Vocabulary acquisition of English as a foreign language in the Hungarian public sector.

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Vocabulary Acquisition of English as a Foreign Language in the Hungarian Public Education Sector

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Abstract

The research in this dissertation is the first attempt in Hungary to reveal language learners' language proficiency in the public education sector through a vocabulary size test as an alternative method. Based on the assessment of vocabulary in learners' coursebooks, the analyses of teacher talk and the answers in learners' informal strategy questionnaire reveal the possible sources through which the learners' can get an access to new vocabulary and also what they do themselves in order to acquire new words in- and outside of the classroom. The results of this research can prove that even the Hungarian language learners' English language knowledge can be at a considerably good level.

The starting point for the research was that both language teachers and students have been evaluating the Hungarian learners' English language knowledge as insufficient, despite the relatively many English classes in the public education. This negative assumption has been supported by the data of Eurostat (2009) statistics, which says that the Hungarians are the last ones in Europe concerning their foreign language knowledge. There has also been guessing that the Hungarian learners' English knowledge does not meet the international standards and like this it is falling behind foreign students' English language knowledge.

The results show objectively how Hungarian learners' knowledge compares with other learners in other countries from the point of view of English as a foreign language.

The current dissertation is hoped to be a substantial contribution to the field of teaching and learning English as a foreign language in Hungary, in particular, and to the field of second language vocabulary acquisition, in general.

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List of tables, figures, diagrams and illustrations

Tables:

Acronyms and Abbreviations

A_lex	Aural lex
A1	CEFR, breakthrough beginner language level
A2	CEFR, Way stage or elementary language level
ANOVA	Analysis of Variance/ is a collection of statistical models
B1	CEFR Threshold or intermediate language level
B2	CEFR Vantage or upper intermediate language level
BNC	British National Corpus
C1	CEFR Effective Operational Proficiency or advanced language level
C2	CEFR Mastery or proficiency language level
CALL	Computer Assisted Language Learning
CANCODE	The Cambridge and Nottingham Corpus of Discourse in English
CEFR	Common European Framework Reference is a guideline used to describe achievements of learners of foreign languages across Europe.
CPE	Cambridge English Proficiency
EFL	English as a Foreign Language
EUROSTAT	Statistical Office of the European Union
EVST	Eurocentres Vocabulary Size Test
FCE	First Certificate in English
GCSE	General Certificate of Secondary Education
GSL	General Service List
IELTS	International English Language Testing System
L1	First Language
L2	Second or Foreign Language
MAVL	Mobile-Assisted Vocabulary Learning
NCC	National Core Curriculum
STT	Student Talking Time
TTT	Teacher Talking Time
VLT	Vocabulary Levels Test
VST	Vocabulary Size Test
X_lex	Vocabulary size (breadth) test, assessing the number of words one knows in a language.

Chapter One

Introduction

The background to, and the motivation for, the research in this dissertation lies in a number of studies (e.g. Eurobarometer/ Eurostat, 2009 and Nikolov in Fekete *et al.*, 1999) which suggest that EFL learning, and foreign language learning generally, are highly unsuccessful in Hungary. The Eurobarometer/ Eurostat (2009) statistics, for example, suggest that the Hungarians are in last place in a ranking of European countries listed by their success in foreign language learning. There are reasons for thinking this might be the case given the content of foreign language teaching in Hungary, which has moved in the recent past from the compulsory teaching of Russian, using very traditional approaches and largely in ignorance of more modern approaches and techniques, developed on the western side of the iron curtain. Many teachers have subsequently converted from teaching Russian to teaching English with all the difficulties that will inevitably go with such a change. However, the research these assertions are based on, rely on student self-assessment or subjective assessments of knowledge and skills which may bear little or no connection to the reality of learner performance in Hungary or elsewhere. The starting point for the studies in this dissertation, therefore, lies in a desire to interrogate these assertions, perhaps in a more objective and systematic way, to test their truth.

This dissertation begins with an investigation of the EFL knowledge of state school students in Hungary. The students sampled in the studies mentioned above, but using the assessment of their vocabulary knowledge. The virtue of assessing learners' performance from the perspective of vocabulary knowledge allows EFL learning in Hungary to be viewed from a different viewpoint. Through vocabulary knowledge, EFL performance can be more objectively measured, and perhaps more meaningfully compared, with curricular targets and achievements in other countries. It is a perspective too, that allows the scale and nature of the EFL input to be quantified, so the whole context of learning in this crucial aspect of EFL knowledge can be assessed. Such information should provide useful feedback to teachers and learners alike in the Hungarian language education system, who can benefit from a quantifiable and objective assessment of performance.

This initial study suggested that learners in Hungary were performing very creditably compared with equivalent learners in other countries and well in excess of the curricular target set for them. Vocabulary knowledge appeared good and because this knowledge is so closely linked to overall foreign language performance, the clear implication is that learners in Hungary are very similar to students elsewhere and that teaching foreign languages in Hungary is not as bad as has been suggested. This raised further questions, which became the focus for two further studies, which address the question of where the students' good vocabulary knowledge comes from. The first study investigated the vocabulary context of the classroom and examined both the content of textbooks and the language of the teachers. This study produced surprising results in that it seemed that learners were developing lexicon well in advance of the content of their books and the curriculum and the language of the teachers could not explain the difference since the teachers were scarcely extending the vocabulary of the textbook. The third experiment, therefore, examined through a strategy questionnaire the EFL related activities students were engaged in both inside and outside the class and this study may explain how Hungarian learners grow large lexicons since it seems they pursue activities in English, such as watching English language films with sub-titles, which have been shown to produce vocabulary growth.

The days when vocabulary research studies were rare are now long gone and there is a substantial literature to draw on to inform a study of this kind and to provide models of research and assessment from which ideas can be drawn and with which comparisons can be made. Almost none of the literature, however, involves learners in the Hungarian context. The research and the studies in this dissertation attempt to fill in this gap and place the learning of English in particular in Hungary in a much wider, European, perspective. It is hoped it can be part of a re-evaluation of EFL teaching and learning in Hungary which will recognise that we are more similar to our European neighbours than we are different, and that there are tools available for measuring and comparing learning in a variety of contexts which can inform teachers and learners alike of their knowledge and progress in foreign languages.

Chapter Two

Literature review

What is Word Knowledge?

2.1 What is a word and what is word knowledge?

Attempts to measure the number of words a person knows have a substantial history. As Anglin (1993) and Milton and Treffers-Daller (2013) note, this history is characterised by huge variation in the estimates which emerge. There may be several reasons for such variation but much of it is due to differences in the methodology used to test for word knowledge and these methods can vary as a result of differences in what counts as a word and what you choose to consider as knowing a word.

The earlier research, and often the larger estimates draw on a sample of dictionary entries as the basis of their calculation. The issue with dictionary counts is that the estimate can be inflated by counting commonly derived forms of a single word as separate words and this can result in a estimate in the hundreds of thousands (e.g. Seashore and Eckerson, 1940). More recent estimates are in the region of about 60,000 lemmatised words (Nagy and Herman, 1987, White *et al.* 1990, Aitchison, 2003) and these assume that words, at least in English, are learned and stored as a base form to which regular rules for inflection or derivation can be applied. Knowledge of the base form implies at least receptive knowledge of these other regularly created forms. '..... Approaching L2 vocabulary learning from the standpoint of the *lemma* offers the potential of reducing the learning burden by dramatically shrinking the sheer volume of disparate lexical items that learners must commit to memory' (Hedgecock and Ferris, 2009, p. 287).

Calculations of size using the lemma or word family will reduce the scale of the estimate, and by implication the scale of the vocabulary learning task, but there can be a difference in the estimate depending on how broadly the definition of a word family is made. A lemma is usually considered to be a base word and its most frequent and regularly formed inflections and derivations. In English this, in practice, usually means that the lemmas include only regular inflections since derived forms tend to be less frequent and less

regular. A common method for deciding on the size of the lemma is to include affixes included in the first three frequency bands of Bauer and Nation's (1993) (in Milton, 2009 p. 104) affix list and these are given in Table 2.1.

Table 2.1. *Summary of Bauer and Nation's list of affixes. The first three are the most common ones (Milton, 2009, p. 104)*

Level	Affix
1	n/a different form is a different word
2	Regularly inflections: plural, 3rd person singular present tense, past tense, past participle, -ing, comparative, superlative, possessive
3	-able, -er, -ish, -less, -ly, -ness, -th, -y, non-, un- (all with restricted uses)
4	-al, -ation, -ess, -ful, -ism, -ist, -ity, -ize, -ment, -ous, in- (all with restricted uses)
5	-age, -al, -ally, -an, -ance, -ant, -ary, -atory, -dom, -eer, -en, -ence, -ent, -ery, -ese, -eque, -ette, -hood, -i, -ian, -ite, -let, -ling, -ly, -most, -ory, anti-, ante-, arch-, bi-, circum-, counter-, en-, ex-, fore-, hyper-, inter-, mid-, mis-, neo-, post-, pro-, semi-, sub-, un-
6	-able, -ee, -ic, -ify, -ion, -ist, -ition, -ive, -th, -y, pre-, re-
7	Classical roots and affixes

It is possible to use a larger word family for the purposes of calculation. Coxhead (2000) for example, includes affixes included in the first six bands for her work in deriving and describing her Academic Word List. The choice of the unit of count hinges on what, it is thought, the learners themselves treat as a word in their mental lexicons. It is assumed that the most frequent affixes are learned early (Larsen-Freeman, 1976) and that a choice of a larger and more inclusive word family would only be justified if the learners were at a sufficiently advanced level to have mastered the less frequent levels. Coxhead's learners intending to study for degrees through English might, presumably, be at such an advanced level. Learners who are less proficient, and this presumably would be the kind of levels that learners in Hungary would attain, might be better suited with a unit of count at the level of the lemma. There is some evidence that L2 learners do handle words with the expectation that there is a base form with regular rules for inflection (e.g. Schmitt and Meara, 1997, Mochizuki and Aizawa, 2000). Since it appears that learners do indeed learn and handle their vocabulary in this way and there appears to be a consensus developing that lemmatised base words or word families is most appropriate for making calculations of vocabulary size (Vermeer, 2004).

The more recent assessments of vocabulary size of native speakers use the lemma or word family as the basis of count and the result can often be a much smaller estimate than the many thousands given above. D'Anna *et al.*'s (1991) study of US undergraduates suggests that educated native speakers have a defining vocabulary of about 14,000 lemmatised words and the authors suggest that this may actually be an over-estimate. Milton and Treffers-Daller's (2013) study of UK undergraduates suggests a defining knowledge of about 10,000 lemmatised words on entry to university and 11,000 on leaving. These figures are comparable with the most recent estimates of the size of the lexicon in advanced non-native speakers (e.g. Nation, 2006) which suggest a vocabulary size of around 8,000 to 9,000 word-families.

It appears, therefore, that tests based on the lemma might be the most appropriate for investigating vocabulary knowledge and vocabulary size among Hungarian school learners and the smaller figures for overall vocabulary size the most useful for the purposes of comparing learner levels with native-speaker performance.

2.2 Knowing a word

There are multiple answers to the question *what is knowing a word?* Knowing a word is likely to include recognising the form, whether written or spoken and knowing its meaning also. But word knowledge can be much more complex and might also include knowing when and how to use the word appropriately. A consensus among researchers in this area suggests that there are many aspects of knowing a word. Nation provides, up to date, the most complete list of what this, potentially, might include and this is given in table 2.2.

Table 2.2. *What is involved in knowing a word (Nation, 2001, p. 27)*

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

Note: In Column 3, R= receptive knowledge, P= productive knowledge

Nation divides word knowledge into three parts: *form, meaning* and *use*. He further divides the three main groups into subgroups. Under the headword *form,* for example, he puts the *spoken, written and word parts* subgroups. Each of these is subdivided into *receptive* and *productive* knowledge, which are further divided into six categories altogether in the form of questions. Nation follows the same system with the category of *meaning* and *use* as well. Nation further subdivides his list of aspects of word knowledge by splitting each aspect into *receptive* and *productive* knowledge. *Receptive knowledge* involves the capacity to identify the word when it is encountered in reading or in listening. *Productive knowledge* is the capacity to call a word to mind and use it where it is needed in speech or writing. Learners' receptive knowledge is usually greater than their productive knowledge (e.g. Erigna, 1974, Eyckmans *et al.* 2004).

