Now he has a monologue.
a. single piece of glass to hold over his eye to help him to see better

b. long turn at talking without being interrupted
c. position with all the power
d. picture made by joining letters together in interesting ways

4. WEIR: We looked at the weir.
a. person who behaves strangely
b. wet, muddy place with water plants
c. old metal musical instrument played by blowing
d. thing built across a river to control the water

5. WHIM: He had lots of whims.
a. old gold coins
b. female horses
c. strange ideas with no motive
d. sore red lumps

6. PERTURB: I was perturbed.
a. made to agree
b. Worried
c. very puzzled
d. very wet

7. REGENT: They chose a regent.
a. an irresponsible person
b. a person to run a meeting for a time
c. a ruler acting in place of the king
d. a person to represent them

8. OCTOPUS: They saw an octopus.
a. a large bird that hunts at night
b. a ship that can go under water
c. a machine that flies by means of turning blades
d. a sea creature with eight legs

9. FEN: The story is set in the fens.
a. low land partly covered by water
b. a piece of high land with few trees
c. a block of poor-quality houses in a city
d. a time long ago

10. LINTEL: He painted the lintel.
a. Beam over the top of a door or window
b. small boat used for getting to land from a big boat
c. beautiful tree with spreading branches and green fruit
d. board showing the scene in a theatre

Tenth 1000
1. AWE: They looked at the mountain with awe.
a. worry
b. interest
c. wonder
d. respect

2. PEASANTRY: He did a lot for the peasantry.
a. local people
b. place of worship
c. businessmen's club
d. poor farmers

3. EGALITARIAN: This organization is egalitarian.
a. does not provide much information about itself to the public
b. dislikes change
c. frequently asks a court of law for a judgement
d. treats everyone who works for it as if they are equal

4. MYSTIQUE: He has lost his mystique.
a. his healthy body
b. the secret way he makes other people think he has special power or skill
c. the woman who has been his lover while he is married to someone else
d. the hair on his top lip

5. UPBEAT: I'm feeling really upbeat about it.
a. upset
b. good
c. hurt
d. confused

6. CRANNY: We found it in the cranny!
a. sale of unwanted objects
b. narrow opening
c. space for storing things under the roof of a house
d. large wooden box

7. PIGTAIL: Does she have a pigtail?
a. a rope of hair made by twisting bits together
b. a lot of cloth hanging behind a dress
c. a plant with pale pink flowers that hang down in short bunches
d. a lover

8. CROWBAR: He used a crowbar.
a. heavy iron pole with a curved end
b. false name
c. sharp tool for making holes in leather
d. light metal walking stick

9. RUCK: He got hurt in the ruck.
a. hollow between the stomach and the top of the leg
b. pushing and shoving
c. group of players gathered round the ball in some ball games
d. race across a field of snow

10. LECTERN: He stood at the lectern.
a. desk to hold a book at a height for reading
b. table or block used for church sacrifices
c. place where you buy drinks
d. very edge

Eleventh 1000
1. EXCRETE: This was excreted recently.
a. pushed or sent out
b. made clear
c. discovered by a science experiment
d. put on a list of illegal things

2. MUSSEL: They bought mussels.
a. small glass balls for playing a game
b. shellfish
c. large purple fruits
d. pieces of soft paper to keep the clothes clean when eating

3. YOGA: She has started yoga.
a. handwork done by knotting thread
b. a form of exercise for body and mind
c. a game where a cork stuck with feathers is hit between two players

d. a type of dance from eastern countries

4. COUNTERCLAIM: They made a counterclaim.
a. a demand made by one side in a law case to match the other side's demand
b. a request for a shop to take back things with faults
c. An agreement between two companies to exchange work
d. a top cover for a bed

5. PUMA: They saw a puma.
a. small house made of mud bricks
b. tree from hot, dry countries
c. very strong wind that sucks up anything in its path
d. large wild cat

6. PALLOR: His pallor caused them concern.
a. his unusually high temperature
b. his lack of interest in anything
c. his group of friends
d. the paleness of his skin

7. APERITIF: She had an aperitif.
a. a long chair for lying on with just one place to rest an arm
b. a private singing teacher
c. a large hat with tall feathers
d. a drink taken before a meal

8. HUTCH: Please clean the hutch.
a. thing with metal bars to keep dirt out of water pipes
b. space in the back of a car for bags
c. metal piece in the middle of a bicycle wheel
d. cage for small animals

9. EMIR: We saw the emir.
a. bird with long curved tail feathers
b. woman who cares for other people's children in Eastern countries
c. Middle Eastern chief with power in his land
d. house made from blocks of ice

10. HESSIAN: She bought some hessian.
a. oily pinkish fish
b. stuff producing a happy state of mind
c. coarse cloth
d. strong-tasting root for flavouring food

Twelfth 1000
1. HAZE: We looked through the haze.
a. small round window in a ship
b. unclear air
c. strips of wood or plastic to cover a window
d. list of names