It would be clearly impossible for a test of vocabulary knowledge to address every aspect of knowledge described in this taxonomy. At the same time as

Nation (2001), and others such as Richards (1976), are detailing every aspect of word knowledge, there is an attempt to simplify these ideas into a structure on which principled testing of knowledge might be based. Anderson and Freebody (1981) suggest a distinction between *breadth* and *depth* of knowledge. *Breadth* refers to the size of vocabulary of the learner or in other words the number of words the learner knows while *depth* of knowledge refers to the quality of that knowledge or the knowledge of each word the learner has including grammatical knowledge, word associations, connotations, frequency, usage and collocations etc. Vocabulary breadth clearly suggests that this knowledge can be meaningfully counted: and a learner with 2,000 words of English has twice the knowledge of another learner with 1,000 words, for example. It is not so clear that depth of knowledge is quantifiable in the same way. Nevertheless, both categories are important, 'they are linked and qualities of depth really seem to appear only after a sizable vocabulary breadth has been attained' (Milton, 2009, p.169). Read (2001) explains that during the language learning process vocabulary breadth and depth develop parallel with each other. As the learners acquire more and more words their vocabulary size will develop and the knowledge of those words they actively use in different contexts will definitely be more complex.

Daller *et al.* (2007) subdivide word knowledge further and suggest this knowledge might be characterised in three dimensions: breadth, depth and fluency. '*Fluency* distinguishes the ease and speed with which a learner can access and use the words they know, from simply recognising the words and knowing about how to use them' (Milton 2009, p.150). Being fluent in a language is the ability of talking about something freely, based on previous language knowledge, without using any guidelines, which presupposes being aware, possibly subconsciously of many aspects of useable words knowledge. Besides that it refers to the speed and appropriateness of the words in a conversation or a writing task.

Fluency as a category is not included into Nation's chart. However, it is an idea which might provide an insight as to why Hungarian learners of foreign

languages might do so badly in comparison with other countries. Such comparisons are based on measures of communicative skill and the learners' perceptions of these skills. It is possible that the school system is teaching word knowledge adequately in the sense of recognising a word and even knowing a lot about its use, but is failing to provide sufficient communicative practice for such knowledge to be activated and for any degree of fluency to be achieved.

The ideas of breadth, depth and fluency should map perfectly onto Nation's table of word knowledge. A measure of breadth presumably ought to include recognition of written and spoken form but might not, as the discussion in the previous section suggests, include complete knowledge of all affixes and word parts. It might not include, as in some measures such as Meara and Jones's EVST (1990) and Meara and Milton's X-Lex (2003), knowledge of any aspect of meaning. Other tests, such at Nation's VST (2001) do explicitly link this quality in the testing method. Vocabulary depth is often assumed to include knowledge of the elements in Nation's list such as knowledge of a word's concepts and referents, its associations and collocations, its grammatical functions and its constraints of use. But depth, as Read (2001) points out, can also involve a gradation of word knowledge rather than knowledge of these discrete parts and he points out that there is not yet a construct of depth knowledge which convincingly ties all these elements and the idea of a cline of word knowledge, together. To add further to the confusion, Meara (1996) suggests that the dimensions of depth and fluency (access as he describes it) may be a single dimension. Meara views depth as the number of links between lexical items and his supposition is that the greater the number of links an item has then the more easily retrieved it will be when needed for communication. Vermeer (2001), extending Meara's notion, suggests that breadth may not be a separate construct from depth either. He reasons that in order to have lots of links between words then, first, a learner should have a lot of words to link. A necessary condition for a growth in depth is a growth in breadth and the two are, in effect, the same. While it is inappropriate to dismiss separate dimensions and the separate elements in Nation's (2001) table it is probably as well to remember, as Milton and Fitzpatrick and Milton comment (2014,

p.176-77) on that, 'To cling too strongly to the aspects of vocabulary knowledge in Nation's (1990, 2001) table as separate and separable elements of knowledge may blind us to their common development and the strength of their inter-relationship.'

To assess every aspect of learners' vocabulary knowledge in Hungary is clearly impractical but a conclusion to be drawn from the discussion in this section is that where we have good and reliable tools for measuring vocabulary knowledge in one dimension such as vocabulary breadth, then this is likely to be highly informative about the development of the whole lexicon. As a first step in the investigation of learners' vocabulary knowledge in Hungary an assessment of learners' vocabulary size would appear to be particularly insightful and might lead subsequently to tests of other aspects of knowledge.

Vocabulary Acquisition

2.3 Vocabulary size and its growth among native and non-native speakers of English

In order to get better understanding of how foreign language vocabulary size grows and the nature of vocabulary acquisition, it is worth comparing it with native speakers' vocabulary size. This is important as it reflects the difference not only between the learning processes and time difference spent on learning, but obviously the outcome as well. 'The process of learning a second (foreign) language has often been described as the learners' progress along the Interlanguage continuum from a non-existent knowledge towards native-like competence without necessarily reaching it. If this is the view we take of L2 acquisition, then vocabulary learning should involve a gradual increase in the learner's vocabulary size as the most striking difference between foreign learner's and native speakers is in the quantity of each group possesses' (Laufer, 1998, p. 255). The supposition is that to become highly fluent, L2 learners, like native speakers, will need to learn a large number of words but in reality they can get along with much smaller number of vocabulary size as well. Partial competence is likely to be characterised by a smaller vocabulary size than natives.

Thornbury (2002, p.20) suggests that an educated native speaker's vocabulary size will probably be around 20,000 word families from which 5000 words are acquired by the age of five and an average 1000 word families are added every year to their vocabulary. Thornbury has almost certainly obtained this figure from Goulden *et al.* (1990). However, the number of words that native speakers use in their daily conversations is probably much smaller and Thornbury suggests that about 2,000 words are needed for everyday activities. To survive in English, carrying out only undemanding everyday tasks then, language learners also need only to know this number of words. These everyday tasks can be very limited in terms of overall language capability. Meara (2010, p.5), suggests that learners who know about or less than 2,000 words can be regarded very elementary. About 3,500 words are needed if you want to pass a Cambridge First Certificate Examination. Learners with a vocabulary about 5,000 words can be considered intermediate. Furthermore, 7,000 or 8,000 words are needed if you want to pass an examination at Cambridge Proficiency level. This implies that high levels of English language competence can be attained with far less vocabulary than native speakers know. However, the latest research on native-speaker vocabulary questions the Goulden *et al.* (1990) methodology and the conclusions it reaches as to size. Goulden *et al.*'s method included only the most limited check for tests participants' statement of their knowledge. Further, the choice of test subjects, faculty members of the English department of the University of Victoria, seems unlikely to be representative of vocabulary knowledge among native speakers as a whole. In repeating Goulden *et al*'s tests with a more rigorous methodology Milton and Treffers-Daller (2013) conclude that students in Britain enter university with a defining knowledge of about 10,000 words and leave with something over 11,000 words, acquiring, therefore, about 500 words per year before and during university education. Cameron's (2001) estimate of childhood uptake of English is confirmed in this calculation. In Dutch similar figures emerge with, it is thought, around 10,000 words needed for starting an academic degree course (Hazenberg and Hulstijn 1996).

It seems that Meara's interim estimates of size for elementary and intermediate learners, rising to some at or around 10,000 words for the most proficient learners, will provide useful benchmarks against which the learners in Hungary can be compared in their acquisition of English. Elsewhere in the literature there are figures which link level and exam performance with vocabulary size measures based on existing tests of vocabulary. Meara and Milton (2003) link X-Lex scores to CEFR levels and the Cambridge suite of exams and this is explaining in Table 2.3. This information is expected to be of particular relevance to this dissertation as the school requirements in Hungary are based on the Common European Framework of Reference for Languages (CEFR).

Table 2.3. *Vocabulary size and CEFR levels (Meara and Milton, 2003, p.5)*

Number of words	Level name	Level group name	Vocabulary range
		Basic user	
0-2000	A1	Breakthrough or beginner	Has a basic vocabulary repertoire of isolated words and phrases related to particular concrete situations.
2000-2750	A2	Waystage or elementary	- Has a sufficient vocabulary for the expression of basic communicative needs. Has a sufficient vocabulary for coping with simple survival needs. + Has sufficient vocabulary to conduct routine, everyday transactions involving familiar situations and topics.
		Independent user	
2750 - 3250	B1	Threshold or intermediate	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.
3250 - 3750	B2	Vantage or upper intermediate	Has a good range of vocabulary for matters connected to his/her field and most general topics. Can vary formulation to avoid frequent repetition, but lexical gaps can still cause hesitation and circumlocution.
		Proficient user	
3750 - 4500	C1	Effective Operational Proficiency or advanced	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.
4500 - 5000	C2	Mastery or proficiency	Has a good command of a very broad lexical repertoire including idiomatic expressions and colloquialisms; shows awareness of connotative levels of meaning.

The public education requirements in Hungary are also based on the CEFR levels, according to which by the end of the 12-year long public education

language learners need to reach 1) A2/B1 levels at an intermediate exam level and 2) B2 level at an advance level exam. It might be hoped that learners in Hungary will possess vocabulary sizes when they take the milestone *Matura exam* at the end of the compulsory public education, as measured by X-Lex, that are in line with the figures in the above table.

It is not clear from the guidelines of the Hungarian *National Core Curriculum* that these volumes of vocabulary are taught. This document suggests how much active and passive vocabulary should be gained by students at the end of different grades in the primary and secondary schools. The figures provided are given on Table 2.4.

Table 2.4. *Hungarian National Core Curriculum vocabulary guidelines (Krizsán, 2003)*

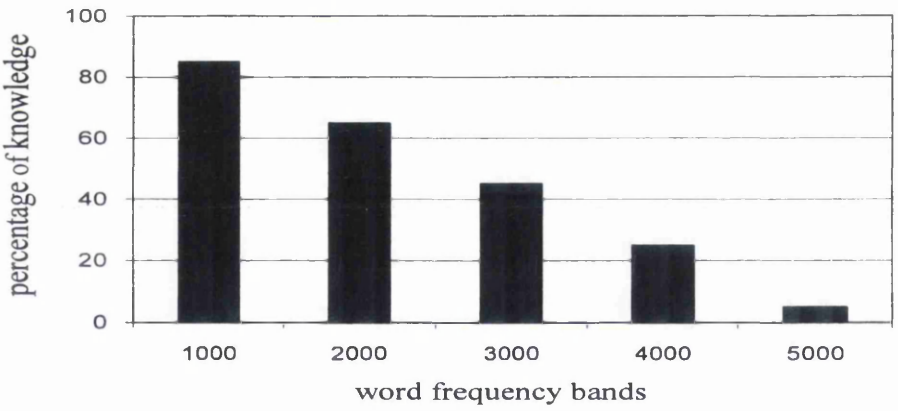
	3rd grade	*4th grade*	*5th grade*	*6th grade*	7th grade	8th grade	10th grade	12th grade
active vocabulary	200	350	500	600	800	1,200	B1 CEFR level (2,750-3,250)	B2 CEFR level (3,250-3,750)
passive vocabulary	150	150	200	250	300	400		
active & passive vocabulary	350	400	700	850	1,100	1,600		

The data in the chart suggest that after six years of English language learning, by the end of the general primary school, students are expected to have an active knowledge of 1,200 and an additional passive knowledge of 400 vocabulary items. Active words refer to productive, whereas passive words refer to recognition vocabulary in addition to productive vocabulary knowledge. Altogether, by the end of the twelfth grade, learners are required to know 3,250-3,750 words. If these figures are drawn from estimates taken from X-Lex, and almost certainly they are not, then they would represent only knowledge of the most frequent 5,000 words in English rather than the overall vocabulary sizes which were provided earlier. If these are intended as global estimates of learners' vocabulary sizes then their knowledge would fall far short of the levels needed to achieve CEFR B2 level elsewhere in Europe and would go far to explain why Hungarian learners appear to fare so poorly in international comparisons.

2.4 Understanding lexical acquisition

'It is generally assumed that there is a strong relationship between a word's frequency and the likelihood that a learner will encounter it and learn it' (Milton, 2009, p.25). The words that are highly frequent in spoken and written texts will probably be encountered a lot of times and these are the ones that are most likely to be learned. The relationship between word frequency and learning is one that has been understood for a century or more. Palmer (1917, p. 123) pointed out to this assumption around 100 years ago when he said, 'the more frequently used words will be the more easily learnt'. Meara (1992) models up this relationship and draws a frequency profile in which he describes a typical learner's knowledge of words. The graph in Diagram 2.5 shows that knowledge of those words in the first thousand band is greater than the knowledge of the ones which belong to the second and third bands and so on.

Diagram 2.5. *Vocabulary profile of a typical learner (Meara, 1992, p.4)*



This nature of this relationship has been demonstrated empirically as in (Milton 2007, and Edwards and Collins, 2013). Some recent studies show that the vocabulary profile suggested by Meara is also found with learners of other languages. For example, Milton (2006a) shows this typical vocabulary profile on Greek learners' learning English. In a study on British learners of French, Richards and Malvern (2008) support this typical vocabulary profile. This

relationship with frequency is sufficiently strong that, as Milton (2009, p.197) points out, even the thematic content of the texts, which learners use, and which may potentially destabilise these profiles, fails to undermine the vocabulary profile. It is assumed that learners' vocabulary knowledge in Hungary, which is under investigation in this dissertation, will show a very similar picture with the one presented by Meara (1992). However, it is possible, as Milton above points out for the vocabulary content of course books, as the principal source of input for most learners, to destabilise this relationship. This is something which might also, usefully, be examined however, the relationship between frequency and coverage means that it is almost impossible for the contents of a course book, no matter how the contents are selected, to avoid representing the most frequent vocabulary in English in a proportionate way.

2.5 Coverage and comprehension

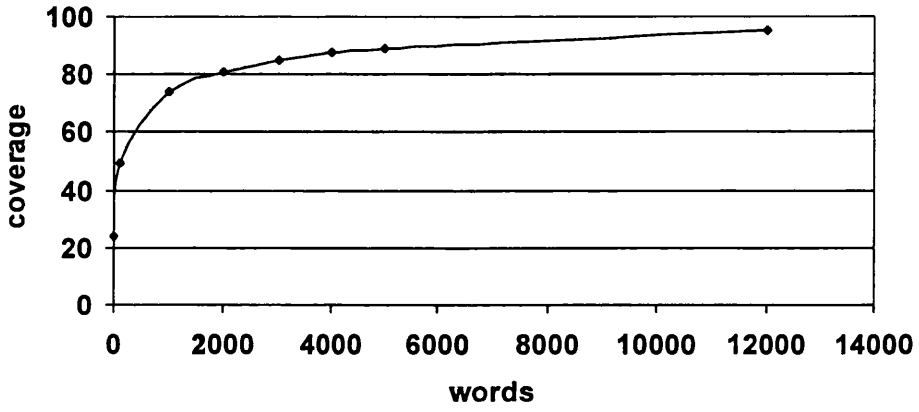
As Palmer (1917, p.123) also points out the most frequent words in a language are also the most important. In English the most frequent words in a normally constructed corpus are content and structure words. These are words whose contribution to text is to provide structure so the relationship between words can be understood and the meaning fully conveyed. These words are essential for comprehension and the meaning cannot be conveyed, except in the most limited sense, without these most frequent words. There is not a huge number of these words but these are so frequent that they contribute enormously to coverage. In comparison, there are many more words, the lexical or content words, which occur very infrequently and contribute very little to coverage in any corpus of normal English.

This relationship is described by Zipf (1949), and is called Zipf's Law. The relationship is summarised and diagrammatised in Table 2.6 and Diagram 2.7.

Table 2.6. *Typical coverage figures for different frequency bands (Carroll et al. 1971)*

number of words	text coverage (%)
10	24
100	49
1000	74
2000	81
3000	85
4000	88
5000	89
12000	95
44000	99
87000	100

Figure 2.7. *The relationship presented in graph form*



In English, it seems, the most frequent 2,000 are sufficiently frequent to provide about 80% of coverage, that is to say, four in every five words which are normally spoken or written is likely to be from these 2,000 words. However, there are different types of English and coverage does not work identically in all registers.

Schonell *et al.* (1956) examined data from the spoken everyday language of a group of Australian unskilled and semi-skilled workers. The analysis of their words suggested that the most frequent 2,000 words provided around 99% coverage of the spoken corpus. It is a general truth and it seems that the coverage provided by the most frequent words in English is greater in spoken language than it is in written language.

Schonell *et al.* 's results are extreme however possible. The size of the corpus is small, however, and the participants belong to only one special layer of the society, in one country, and the language is drawn only from one, especially, limited register. Adolphs and Schmitt (2003), provide what is thought to be a more representative result in examining coverage of spoken discourse through the CANCODE corpus, which consists of around five million words. They also compared CANCODE with the spoken corpus taken from the BNC (British National Corpus) which consists of around 4,500,000 words. They conclude that the most frequent 2,000 words provide around 94.76% coverage and that the most frequent 3,000 words can make around 96% coverage. Very few speech-based studies have tried to investigate the lexical threshold necessary for operating successfully in spoken environments as Adolphs and Schmitt (2003) point out. Nonetheless, the results suggest that successful spoken communication can be achieved with only around 2,000 to 3,000 words. This conclusion contrasts with the results drawn from more general, often predominantly written corpora, that the most frequent 2,000 words in English can provide only around 80% coverage. Written texts, however, are rather different from spoken texts and appear to require less use of the most frequent lexis and more extensive use of less frequent words.

West (1953) emphasises the importance of the frequent 2,000 words in his General Service List (GSL). However, the relationship between coverage and comprehension goes further than this and, even though essential, these highly frequent words are insufficient for language competence (Hwang and Nation, 1989). In a more recent study (Nation, 2006) suggests that 98% coverage, or about 8,000 to 9,000 words, might be needed for reasonable comprehension of an unsimplified written text. This figure is not completely uncontentious, however, and much hinges on what is considered to be reasonable comprehension. Laufer (1992) finds in an experiment that 3,000 word families were the minimum for successful reading of unsimplified texts, where successful reading is defined as the ability to pass the University of Haifa English entrance exam. This suggests that the threshold of text coverage for

minimal comprehension is around 95%. However, in both cases there is a clear implication that for anything like full comprehension of a text the learner will need to know all, or almost all, of the words in a text and this is likely to imply that a fluent user of English as a foreign language will have to know several thousand words including the most frequent 2,000 words.

Comparing the average number of words the learners in Hungarian schools appear to know against those figures might tell whether the Hungarian learners have enough vocabulary to enable them theoretically to use the language effectively or not. If they appear to know around 5,000 words or more, this would be an important factor that might predict their success in the advanced stages of education where the ability to perform well through written English is important. In fact as the dissertation deal with examining EFL vocabulary development, this might let us conclude about students' knowledge at different stages of their studies.

2.6 The role of vocabulary in the language learning process

Learning a foreign language not only involves vocabulary learning, but many other aspects of language both structural and pragmatic as well. All the components of a language have an impact on one another and the language learner acquires these through the acquisition process. However, as the previous section has suggested, vocabulary is a particularly useful metric to investigate if access to the learning of language overall is required. As the coverage information suggests vocabulary size for example can provide information about all the language skills. There are views of language acquisition, for example the minimalist agenda (Cook, 1998), which suggest that vocabulary may drive the acquisition of structure and other aspects of language. In spite of this for a long time vocabulary has had only a secondary importance in language learning. It was thought that it is incidental and takes care of itself. Gairns and Redman (1986) state that vocabulary had not received the recognition it deserved in the classroom. Because of the dominance of

structural linguistics, vocabulary often does not play a big role or was absent from language syllabuses in the 1970s and 1980s (O'Dell, 1997). It is only since the 1980s that the attention has been turned towards the importance of vocabulary. By now it has become clear that vocabulary learning (acquisition) is just as important as the learning (acquisition) of grammar and basically the two are interdependent' (Channel, 1988 and Widdowson (1989).

Vocabulary size also has the useful quality of being countable so measurements of learners' knowledge can be more meaningfully compared. This is another useful quality where comparison of the learners in Hungary with learners elsewhere is sought. 'Vocabulary size refers to the total number of words that a person knows (Read, 2001, p.31)'. As vocabulary size is closely related to other language skills, measuring it should provide an insight into students' overall language competence and development. In particular, vocabulary knowledge and size correlate well with students' scores in reading comprehension, written tests of foreign language ability and tests of foreign language grammatical knowledge.' Stæhr (2008, p.139), confirms that 'learners' receptive vocabulary size is strongly associated with their reading and writing abilities and moderately associated with their listening ability'. Table 2.8 summarizes the link with the different language skills which involve writing:

Table: 2.8. *Spearman correlations between vocabulary size scores and reading, listening and writing scores (n=88) (Stæhr, 2008, p.144)*

	Listening	Reading	Writing
Vocabulary size	0.69*	0.83*	0.73*

* *Correlation is significant at the 0.01 level*

In a separate paper Stæhr (2007) also suggests a strong, and statistically significant, correlation between vocabulary size and listening comprehension among 115 advanced learners of English as a foreign language taking the Vocabulary Levels Test (VLT) and a Word Associates Test (cited in Stæhr, 2008, p. 140). These close correlations suggest that vocabulary size makes large contribution to changes in scores in the written skills and, especially in the case of reading, may account for most of this variance.

Usually, vocabulary size measures are not thought to associate so closely with scores on aural skills. This is because vocabulary size tests are usually run in written only format and it is thought that vocabulary knowledge in this form links well with the language skills that involve writing. Tests are not usually administered in aural format where knowledge of the sound of the word only is measured. 'In principle, therefore, it seems possible that tests of phonological vocabulary knowledge and the more common orthographic test might tell us different things about how a learner is likely to perform in oral language skills' (Milton, 2009, p. 177). In a small-scale study Milton *et al.* (2010) reveal that orthographic and phonological word knowledge may not be strongly linked and that the two different types of vocabulary knowledge may predict different language skills. In this experiment they use an aural only test of vocabulary knowledge (A-Lex) alongside the written version of the test (X-Lex). This is shown in the results in Table 2.9.

Table: 2.9. *Spearman correlations between vocabulary size scores and IELTS scores (Milton et al. 2010, p.178)*

	A-lex	Read	Listen	Write	Speak	Overall
X-lex	0.456*	0.699**	0.479**	0.761**	0.347	0.683**
A-lex		0.217	0.676**	0.441*	0.713**	0.546**

** *Correlation is significant at the 0.01 level*

* *Correlation is significant at the 0.05 level*

The scores in the chart show that there is a strong relationship between learners' orthographic vocabulary size (X_lex scores) and their reading and writing skills and just a moderate association with their listening skills. The two different correlation rates suggest that knowing the written forms of the words may not correspond with the oral and aural performance. Orthographic word recognition knowledge seems indispensable for reading and writing skills. The opposite situation is revealed through A-lex test where the scores strongly correlate with listening and speaking skills and moderately with writing skills. A combination of knowledge in written and aural form is able to make the best explanation of scores on the listening test where the test format

includes both reading the question paper and listening to the text where the answers are to be found.

What these, and other related studies, tell us is that an investigation into the vocabulary knowledge of learners in Hungary is likely to be very insightful as to these learners' levels of knowledge and progress in learning English as a foreign language. Such measures are likely to be highly insightful in allowing more meaningful comparison with the levels of achievement in other countries and the rates of progress they display.

Vocabulary testing

2.7 Vocabulary testing

'Testing vocabulary is similar to testing other areas of language knowledge and use, but in this case obviously is on vocabulary. The same criteria of reliability, validity, practicality and washback need to be considered when designing and evaluating vocabulary tests' (Nation, 2001, p.344). If the vocabulary knowledge of learners in Hungary is to be assessed then good and appropriate tests will be needed and some of the qualities these need, such as use of the appropriate unit of measurement, have already been discussed. In addition, wider quality of validity and reliability will need to be demonstrated. There are a number of standardised tests and approaches to testing vocabulary which are believed to be reliable and valid, and the most important and potentially relevant ones will be examined later in this chapter in order to select the most appropriate one(s) to use to investigate the vocabulary knowledge of learners in Hungary.

2.7.1 Test reliability and validity

Test reliability is the ability of a test to produce similarly accurate results under consistent conditions. If a test is repeated and the underlying language knowledge has not changed then the test should produce the same result repeatedly. In the field of vocabulary research, if a test is administered to the same learner twice in a short period of time where learners do not have any further vocabulary input, the two scores should be the same or at least very similar. This method of assessing reliability is often referred to as test-retest method or internal reliability. Davies *et al.* (1999) define reliability as 'the actual level of agreement between the results of one test with itself or with another test'. A further test of reliability may also be to compare the results of one test with the results of another test which measures the same quality. This is called external reliability although it can also be called concurrent validity.

When the same test is administered to the same learners for the second time, the possibility of errors should be taken into consideration in order to eliminate or at least minimise them in the two settings of both tests. It may not be possible for tests to produce identical scores when repeated; even good tests can produce errors. Gyllstad (2007, p.64) points out that the aim of a language test is to 'minimize error and subsequently to maximize reliability'. Objective style tests are believed to be more reliable than subjective testing approaches because the first produces fewer errors.