2. SPLEEN: His spleen was damaged.
a. knee bone
b. organ found near the stomach
c. pipe taking waste water from a house
d. respect for himself

3. SOLILOQUY: That was an excellent soliloquy!
a. song for six people
b. short clever saying with a deep meaning
c. entertainment using lights and music
d. speech in the theatre by a character who is alone

4. REPTILE: She looked at the reptile.
a. old hand-written book
b. animal with cold blood and a hard outside
c. person who sells things by knocking on doors
d. picture made by sticking many small pieces of different colours together

5. ALUM: This contains alum.
a. a poisonous substance from a common plant
b. a soft material made of artificial threads
c. a tobacco powder once put in the nose
d. a chemical compound usually involving aluminium

6. REFECTORY: We met in the refectory.
a. room for eating
b. office where legal papers can be signed
c. room for several people to sleep in
d. room with glass walls for growing plants

7. CAFFEINE: This contains a lot of caffeine.
a. a substance that makes you sleepy
b. threads from very tough leaves
c. ideas that are not correct
d. a substance that makes you excited

8. IMPALE: He nearly got impaled.
a. charged with a serious offence
b. put in prison
c. stuck through with a sharp instrument
d. involved in a dispute

9. COVEN: She is the leader of a coven.
a. a small singing group
b. a business that is owned by the workers
c. a secret society
d. a group of church women who follow a strict religious life

10. TRILL: He practised the trill.
a. ornament in a piece of music
b. type of stringed instrument
c. Way of throwing a ball
d. dance step of turning round very fast on the toes

Thirteenth 1000
1. UBIQUITOUS: Many weeds are ubiquitous.
a. are difficult to get rid of
b. have long, strong roots
c. are found in most countries
d. die away in the winter

2. TALON: Just look at those talons!
a. high points of mountains
b. sharp hooks on the feet of a hunting bird
c. heavy metal coats to protect against weapons
d. people who make fools of themselves without realizing it

3. ROUBLE: He had a lot of roubles.
a. very precious red stones
b. distant members of his family
c. Russian money
d. moral or other difficulties in the mind

4. JOVIAL: He was very jovial.

a. low on the social scale
b. likely to criticize others
c. full of fun
d. friendly

5. COMMUNIQUE: I saw their communiqué .
a. critical report about an organization
b. garden owned by many members of a community
c. printed material used for advertising
d. official announcement

6. PLANKTON: We saw a lot of plankton.
a. poisonous weeds that spread very quickly
b. very small plants or animals found in water
c. trees producing hard wood
d. grey clay that often causes land to slip

7. SKYLARK: We watched a skylark.
a. show with aeroplanes flying in patterns
b. man-made object going round the earth
c. person who does funny tricks
d. small bird that flies high as it sings

8. BEAGLE: He owns two beagles.
a. fast cars with roofs that fold down
b. large guns that can shoot many people quickly
c. small dogs with long ears
d. houses built at holiday places

9. ATOLL: The atoll was beautiful.
a. low island made of coral round a sea-water lake
b. work of art created by weaving pictures from fine thread
c. small crown with many precious jewels worn in the evening by women
d. place where a river flows through a narrow place full of large rocks

10. DIDACTIC: The story is very didactic.
a. tries hard to teach something
b. is very difficult to believe
c. deals with exciting actions
d. is written in a way which makes the reader unsure of the meaning

Fourteenth 1000
1. CANONICAL: These are canonical examples.
a. examples which break the usual rules
b. examples taken from a religious book
c. regular and widely accepted examples
d. examples discovered very recently

2. ATOP: He was atop the hill.
a. at the bottom of
b. at the top of
c. on this side of
d. on the far side of

3. MARSUPIAL: It is a marsupial.
a. an animal with hard feet
b. a plant that grows for several years
c. a plant with flowers that turn to face the sun
d. an animal with a pocket for babies

4. AUGUR: It augured well.
a. promised good things for the future
b. agreed well with what was expected
c. had a colour that looked good with something else
d. rang with a clear, beautiful sound

5. BAWDY: It was very bawdy.
a. unpredictable
b. enjoyable
c. rushed
d. rude

6. GAUCHE: He was gauche.
a. talkative
b. flexible
c. awkward
d. determined

7. THESAURUS: She used a thesaurus.
a. a kind of dictionary
b. a chemical compound
c. a special way of speaking
d. an injection just under the skin

8. ERYTHROCYTE: It is an erythrocyte.
a. a medicine to reduce pain
b. a red part of the blood
c. a reddish white metal
d. a member of the whale family

9. CORDILLERA: They were stopped by the cordillera.
a. a special law
b. an armed ship
c. a line of mountains
d. the eldest son of the king

10. LIMPID: He looked into her limpid eyes.
a. clear
b. tearful
c. deep brown
d. beautiful

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