Test validity is the quality whereby a test measures the quality it is intended to measure and not something else. Messick (1989) explains validity as 'the degree to which empirical evidence and theoretical rationales support the adequacy and appropriateness of interpretations and actions based on test scores'. If a test turns out to measure something other than what it is intended to measure then the test is not valid. There are many things which can undermine the validity even of the most promising looking test. Nation (2007) remarks, that the validity of any test depends on the willingness of learners to demonstrate their knowledge accurately. The learners have to produce or use

language in some way in order to be assessed. If the learners do not participate and display their knowledge appropriately and accurately then the test cannot be valid.

If a test is reliable it does not necessarily mean that it is valid at the same time (Hughes, 1989). A test might be good at producing consistent scores when repeated but if it is testing the wrong thing then it is still not valid. Reliability might be considered as a prerequisite for validity. Oller (1979, p.406) includes reliability in defining validity by saying, 'the ultimate criterion for the validity of language tests is the extent to which they reliably assess the ability of examinees to process discourse'. The test is not reliable when it does not measure the ability intended to measure which makes it invalid too. However, the difference between reliability and validity is that reliability is seen through the scores of the test while validity is seen through the interpretations and use of those scores. The umbrella term validity has four subgroups including content validity, construct validity, concurrent validity and face validity.

2.7.2 Content validity

Milton (2009) explains that a test has content validity when it has the necessary and appropriate content to measure what it is supposed to measure. For example, if learners' vocabulary knowledge of the most frequent 5,000 words in English is sought then the best way might be to present the whole 5,000 words in the test. However, this seems to be very impractical and difficult to carry out. Instead, a sample of the 5,000 words can be presented in the test and the results can be extrapolated. One potential barrier to validity in vocabulary tests based on frequency is the appropriateness of the corpus from which the frequency information is obtained. Read (2007) argues that there is 'no definitive word frequency list, either for English generally or for particular uses of English'. Read (2007) adds that choosing sample words to include in vocabulary size tests is a process of using the best available or 'least unsatisfactory' list. It is believed that word lists based on frequency lists drawn

from large general corpora might be really the best available ones rather than least unsatisfactory, which eventually gives content validity to these tests.

Once the choice of lists to sample from has been established then the range of frequencies to be tested arises. Goulden *et al* 's (1990) test of vocabulary size samples, as part of its construction, across the most frequent 25,000 words as described in Thorndike and Lorge's words lists (1944). A test of this scale looks likely to be inappropriate for school learners in Hungary. School learners in Hungary are likely to know much less vocabulary than this and two potential problems emerge from this. One is that such a test would inevitably contain many, even most, items which learners will not know. A test as intimidating as this may dishearten learners who then fail to display what vocabulary they do know. Secondly, there are issues of sampling. A sample rate which is adequate for assessing knowledge at the frequent levels, where knowledge is concentrated, may not be adequate at the less frequent levels where knowledge is sparse and may not be sufficient for a learner's true knowledge to be assessed. Ideally, the test used in Hungary will focus and provide a larger sample of words from the more frequent vocabulary ranges.

2.7.3 Construct validity

Construct validity refers to how well a test or tool measures the constructs that it was designed to measure. Construct in language testing, according to Davies *et al.* (1999), is a trait that a test is intended to measure. More specifically, it is 'an ability or set of abilities that will be reflected in test performance, and about which inferences can be made on the basis of test scores' (cited in Gyllstad, 2007, p. 62). If the test measures the language ability, or construct, that it is intended to then it has construct validity. It means that the test score 'reflects the area(s) of language ability we want to measure, and very little else' (Bachman and Palmer, 1996, p. 21). Milton (2009) calls the attention to the close association between construct validity and content validity. Content and construct validity mutually support each other as content validity is required for construct validity and construct validity is the goal for content validity.

Construct validity in language testing is difficult to accomplish because assessing language is not accessible directly, especially when measuring productive vocabulary knowledge. We cannot depend solely on our measures. These measures can help infer such knowledge of learners from the language they produce which can be extremely challenging to language test developers. There seems to be no agreement on what the depth of vocabulary knowledge exactly means. It is however less challenging, although not necessarily simple, when measuring the breadth of vocabulary knowledge. On the one hand the task in the receptive tests used in the current study is to identify the words presented as real or unreal English words, which seems a straightforward task. The construct in receptive vocabulary tests seems to be possible to define. On the other hand, productive vocabulary tests have not had an accepted construct, at least until now, which makes it hard to prove that any test is a good test of this quality.

2.7.4 Face validity

'Face validity concerns the superficial appearance or face value, of a measurement procedure. Does the measurement technique look like it measures the variable that it claims to measure' (Gravetter and Forzano, 2012, p. 78. and Hughes, 1989, p. 27) refers to the term as 'the extent to which a test appears on the surface to accurately assess what it is meant to assess'. Learners can have very fixed ideas about what a proper language test should look like. Vocabulary size tests based on Yes/No checklist formats may challenge learners' belief in the testing instrument if the test is represented as a test of their overall language knowledge and skill, even though research usually shows they are good predictors of these qualities. Presented as a test of passive/receptive vocabulary knowledge, however, the same test is likely to meet far less resistance and to be far more credible.

2.7.5 Concurrent validity

Concurrent validity of a test can be checked when it is compared with another test of the same quality where the two tests are taken by the same learners. 'It is a frequently used method to help validate a test's construction and content' (Milton, 2009, p. 19). The results of one test should compare well with the results of another, if the test is performing properly. The correlations between these tests may be modest, however, language is not a directly accessible quality and tests are likely to have a degree of error. Since the two tests use indirect measures of language in which the performance of the learners in both tests can be influenced by other areas of knowledge, high correlations may be hard to find.

For the research planned in this dissertation to be useful, it will be necessary to consider and demonstrate that the vocabulary size tests used possess the qualities of reliability and validity to the greatest degree possible. The following section will review commonly used vocabulary tests and consider which are likely to be most suitable for the planned research.

2.8 Vocabulary size tests

'Vocabulary size measures typically require a relatively large sample of words that represent a defined frequency range, together with a simple response task to indicate whether each word is known or not' (Read, 2007, p. 107). A well constructed vocabulary test is likely to be useful in this research because of the way scores from such a test can be tied to examination levels, to hierarchies of performance such as the Common European Framework of Reference for Languages (CEFR) and even to examination grades (Milton, 2009 p. 170). Desirably, for this dissertation a test is needed which will posses good reliability and validity and link to hierarchies of levels such as the CEFR.

2.8.1 Vocab Size test (Beglar and Nation, 2007 on Cobb, 2014)

Nation and Belgar's (2007) multiple choice test of vocabulary size consists of a series of questions where the target word is given in a sentence and the test-takers have to choose the best explanation for the test word from 4 definitions. Eight test words are selected from each of the first 14,000 word bands in the BNC and from the responses it is possible to calculate the test-taker's knowledge and estimate a size. The tests can be taken online or printed off and taken on paper where an answer key is provided.

Multiple choice tests of this kind have both advantages and disadvantages.

The advantages are that they are objective tests and these usually provide more reliable scores since the subjective opinions of test markers form no part of the testing process.

Multiple choice tests of this kind also usually take less time to take than other forms of question such as free writing or comprehension questions so it becomes possible to test a larger number of words for a better, and more reliable result, and problems of fatigue are less likely to impact on the test-taker's score. Test administrators can get assistance even from unprofessional staff in marking the tests as long as they are given the answer keys. If the test is administered through a computer, it is even easier and faster to get the results with no possibility of human error intruding on the scores that result..

In spite of the advantages there are some disadvantages as well. Building on Wesche and Paribakht's (1996, p.17) it is possible to suggest the following problems:

- They are difficult to construct, and require laborious field-testing, analysis and refinement.
- The learner may know another meaning for the word, but not the one sought so it becomes possible to choose the right answer not by

knowing the meaning of the test word but by eliminating other explanations from words which are not being tested.

- There is no restriction on the learner guessing an answer and this would be a good strategy for any test-taker trying to maximise his/her score since there is a 25 % chance of guessing the correct answer in a four-alternative format. There appears to be no adjustment mechanism for this test which allows guess-work of this kind to be factored into the calculation of size.
- The learner may miss an item either for lack of knowledge of words or lack of understanding of syntax in the distractors.

It is impossible to test the construct validity of a test in this format as the test-taker needs to know not only the target words, but also the words of the context and the distractors. There do not appear to be examples in the literature of the use of this test to provide scores against which learners in Hungary could be compared. This, combined with the inevitable, but unquantifiable, over-estimation which must form part of this test's characteristics means it is not suitable for measuring Hungarian learners' overall vocabulary knowledge in this dissertation.

2.8.2 Vocabulary Levels Test (VLT) (Nation, 1983, 1990)

The Vocabulary Levels Test (Nation, 1983, 1990) is a diagnostic test was originally designed as a simple instrument to help teachers develop suitable vocabulary teaching and learning programs for their students and to gauge a learner's readiness to undertake academic study at university. Nation (2005) asserts that it is quick to take, easy to mark and easy to interpret As Nation made it freely available for professionals it became widely used in New Zealand and in other parts of the world especially in English-speaking countries where the vocabulary size of the migrant and international students is tested when they first arrive to these countries (Read, 2001).

Five different word frequency levels are represented in the test to give an estimation of test takers' English vocabulary knowledge. The first two are the 2,000- and 3,000-word levels which contain high-frequency words that EFL learners need to know in order to use the language efficiently. The third level is the 5,000-word level, which is the transition stage between high and low frequency words. It is more difficult to acquire the words, which belong to this group. That is why it is worth spending some time on practicing them in class (Nation, 1990). The fourth level is the 10,000-word level which contains low frequency words. The knowledge of these words enables university students to academic texts with good comprehension. Finally, there is a selection of words from the University Word list (Nation, 1990) or the Academic Word List (Nation 2001).

Each level of the test presents the learners with 36 words and 18 definitions, in groups of 6 words and 3 definitions, and the takers need to match words with their meanings. An example of the format, which is taken from the 2000-word level, is given in diagram 2.10.

Diagram 2.10 *Example of the VLT format (Nation, 2005, p.417)*

1.	copy		
2.	event	__	end or highest point
3.	motor	__	this moves a car
4.	pity	__	thing made to be like another
5.	profit		
6.	tip		

The words in each group belong to the same word class so as to avoid giving any grammatical prompts which might suggest the right choice. The words are always in alphabetical order to help reducing the possibility of guessing and have totally different meanings to make it less difficult for the learners. The definitions are usually very short to reduce the reading time needed by the learners and they contain high frequency words or at least words belonging to the same frequency level.

The Vocabulary Levels Test (VLT) has been proved to be as a valid and a reliable test however, it might not be suitable for testing the Hungarian students, the subjects in this dissertation, for a number of reasons. Although the VLT seems different from the traditional multiple choice format tests, there are still chances to guess. The test taker has one chance out of six to find the word matching with the definition. Nevertheless, if they match the word tip with end or highest point the chance for the next becomes one out of five and one out of four for the last definition. The overall effect of guessing on final scores is difficult to calculate although we know that guessing does occur (Kamimoto, 2005).

These scales have other drawbacks. For example, not all the frequency bands are sampled. Given the effect of frequency on learning, the absence of a word sample from the 1,000 word band gives low level students little opportunity to demonstrate the knowledge of words they do know. Likewise, the presence of a word sample at the 10,000 word level and from specifically academic register word lists suggests much of the content will be beyond the level of many learners, perhaps even most, who are studying English in the Hungarian state school system.. The sampling system presents further problems. The absence of a principled sample across the frequency ranges means that it becomes difficult to make an estimate of vocabulary size. But the information we have on the vocabulary loading of the curriculum (as in Krizsán 2003 above) provides us with an anticipated size and we need a tests which will allow comparisons to be made.

Because of all the reasons mentioned above we needed to find a more practical test, which would fit for all the age groups and language level groups it is intended to test, and which provides the estimate of size which is needed.

2.8.3 Yes/No tests Meara and Jones (1990) Meara and Milton (2003)

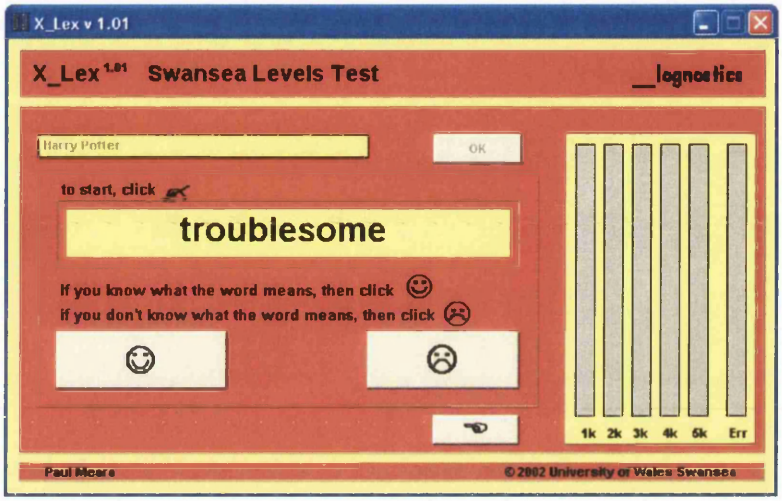
YES/NO tests are the simplest possible format for testing and are also called checklist tests as the test takers only indicate if they know the answers or not

(Read, 2007, p.87). They have been used as placement tests for a long time (Nation, 2005). It is an old test type and was originally designed for L1 learners. Learners are presented with a list of words and are asked to mark the words which they know the meaning of. They are not asked to write the meaning just to indicate which words they think they know. This way this test type mostly measures learners' passive receptive knowledge. In its earliest forms the test did not account for the possibility of some learners overestimating their vocabulary knowledge; the learners could mark any word in the test as known and there was no check for the accuracy of these responses. This, of course, undermined the validity of this type of test. This shortcoming in the checklist test was addressed in a study by Anderson and Freebody (1983) who were the first to include pseudo words in their yes/no test to adjust the scores for overestimation of knowledge. The pseudo words were designed to look like real words but they were not. When learners responded that they knew these (imaginary) words, this indicated that they were probably overrating their knowledge. These responses to the unreal words were used to make an estimate of the scale of over-estimation and to reduce the final score. Anderson and Freebody (1983) created these pseudo words using two principles: 1) changing one or two letters in a real word and 2) forming unconventional base plus affix combination (cited in Eyckmans *et al.* 2007, p.74).

In the two most recent forms of the test Meara and Jones's EVST (1990) Meara and Milton's X-Lex (2003) take principled samples of words across the frequency bands to form the basis of their estimates of vocabulary size. X-Lex samples 20 words from each of the first five 1,000 word frequency bands. EVST is more complex in its method and samples only a few words from each of the first ten 1,000 word bands before making a preliminary estimate of size and sampling in more detail at the approximate level of the learner. Al-Masrai (2009) and Milton and Al-Masrai (2012) suggest that EVST's methodology is likely to under-estimate passive receptive vocabulary size in learners. It makes the assumption that once knowledge in a band drops below a pre-defined level, it is not clear but this is where knowledge falls below between 30% and 50% of

the words in the band, then there is no knowledge of words beyond this level. The frequency profiles described above, and frequency profiles drawn from real learners, clearly show that this assumption is incorrect. Both tests make use of pseudo words as a check for guesswork and overestimation. A third of the EVST words are false words, in X-Lex there are only 20 false words. An idea of the format and presentation of the compute version of these tests is given in Illustration 2.11.

Illustration 2.11. *Example of checklist test presentation (Meara and Milton, 2003)*



These type of tests have a number of potential advantages for use in the research envisaged in this dissertation.

- These test are passive-receptive tests and, as such, are likely to make the largest reasonable estimate of vocabulary size. All other elements of vocabulary knowledge such as productive vocabulary knowledge and depth of knowledge are likely to be sub-groups of this type of knowledge. This type of test has to be a useful metric for the kind of research intended in this dissertation.
- The results of these tests, the scores they produce, have been demonstrated to give good insight into overall language skills. The scores are useful metrics to answer questions about how good students in Hungary are in relation to performance in overall language skills. Even though these are passive tests of knowledge it is noticeable (e.g. Stæhr 2008) that these predict at least some productive skills very well.

- These tests generally test what are for vocabulary measures, a large number items and this is likely to contribute to the high levels of reliability and validity which are claimed for them.
- The tests test vocabulary across a range of relevant frequency bands are able to give a meaningful estimate of size therefore and this ties directly into the estimates of size which are contained in the Hungarian school curriculums, described earlier, allowing answers to be found as to whether these curriculum targets are met.
- These tests have a method for adjusting for guesswork and this ought to make the results which emerge more believable. Guesswork and over-estimation must occur whenever students take objective style tests and it seems much better if tests acknowledge and account for this in estimating size, rather than ignore it with the possible misinterpretations which must occur as a result.
- Finally, the sizes which these tests produce, especially X-Lex, are comparable with scores elsewhere internationally, there are figures for learners in other countries, and map into frameworks such as CEFR. This should allow direct comparison with learners in other countries in a way that is not possible with other methodologies of language testing and evaluation.

In addition to the advantages there are potential problems and disadvantages associated with this kind of testing.

- One issue is that dichotomous Yes/No testing of this kind may not really reflect well the true nature of vocabulary knowledge. Knowledge may be partial or incomplete and the tests do not acknowledge this or allow any way to indicate partial knowledge or uncertainty. Ideally, it would be good to have a testing method that does allow partial knowledge to be reflected.
- A second issue lies with the false words that the tests contain. The advantages of having these words in the test have been explained but there are problems too knowing exactly how to treat overestimation. It is not entirely clear that a simple arithmetic reduction of the scores

gained by the Yes responses is always appropriate. This will penalise the odd minor slip and reduce scores unnecessarily. Some researchers (as in David, 2008 and Richards *et al.* 2008) extend the Yes responses to false words by setting a cap on the number that will be accepted as a reliable score. In both these cases, using a French version of X-Lex, a false alarm rate of above 20% (i.e. more than 5 or more Yes responses to the possible 20 false words) resulted in the data being excluded from scrutiny. This seems like a very workable way of using results from this test but as Alsaif (2009) has shown this can result in the exclusion of many or even most of the data collected. The process of dealing with false alarms can only be decided once the data has been collected.

- Finally, it must be acknowledged that these tests, which present single decontextualised words one at a time, test just one dimension of knowledge. In the mind of researchers in the area (e.g. Nation, 2007 and Richards and Malvern, 2007), productive and receptive vocabulary knowledge and require separate and differently constructed tests. Passive knowledge, I might be argued, may not be directly relevant to communicative, hence productive skill and it is the communicative skill among English learners in Hungary that appears to be particularly in question.

Despite these potential problems, the ease of use, the clear size scores they produce, which is adjusted for guesswork, and the availability of scores from this test among learners in other countries appear to make this the best choice of test for use in this dissertation.

2.8.4 A_Lex, the aural vocabulary size test (Milton and Hopkins, 2005)

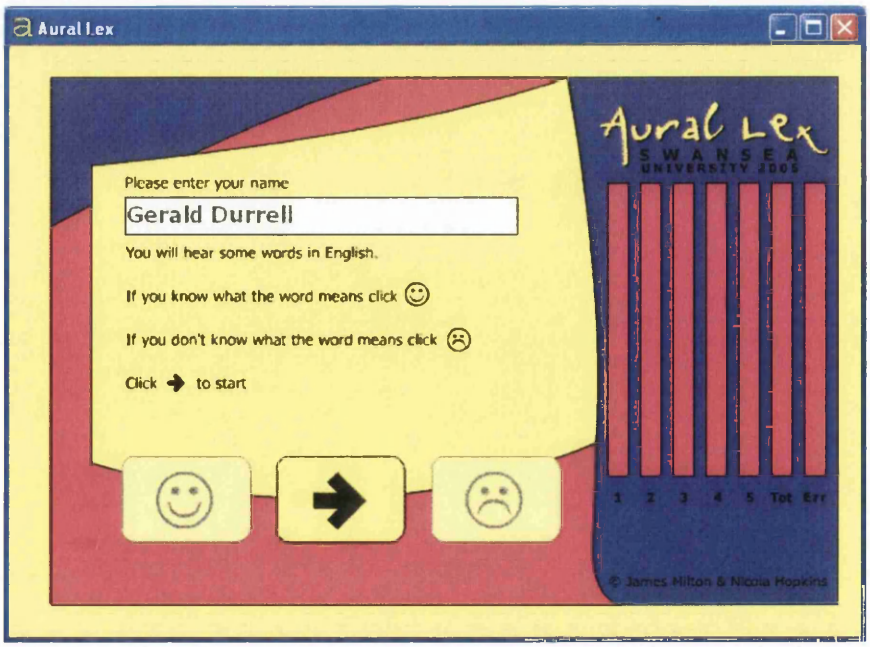
The phonological variation of X_lex test is A_lex (Milton and Hopkins, 2005), which is not only similar to X_lex, but in fact identical in construction except that the test takers only listen to the words instead of reading them. The decision whether each word presented in the test is real or not, is based on identifying the phonological representation of the word. The written form of

the word does not appear on the screen. Milton states that 'Phonological vocabulary knowledge best predicts the ability to handle those elements of the test that involve the ability to handle spoken language, like the speaking test' (Milton, 2009, p.178).

Learners taking A_lex need to listen to 120 words, one by one, and decide whether each word is a real English word or not by clicking on the right button accordingly. The scoring system is identical to that in X_lex. Test takers can listen to each word in the test as many times as they want to before making their decisions, without affecting their score which can be both an advantage and a disadvantage. It is an advantage because it overcomes the possibility of mishearing the word, which can affect the learners' judgment and, eventually, their scores. Test takers can hear the word several times in order to make the right decision. However, it might be considered as a disadvantage in the idea that repeating the words many times might suggest that the learner has limited vocabulary which may not be seen in the scores if he/she eventually makes the right choices. The speed of response might need to be considered to some extent in the scoring system. X_lex test takers have time to read the words again and again, while in case of A_lex they listen to the word and then it is only in their memory. If they did not have a chance to listen to the words again they would have less chances to decide if they know the words or not than in case of the X-lex.

The test appears to be both valid and reliable (Milton and Hopkins, 2006 and Milton and Riordan, 2006) and A_lex would also seem to be the useful for the purposes of this dissertation. Its ability to tap into a learner's spoken vocabulary knowledge and the significance of this for communicability, especially, oral communicability, is important. It provides scores which are directly comparable to those of X_lex allowing a more rounded estimation of learners' vocabulary knowledge to be made. It is possible too that the Hungarian native speakers learning English have vocabulary knowledge accessible mostly through the written forms as a consequence of their classroom experience.

Illustration 2.12. *Screenshot of A-lex (Milton and Hopkins, 2005)*



If the test is presented aurally, this might allow the learners to demonstrate their knowledge more representatively. This seems very crucial in this study as if the hypothesis is proved to be true the learners' mean scores in A_lex are significantly lower than their mean scores in X_lex. The conclusion about the low aural vocabulary knowledge of the learners in Hungary might need to be re-evaluated.

There are possible problems with the test format:

- The speaker's accent (there is a native speaker in the test) can be a problem for the test takers as most of the Hungarian students had not have a chance to listen and talk to native speakers during their studies. They mostly learn English from their English language teacher, whose mother tongue is Hungarian and who has a Hungarian accent. It is very rare that they have native speaker teachers at schools.
- Some words might be confusing especially if they are similar to other words, especially if the non-words are those which include potential phonological confusion. For example *vosper* is a non-word but is easily confused with whisper since Hungarian speakers rarely differentiate

between the sound 'v' and 'w'. This concerns especially those at a beginner level.

- There is no context, which can be both an advantage and a disadvantage. It is an advantage, because it introduces only the words that we are interested in the test. From the point of the test takers this can be a disadvantage as there is no key to the meaning of the word, as it cannot be guessed out.

Nonetheless, X_lex and A_lex as tools for vocabulary size testing appear to be the most practical and useful for this dissertation. They are able to test language learners' vocabulary size from very beginner to advanced level. Both tests are kind of Yes/No tests with pseudo words included so they are time-efficient with an adjustment for guesswork. Validation studies repeatedly endorse these as reliable and valid ways of forming a measure of vocabulary size (e.g. Anderson & Freebody, 1983; Harrington & Carey, 2009; Lemhofer & Boersma, 2009; Meara & Buxton, 1987; Meara & Jones, 1988; Mochida & Harrington, 2006).

Vocabulary Teaching and Learning

2.9 Learning L2 vocabulary from constructed input

The current study aims to investigate English L2 vocabulary knowledge among learners in school in Hungary.

This is a pioneering work as there have been very few studies in Hungary before focusing on English language vocabulary acquisition. In addition, none of them have been focusing on vocabulary acquisition in compulsory public education, which means from the beginning when learners meet the English language for the first time in their lives until they take their milestone school leaving examination.

An important fact in the acquisition of a foreign language is the time which is made available for the learners to study at school. There is evidence that this impacts significantly on the progress in vocabulary acquisition that learners can make. Milton and Meara (1998), examine the claim that the British learners are bad at learning foreign languages by investigating the L2 vocabulary knowledge among English learners in Greece and Germany and among learners of L2 French and German in Britain. The study concludes that the British learners of a foreign language know less vocabulary than their counterparts. However, considering the time available for them in schools to learn the language their rates of progress per hour appear similar to the other nationalities. The implication is that if the British learners were given the same number of classroom hours as the German and Greek learners, then quite possibly they would have achieved similar levels of knowledge. Calculating simple volumes of words learned may usefully be supported by information on the volume of classroom input the learners receive.

A particularly useful metric emerges from this study, which is that vocabulary uptake per hour of instruction is designed to allow meaningful comparison of the knowledge and progress, and therefore the learning efficiency of learners in different countries and potentially very different learning environments.

Drawing on a number of previous studies Milton and Meara (1998) investigate the rate of lexical uptake and conclude that British students learning French who learn at about 3.8 to 4.3 words per contact hour and perform quite well internationally in the speed of acquisition even if the level of their final achievement is lower than elsewhere.
In other countries it seems the number of words learned per classroom hour varies between 1.7 and 3.3 words. Table 2.13 presents the figures.

In conclusion, empirical studies on foreign language learners show that they learn around 4.6 words per classroom hour in the highest estimates and 1.7 words in the lowest estimates according to the studies reported. These numbers

give, roughly, what we might expect from the learners in Hungary and provide a useful basis for comparison with results in this study.

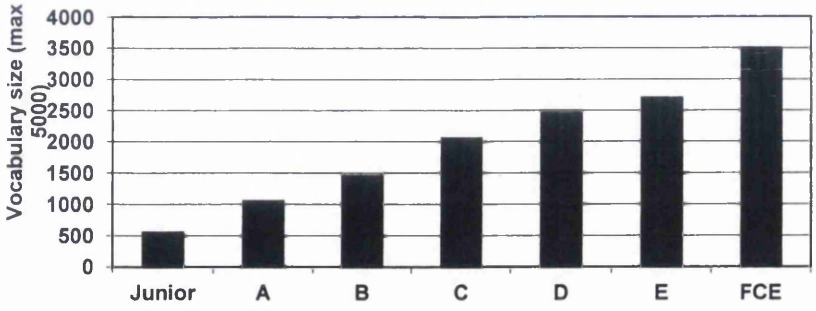
Table 2.13. *Vocabulary learnt per contact teaching hour (Milton and Meara, 1998, p.75)*

Learners	Foreign language	Vocabulary learned per hour	Source
Greek	English	4.4	Milton and Meara (1998)
British	French	3.8 – 4.3	Milton and Meara (1998)
Greek	English	2.8	Vasiliu (1994)
Indian	English	1.7 – 3.3	Barnard (1961)
Indonesian	English	1.7 – 3.3	Quinn (1968)

There are some very detailed studies which indicate further how vocabulary is acquired for instructed input. The vocabulary knowledge and progress of 227 young learners has been measured (Milton, 2006c) in private EFL schools in Greece (called frontisteria). Every learner in a frontisteria was tested at the end of the school year using Meara and Milton's *X_lex* (2003) test, which provides an estimate of the number of words known out of the most frequent 5,000 words in English. The learners received 100 hours of classroom instruction per year over the first five years (Junior to level D) and 125 hours of input in years six and seven (class E and the FCE class). Learners in this study, fairly consistently, appear to add about five new words to their vocabularies per contact hour of study.

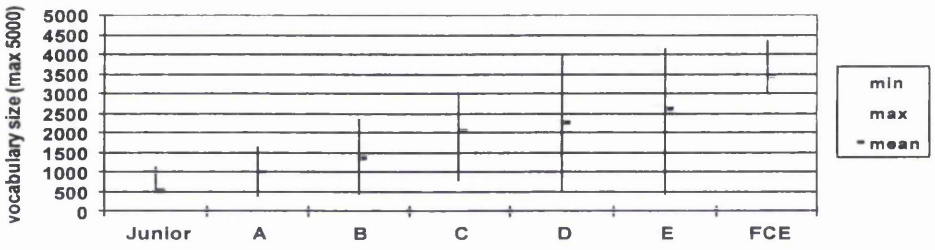
These figures, illustrated in Figure 2.14, suggest that Greek learners of English learn approximately 500 words per year and after four years have a vocabulary size of some 2,000 words. This is considerably larger than the 850 word target identified in the Hungarian *National Core Curriculum*. In the absence of evidence we do not know whether Hungarian learners do have vocabularies at the curricular level or at the more elevated levels of the Greek learners.

Figure 2.14. *Lexical growth in learners of EFL in Greece (Milton, 2006c, p.34)*



The figures reported in the Greek study are mean scores and, of course, there is considerable individual variation. An idea of the scale of the variation which occurs can be seen in Figure 2.15 which shows the spread of scores around the mean for the figures provided in Figure 2.14.

Figure 2.15. *Spread of lexical size scores among learners of EFL in Greece (Milton, 2009, p.80)*



While most learners clearly make good and regular progress in their vocabulary development, it is also clear that many students do not. Some students make what appears to be spectacular progress. There is considerable overlap between the classes. The best students, these results suggest, can acquire over 1,000 new lexical items in the first year and, subsequent figures imply, continue to make considerable progress thereafter. Some learners, at the end of this course of study, seem to have real knowledge of the vast majority of frequent words in English and are presumably well placed to read with understanding and communicate through English.

Not all students are so good, of course, and the lowest scoring students have estimated vocabularies in the region of 400 to 500 words across all the levels up to the FCE group (where the least able learners deemed unable to pass the exam, are excluded). Again, in the absence of evidence, we have no idea whether this kind of variation is a feature of vocabulary learning in Hungary.

These figures provide data against which figures obtained from Hungarian learners can be compared.

In a further study of learners of French as a foreign language in British schools (Milton, 2006) a rather different pattern of lexical growth emerges. In British schools it appears that learners make progress in the first year of study (aged 11 when French instruction begins in secondary school) but plateaus thereafter for three years. Although learners know only a few hundred words on average, they make very little progress in this vital area of language knowledge until the fifth year of their study. Rates of progress are as small as one word per contact hour in these plateau years compared with 3 or 4 words per hour in the first year of study and in the years subsequent to the plateau. It is not at all clear why learning of vocabulary should halt in this way. Learners taking the national GCSE exam at the end of the fifth year of study could pass with substantially less than 1000 words in their foreign language lexicon.

We know by now how much vocabulary the learners would need to know to use the language effectively. We also have some ideas about how much vocabulary EFL in other countries approximately learn from instructed input. This might suggest studying the vocabulary input presented to the learners in Hungarian schools more thoroughly to see how much the learners learn from that input. This input needs to be compared with the students vocabulary output (their scores in X_lex and A_lex) to see to what level the scores are comparable to figures found with other EFL learners. If the comparison shows that the learners in Hungary act quite similarly with respect to the amount of vocabulary learned from the instructed input, the question of whether they are getting enough vocabulary from school instruction might strongly be considered. If the comparison shows the learners learn very little or not enough from the vocabulary input presented, other factors might need to be

investigated, especially those related to teaching methodologies, learners' learning styles, and out of school incidental learning. First of all, the right teaching methodologies can help a lot in the learning process. Right teaching can ease the learning burden enormously, which would also be realised in the fast growing knowledge of the language learners. If the right approaches are applied the learners can learn a lot of words without too much effort. If it accidentally does not happen at school, the learners have to learn how to apply the best learning styles to help themselves in the acquisition process. Learners have to be responsible for their own learning and they do not have to wait everything from the teacher, but improving learning styles also has degrees. In the first years of schooling learners do not have special learning styles. They improve them later. If the teaching is good it involves unnoticeable learning styles training as well, but if it is not part of the teaching, it is more difficult for the learners. If they are lucky they can develop their own learning styles, which will make them successful language learners. Learning styles might refer to from planning their own learning to the execution of learning, namely what to do exactly to remember better.

Last, but not least we should mention the out of school incidental learning processes, which might influence English knowledge. These are mostly the internet, the television and the radio.

2.10 Approaches to EFL teaching and improving vocabulary knowledge

Classroom observation projects (Fekete *et al.* 1999, Nikolov, 2002) and a Hungarian nation-wide survey into the frequency of typical classroom activities in primary and secondary schools revealed that teachers in Hungary most often apply techniques of the audio-lingual and grammar-translation methods both in English and German classes (Nikolov and Csapó, 2002; Nikolov, 2003). From the vocabulary learning perspective, these may be satisfactory approaches at least in terms of their capacity to systematically develop learners' vocabularies. Other approaches have been criticised for systematically sidelining vocabulary acquisition and thereby diminishing the

learners' capacities for developing good foreign language capability and communicability. Structural approaches are criticised by Wilkins (1972) for this deficiency, Communicative approaches have likewise been criticised by Milton and Alexiou (2012) who point out that some standard texts describing the approach (e.g. Littlewood, 1983) vocabulary is not mentioned at all. Even if the approach and the method to teaching, including vocabulary, appear sound, there is no guarantee that teachers will always deliver as the course and syllabus designers anticipate. In another study Nikolov in Fekete *et al.* (1999) suggest that course book tasks are not being approached in the way the course book writers had intended, but instead the communication tasks are used as reading and translation tasks and, as a consequence, the potential for interesting and memorable teaching was lost. This means that in the English lessons which have been referred to, the main source of English is almost only the course book. Students might not rely too much on the teacher talk, and other communicative tasks. The answers of English language teachers' given to questions in a questionnaire (see Appendix A) prove that systematic vocabulary recycling is also missing from the lessons. Of course vocabulary expansion does not only depend on the course book content, but it can be one of the important factors especially if it is handled with care, which mostly depends on the teacher. That is the reason why this topic is discussed in details in this dissertation.

Orosz (2007) revealed in a study that teachers in Hungary appeared to spend very little time on vocabulary teaching. The most common practice of teaching vocabulary is giving the mother tongue translation (Grammar-Translation Method), automatically writing the new words and expressions on the board and into the vocabulary notebook and then the learners' task is to memorise them at home. At the same time teachers regularly test whether their students have really memorised the new words. The tests usually appear in the form of word lists. If the teacher gives the English word, the students have to write the meaning in their mother tongue. If the word is given in the mother tongue the students have to write the corresponding words in English. New materials, it is suggested, appear to be introduced without any preparation and without recycling of the vocabulary to facilitate memorization. Instead, when learners

read a new reading material and if there is an unknown word in the text the teacher automatically gives its translation or asks students to look up the meaning in the dictionary. It is not clear, therefore, that the vocabulary that is presented will be systematically learned and if it is not, then this may well explain why Hungarian learners are thought to progress so poorly in overall foreign language communication.

2.11 Types of language input

In a well organised classroom it is probably appropriate that teacher talking time (TTT) and student talking time (STT) are well balanced. Of course, the nature and the level of the class might affect the amount of the teacher/student talk. Thus, in a beginner or elementary class teachers might talk more than in more advanced classes, simply because the students still cannot talk well or fluently.

There have been attempts to measure the quantity and quality of teacher talk. It has been observed that teacher talk make up around 70% of the total talk in classroom as for example in studies reported by Cook (2000), Legarreta (1977), Chaudron (1988) and Zhao Xiaohong (1998) (cited in Xiao-yan, 2006, p. 16). Legarreta (1977) concludes from her observation on Spanish kindergarten bilingual classrooms that teacher talk constitutes 80-85% of the classroom talk. In Hungary in a Classroom Observation Project, which provides more detailed information on the teacher talk, Nikolov (1999) concludes that in year 10, 11 and 12, 55-56% of the interaction is based on frontal work, which suggests that it is mostly filled in with teacher talk which might suggest that, compared with other studies, the learners in Hungary are being given better than usual opportunities to develop their oral skills and communication.

It is not clear from any of these studies, however, what the optimal amount of teacher talk is. Teacher talk, of course, has to be in English if it is to provide learners with the maximum chance of exposure and learning. Not all classes are delivered entirely in English, however, and the absence of this must diminish the learning opportunities for some learners. It is revealed in the same

project that in a grammar school (secondary school) the teacher talk is 77.66% English in average and 23% Hungarian, while in vocational secondary schools this ratio is 65.79% and 35.61%. 'Most probably this rate is related to students' levels rather than teachers' proficiency, as the more teachers think students understand, the more they rely on the target language' (Nikolov in Fekete *et.al.* 1999).

Some researchers seem to put little importance on vocabulary taught in the classroom. Harris and Snow (2004, p.55) report for example, that several studies claim that only little retention is found from the vocabulary learned or taught by direct instruction. It is not clear what studies this idea is gained from but it seems to correspond with Ellis N. (1994a, p.24) who suggests that 'most L2 vocabulary is learned incidentally, much of it from oral input'. The concern of Snow and Harris, and others, may well be that classrooms, which are dependent entirely on a textbooks for the language they illustrate and use, can be lexically poor environments. If words are not available for learning in the classroom then they cannot be learned there and must be acquired elsewhere. Lexical richness mostly means the quality of the teacher talk, but of course the quantity of teacher talk might also make the classrooms effective. It has been discussed earlier that the most frequent 2,000 words in English make around 94.76% lexical coverage of any spoken discourse (Adolphs and Schmitt, 2003). Consequently, most vocabulary gained from the oral/aural input may lie within this relatively limited frequency range which does not help learners expand their vocabulary size. Nevertheless, the repetition of the already learnt words and phrases might give good practice and can establish confidence in using the already known vocabulary.

There are studies which confirm that the vocabulary available for learning in textbooks (e.g. Konstantakis and Alexiou 2012 and Alsaif and Milton 2012) and in the language of the classroom (e.g. Tang and Nesi, 2003 and Meara *et al.* 1997) can be poor. Other studies suggest quite the opposite. Vassiliu (2001) reports studies of both vocabulary input and uptake from classroom settings and these are unequivocal that very large amounts of vocabulary are gained from classroom instruction and from the course book. Donzelli (2007) reports a

study of a teacher of English to very young Italian learners which shows that the teacher can add a wealth of vocabulary to classroom and that this vocabulary appears to be learned. Interestingly, Vassiliu's research further suggests that it can be hard to actually overload learners with vocabulary. There are estimates of optimal rates of input of vocabulary. Gairns and Redman (1986) for example suggest 8 to 12 words per hour although the rates of acquisition noted above suggest that uptake is much smaller than this. Vassiliu's results suggest that where vocabulary is a focus of learning and volumes of vocabulary are increased for the learner, then the volumes learned increase. In the light of this vocabulary learning might be seen as a short cut to the levels of knowledge needed for communicability in the foreign language to begin.

A possible explanation of poor communicability among school EFL learners in Hungary may be to do with the poverty of the lexical environment they experience. Perhaps the textbooks are inadequate in some way. This has been suggested as an explanation of low lexical and language uptake in Saudi Arabia (Alsaif 2009). Or perhaps the quality and quantity of teacher talk is insufficient for good language learning to occur. There is currently no published research to shed light in this area. In this dissertation the nature and quality of the lexical environment for learners, the textbook and the teacher talk, will be investigated.

2.12 Focus on form and explicit vocabulary teaching

Corder (1967) makes the point that there is a difference between language that is available for learning, the words in the textbook and the language the teacher uses, and the language that is actually learned. There is a potential difference between input and uptake. In vocabulary, explaining how and why uptake occurs, and understanding how to improve the efficiency of lexical uptake, is gaining a growing literature.

There appear to be two schools of thought on how vocabulary is learned. One is that learning is implicit and that words are soaked up incidentally from the language environment without conscious effort (for example Harris and Snow 2004 and Ellis R. 1994). Laufer calls this a default theory and suggests that it has emerged in the absence of any better theory to explain the very large volumes of words which learners need to become fully fluent and even native-like. The idea seems to be that the volume of vocabulary learning is so large that explicit learning cannot explain it. This theory might be very attractive to teachers in that it removes from them the responsibility for overseeing and organising this aspect of language learning. Learners will do it themselves whatever the teachers do. A second school of thought has emerged recently which directly contradicts this idea. The volumes of words a learner needs for fluency is not as large as previously estimated and good non-native speakers may attain and even outstrip the vocabulary knowledge of native speakers (Milton and Treffers-Daller 2013). The volumes of vocabulary needed for fluency may be large but can still be explained by explicit learning. Research too suggests that there are certain conditions necessary for word learning and one of these is that the word must be noticed and attached to meaning (Ellis N., 1994b). Laufer and Hulstijn's focus-on-form hypothesis has been tested and appears to bear out the idea that where learners are impelled by the activity to notice the form of a word and work to link it to meaning then word retention is greatly enhanced (Laufer and Hulstijn, 2001).

Placing this in the context of the way vocabulary might be learned in Hungary, it might be speculated that even if textbook and teacher talk are sufficiently well loaded with vocabulary then the form of the activity the teacher uses to embed and practice this vocabulary might be crucial if it is to be useful in communication. Genuinely communicative activities should be able to do this but it is not at all clear that teachers in Hungary are well versed in this kind of approach.

2.13 Teaching and learning strategies

The choice of teaching and learning strategies employed in Hungary are potentially important in terms of the contribution they may make to the language vocabulary acquisition process and outcomes.

Vocabulary learning strategies are part of the general learning strategies (Nation, 2005), which are self-regulatory mechanisms. Weinstein and Mayer (1986, p.315) state that strategies are 'the behaviours and thoughts that a learner engages in during learning that are intended to influence the learner's encoding process'. Weinstein *et.al.* (2000) broaden the idea by adding learners' beliefs and emotions, which facilitate acquisition, understanding, or later transfer of knowledge and skills. Schmitt (2000, p. 132) proposes that learning strategies are the 'actions of learners, [which] might affect their acquisition of language'. Nevertheless, Dörnyei (2005) presumes that not all the learning is strategic. He distinguishes between strategic and ordinary learning and asks 'how to distinguish strategic learning from ordinary learning' (Dörnyei, 2005). The distinction between ordinary learning and strategic is far from clear however. Potentially, what Dörnyei considers ordinary learning might also have some strategic elements. Cohen (1998) says that the element of *choice* is the additional feature which makes any kind of learning strategic. Riding and Rainer (1998) argue that an activity is strategic if it is 'particularly *appropriate* for the individual learner'. It is probably appropriate for this dissertation to stand back from this debate and simply consider strategies as those techniques or set of techniques, which promote the students' progress, which help them making their learning more effective by putting effort into their own learning. In particular, of course, we are interested in those techniques which promote vocabulary acquisition.

There are some general strategies which might apply to many students, but there are other strategies which might be relevant or appropriate only for an individual learner or for learners at a particular stage of language development. According to Schmitt (2000) the proficiency level of the students and their

learning culture might have a considerable impact on their learning strategies. Beginner students might use shallower activities like memorization, repetition and note taking as more complex activities might distract them (Schmitt, 2000). Intermediate and advanced level students might apply more complex strategies as well. It is probably because advanced level students already have a lot of previous knowledge where the new information can easier fit in and their learning mechanisms can work similarly to native speakers who only have to extend the network of the already known words (Nation, 2005). For beginner students everything is new, they do not possess a vocabulary network or just in a limited form. Meanwhile the intermediate and advanced level students have probably developed their own learning strategies, while the beginner students follow their teachers' or parents' advice or in the absence of those they follow the learning strategies they got used to from other school subjects.

Nation's (2001) taxonomy, shown in Table 2.16, describes Planning, Sources and Processes as General class of strategies and he juxtaposes only a couple of types of strategies to these classes.

Table 2.16. *Nation's Taxonomy of VLS (Nation, 2001, p. 218)*

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	Analyzing the word Using context Consulting a reference source in L1 or L2 Using parallels in L1 and L2
Processes: establishing knowledge	Noticing Retrieving Generating

Schmitt's (2000) classification is a bit different and this is shown in Table 2.17. He indicates five strategy groups like: *Determination strategies*, *Social strategies*, *Memory strategies*, *Cognitive strategies* and *Metacognitive strategies* and within these plenty of types, a bit more detailed strategies than the previous one. For compiling the strategy questionnaire used with the Hungarian students some of Schmitt's strategies, the ones which were thought to be the most relevant into the Hungarian situation, indicated in italics were borrowed. The researcher has to be very careful when

analysing students' strategy questionnaire about their learning, however, as there is always the danger that the students do not say or write what they usually do while using the strategies (Gu and Johnson, 1996).

Table 2.17. *Vocabulary learning strategies (Schmitt, 2000, p.134)*

Strategy Group	Strategy
Strategies for the discovery of a new word's meaning	
DET	*Analyse part of speech*
DET	Analyse affixes and roots
DET	*Check for L1 cognate*
DET	Analyse any available pictures and gestures
DET	*Guess meaning from textual context*
DET	*Use a dictionary (bilingual or monolingual)*
SOC	Ask teacher for a synonym, paraphrase, or L1 translation of new word
SOC	
Strategies for consolidating a word once it has been encountered	
SOC	Study any practice meaning in a group
SOC	Interact with native speakers
MEM	Connect word to a previous personal experience
MEM	Associate the word with its coordinates
MEM	Connect the word to its synonyms and antonyms
MEM	Use semantic maps
MEM	*Image word form*
MEM	*Image word meaning*
MEM	Use Keyword Method
MEM	*Group words together to study them*
MEM	*Study the spelling of the word*
MEM	*Say new word aloud when studying*
MEM	Use physical action when learning a word
COG	*Verbal repetition*
COG	*Written repetition*
COG	Word lists
COG	*Put English labels on physical objects*
COG	Keep a vocabulary notebook
MET	Use English-language media (songs, movies, newscasts etc..)
MET	Use spaced word practice (expanding rehearsal)
MET	*Test oneself with word tests*
MET	Skip or pass new words
MET	*Continue to study over time*

Perhaps because the use of these strategies can be so idiosyncratic, and because good data on their use can be so hard to gather, it can be hard to ascertain which of these strategies particular expedites general language learning or something more specific like vocabulary learning. Milton *et al.* (2014) (cited in Milton and Fitzpatrick, 2014) report from a study of strategy use and vocabulary uptake that there appears to be no correlation between the numbers of strategies used and learning. Even general trends,

such as the use of oral and aural learning strategies to promote oral vocabulary knowledge, appear not to produce learning gains which are statistically significant. They do report, however, that individual strategies can associate with success, and the lack of it. Thus, miming the actions of new words to help learning, and recording feelings while learning associate negatively with success, while reading books and magazines in the foreign language appear to be positively associated (p. 27).

Even with these individual strategies the evidence is often ambiguous. It is generally assumed that a strategy like extensive reading will promote both vocabulary and general language development. Bright and McGregor write, for example, that 'where there is little reading there will be little language learning' (1970, p.52). Yet research can often tell a different story. Horst *et al.* (1998) suggest that lexical uptake from general and undirected reading, appears very slight. Nonetheless, case studies, as in Horst and Meara (1999), by contrast, show that a simple reading task can lead to quite dramatic vocabulary gains. In evaluating this paper Milton (2008) calculates uptake at 36 words per hour and the scale of this achievement will be appreciated when seen alongside the figures, quoted earlier, for vocabulary uptake from general language classes which are about one tenth this rate at around 3 words per hour. It may be that the idiosyncratic nature of many of these strategies means that general trends are hard to see and the case study format may be more revealing. Further case studies of listening to songs in a foreign language (e.g. Milton, 2008) and watching foreign language films with subtitles (e.g. Garnier, 2013) also reveal that considerable vocabulary gains are possible for learners who are well motivated and who have a compatible task. Milton (2010) suggests that the use of this kind of strategy, informal tasks involving the foreign language, may explain how very high achieving learners make the transition beyond the vocabulary of the textbook, to the point where their vocabularies appear comparable to highly educated native speakers.

The use of language learning strategies among Hungarians in state school education is not well researched but if a wide range of strategies are not used by learners, and if learning is solely restricted to the classroom and course books it contains, than this might explain the limitations of the Hungarian foreign language learners. It is part of the aim of this dissertation to investigate whether this is the case.

The Hungarian Education System

2.14 Background

It becomes important at this stage to understand how the educational system in Hungary has developed as it enables us to understand how English language teaching interacts within the whole system. The objectives of teaching English in Hungary go in line with the general objectives of the education system.

The fundamentals of the today's system in Hungary were laid after World War II, by using the basic principles of an earlier system, established in the 1920s and beginning of the 30s, during the mandate of Count Kunó Klébelsberg. Above all he extended compulsory education to all the children and he had schools built and universities established all over the country. The system had many positive features, with a huge impact on today. In general outline the education system followed the 'well-established' 'Prussian' way, which was, similar to the one-time military state, a military educational system. Hungary's history in relation to Germany and as part of the Austro-Hungarian Empire explains this orientation. In many ways the advent of communism change the educational system little. It retained its discipline and belief in the virtue of rote learning with little attention paid to the virtues of creativity and a critical and questioning mind set. It had its benefits and is still considered to have provided generations of people with quite a good level of general knowledge and provided good background for those who wanted to continue their studies in higher education. This system is still partly present in the today's system. The decline of the communist bloc has led to the dismissal of the old certainties of the educational system and to a period of considerable change. The latest financial crisis has exacerbated this and created among teachers, parents and students the feeling of instability.

At the time of writing children in Hungary go to kindergarten (pre-school) when they are three. The kindergarten is not compulsory except for the last year, but almost every child attends it. The reason for this is that if the parents go to work, this is the best place where the children can stay safely. It has an

emphasis on play and does not include the formal teaching of a foreign language.

After three years, at the age of six or seven, children start the eight-year general primary school and the beginning of grade education. The lower primary cycle is usually the first three, or four years. In that cycle there is only one class teacher who teaches all the subjects. The exception to this is the teaching of foreign languages which are introduced in the third grade and for this there are specialist language teachers. The upper primary cycle follows the lower cycle and primary education concludes after eight years. Primary schools are mostly state run, but there are also some private ones. Both public and private primary level include some specialist primary schools and these include specialised English bilingual schools. Towards the end of the general primary school year, the 8th grade students (aged between 14 and 15) have to choose a secondary school which may be general (gymnasiums - gimnázium), or specialist and vocational. Entrance exams determine acceptance for these schools. The focus of this dissertation is on students learning English in the general system and so would investigate learning from the third grade of the general primary up to the twelfth grade of the general secondary schools.

Gymnasiums (just like in ancient Greece, but with different meaning) or general secondary school in Hungary means: secondary school with general and with some specialised courses. General secondary schools are the most common as they aim at preparation for universities and colleges, through foreign language teaching and thorough general education. The gymnasiums generally offer a 4-year-long education, starting in the 9th grade and finishing in the 12th grade. In some occasions a one year long language preparatory course is also organised for the students. This is an extra year, which means that students in these cases will finish their studies one year later and the whole secondary school lasts for five years. At the end of this period it is possible to obtain a secondary leaving certificate called *Matura Examination.* From 2005 the advanced level *Matura Exam*ination, fulfils the role of the entrance exam to higher education as well.

The compulsory school age has been changing in Hungary from time to time. A few years ago it was sixteen and then for many years it was eighteen. In September 2011 the compulsory school age was changed back again and this time the experts decided on the age of sixteen.

Table 2.18. *Compulsory school age in Hungary (Filei, Hinkel et. al. in Istenes and Péczeli, 2010)*

	1868	1940, 1945	1961	1985, 1993, 2013	1996
compulsory school age	6-12	6-14	6–14 / (16)	6-16	6-18

In Hungary the term higher education includes training at colleges and universities. Students graduating from both institutions receive a 'higher education diploma'. The higher education is undergoing fundamental changes at the moment since Hungary has become part of the European Union and even in this country the rules of the Bologna process apply just like in other countries in Europe. College students will get bachelor degrees similar to the English Educational system. Only graduates from the university will get a Master's degree.

2.15 English language education in the Hungarian Public Education

In the following section the history and objectives of teaching English in Hungary are presented in order to give an idea about the nature of language teaching which might be reflected in students' scores from X_lex and A_lex tests. These results are presented later in the dissertation.

Teaching English in public education in Hungary has a relatively short history in spite of the fact that there has been English language teacher education in the country since 1926 (Kontra, 1986). The reasons were political as before 1989, under the communist regime, the compulsory foreign language at schools was Russian. Even so, at secondary schools level it was possible to choose a second foreign language like English, German, French, Latin or anything else the

school could provide, depending on foreign language teachers available. In 1989 the compulsory Russian language element of the syllabus was abolished. A Western language retraining programme was provided for former teachers of Russian in 1989 and 3,700 teachers started to study languages such as English, German and French. Most of the teachers chose English in the retraining programme as a target language as it was the most popular at that time and offered the greatest prospect for learners for subsequent employment and educational and professional development.

It was a rapid change and many teachers took the mindset of teaching the former Russian language, with them into the new language, in which modern approaches such as communicative teaching, formed little part. There were few or no books available for the teachers and definitely no curriculum. Many of these teachers faced the real prospect of unemployment in the unstructured new education system. It was hard for the teachers to be fully professional in this teaching environment and their frustration cannot have helped their students' development.

Over the last twenty years or so, the teaching of foreign language, including English, has become more systematised. The students in the general primary and secondary schools now generally have between two and five English lessons, depending per week on the schools' profile. The lessons are 45 minute long. The academic year normally consists of 37 weeks. It is the schools' and sometimes the teachers' free option to choose books they want to use in their lessons. Nowadays teachers in the same school mostly agree on the same course book family in order to make the classes more easily accessible for students from one class to another if it is needed. English teaching is regulated by the National Core Curriculum (NCC), which was compiled by the experts of the Ministry of Education, the new name of which is Ministry of National Resources. The National Core Curriculum provides the basic principles for English teaching, but the schools have to compile their own local curriculum, based on the documentation provided by these bodies. The most important parts of the National Core Curriculum are: the conceptual system of the

curriculum, the basic principles of language learning and teaching, the importance of developing communicative and other competencies, the number of lessons, the recommended course books, teaching aids, and the detailed aims and teaching tasks from year to year.

Competencies development in schools started in Hungary in 2002 (Pála, 2009). It is not easy to change an old system in the education where teaching and learning followed the Prussian way, where the students were not allowed to participate in the lessons, where they were not allowed to ask questions and they could talk only if they were asked. They were not allowed to be creative and participation was restricted to the students providing answers to the teachers' questions. Nowadays competencies based teaching gives more freedom for the students, but both the teachers and the students have to learn how to use this freedom wisely. It is still one of the characteristic features of the Hungarian language education that it generally is not based on communicative language teaching. The teachers are able to develop all the other skills except for this one. A Eurostat survey (2009) shows that the self-perceived language knowledge of the Hungarians is in the last place in Europe and 74.8% of the adult population aged between 25-64 do not speak any foreign languages. To mention the results of the Eurostat surveys is to see the opinion of the elderly generation on their own knowledge, which might be true or not, but at least one consequence can be drawn from it and this is that the people in Hungary are usually very negative concerning their foreign language knowledge, and the opposite has not proven, yet. Hopefully this dissertation will add a lot of useful information about the English language knowledge of the Hungarian learners and we can see that the situation is not as bad is it has been widely assumed.

One of the main priorities of the education decision makers now in Hungary is to improve the quality of foreign language teaching.

2.16 Possible effects of the native language

Of course it can be agreed that the Hungarian language is very different from any other widely spoken languages as it belongs to the Finno-Ugric family of languages and is spoken only by 15 million people all over the world, mostly within the home country. The Hungarian language does not only have very different words and shares only a few cognates with the Indo-European languages, but also has very different grammar. Hungarian is a highly agglutinative language, while English and the other Indo-European languages are not. Nevertheless, it is true that there is a huge difference between Hungarian and English, but there are many other countries with languages which are also very different, for example Finnish, and still in these countries foreign language teaching and learning is a success story. It has been suggested that Hungarian learners are determined to have difficulties when learning a foreign language and perhaps they will never be able to acquire it well as a consequence (Nádasdy, 2012) or maybe a very different mother tongue does not have anything to do with English language acquisition.

Perhaps referring to the differences between Hungarian and the world languages is just an easy excuse, which releases the language teachers and learners from the responsibility. Or maybe the causes are deeper and it has historical reasons as Hungary was isolated from other countries for decades and there was no need for others languages. There was even a joke about this according to which Hungarian people do not have to learn any languages, instead people who want to visit us should learn Hungarian.

Conclusion

This literature review has, as its stating point the belief, recorded in various pieces of published literature, that the public school teaching of foreign languages and of English in particular, is not as good as it should be and that our students are not performing as well as they should be. The intention is, therefore, to find out whether this is the case by examining the vocabulary

knowledge of the students which provides quantifiable data in an area of foreign language knowledge which is important in its own right but also provides a good insight into overall communicative proficiency. It has emerged from this review that there are well developed tests of vocabulary, which can be used and for which there are normative figures for learners in other countries and for formal hierarchies such as the CEFR against which learners in Hungary can be compared.

The dissertation also attempts to find out the reasons of why Hungary might be lagging behind other countries by examining the language learning environment. This review has shown that an examination of the text books used and the language of the classroom can explain much about the progress learners make. It has revealed too that there is much in terms of which learners do outside the classroom in terms of informal language learning and the strategies they use, which might help explain how Hungarian learners make the progress they do. Again there are figures from other countries which will provide useful bases for comparison when considering the state of vocabulary learning in Hungary and of foreign language learning more generally.

Chapter Three

Experiment one

Vocabulary size of learners in Hungary and its comparison with vocabulary size of learners in other countries

Introduction

Studies reported in the Literature Review suggested that students who pass through the Hungarian state schools system learning foreign languages are not performing as well as they should or as well as they should be compared with learners in other countries. There is a dearth of reliable evidence, however, to confirm or quantify this and this has led to an interest in taking a lexical approach to this question since vocabulary knowledge in a foreign language is a very good indicator of overall foreign language ability and communicativeness. It is also measurable and quantifiable in a way that other aspects of foreign language knowledge and skills are not, and there exist studies from other countries of vocabulary size against which the performance of Hungarian students could be compared. This should allow a more meaningful basis of comparison to decide whether Hungarian students are underperforming in some way.

Vocabulary is an essential component of competence in a foreign language and the *National Core Curriculum* sets standards for the scale of English vocabulary acquisition during the course of the study in Hungarian schools. Again, there is an absence of research in this area. We have no data, therefore, to tell us whether these targets are met and whether the progress learners make in learning vocabulary is satisfactory in terms of achieving the communicative goals of the curriculum. This study seeks to fill this void of information by testing the vocabulary sizes of learners during the whole period of their English study at a Hungarian general primary and secondary school, in other words the Hungarian public education system. The results should help to indicate the progress learners make towards their curricular goals not just in vocabulary learning but in general language development as well.

3.1 Aims of the study

The purpose of the investigation reported in this study is to measure the English as a foreign language (EFL) vocabulary size among learners of English in Hungarian public education. Vocabulary is an essential element of foreign language learning which contributes at every level to communication and comprehension in the target language. Measuring and monitoring this element of knowledge is hoped to contribute to our better understanding of the learning process and allow us to make better judgments about the likely levels of success for learners.

3.2 Background, context and literature review

3.2.1 Background and context

The decision to investigate Hungarian students' vocabulary advancement was made following the survey, reported in the previous chapter, which investigated the teaching of vocabulary in Hungarian state schools. The survey revealed that teachers appeared to spend very little time on vocabulary teaching both in the primary and secondary schools, but vocabulary was nonetheless regularly tested to see whether their students had learnt new words. There appears to be a contradiction here. New materials were introduced without preparation. Recycling of vocabulary to facilitate memorisation was missing and very little time was devoted to vocabulary teaching in general. Despite this, teachers seemed to expect an enormous expansion in their students' vocabulary and feel that students underachieve in this important area of language knowledge. It appears to be a commonly held belief that Hungarians are not able to learn languages well and our position in language learning is bad compared to other countries (e.g. Eurostat 2009). There is no data available, however, to quantify the actual achievement of learners in terms of their vocabulary development and to tell us whether the learners are making appropriate progress towards their learning goals or not, and whether the teachers expectations are realistic or not. Measuring language learners' vocabulary size should make an interesting study, therefore, and should enable us to make better judgements about their English knowledge.

Vocabulary size is inevitably interrelated with learners' general language level. Vocabulary size, other language skills, and knowledge of structures, correspond well among populations of learners. In brief, they depend on each other and this is frequently commented on in texts on language acquisition. For example, 'knowing a word involves how to use it in sentences' (Sinclair quoted in Nation, 2001, p.106); 'In order to know a word it is necessary to know what part of speech it is and what grammatical patterns it can fit into' (Nation, 2001, p.55). Vocabulary size corresponds with reading abilities, comprehension and writing abilities (Meara & Buxton, 1987). Also, knowing a word involves knowing what words it typically occurs with (Nation, 2001, p.27). As vocabulary extends, other language skills also develop. All in all, it would be beneficial for teachers to know about the development of their students' general language level and a vocabulary size levels test might provide an alternative solution for this purpose. It should provide a good measure too of learners' overall language development and knowledge.

3.2.2 Vocabulary requirements of the National Core Curriculum

Even if we do not know exactly how many words learners will know after ten years of learning, we do know that some of what they are taught will be forgotten. We do have information from the guidelines of the Hungarian *National Core Curriculum* about the number of vocabulary students should learn. This document suggests how much active and passive vocabulary should be gained by students at the end of different grades in the primary and secondary schools. This might be added the estimates implied by the B1 placement of the 10th grade and the B2 placement of the 12th grade exams. The figures provided are given on Table 3.1:

Table 3.1. *Hungarian National Core Curriculum vocabulary guidelines (adapted from Krizsán, 2003)*

	3rd grade	*4th grade*	*5th grade*	*6th grade*	7th grade	8th grade	10th grade	12th grade
active vocabulary	200	350	500	600	800	1,200	B1 CEFR level (2,750-3,250)	B2 CEFR level (3,250-3,750)
passive vocabulary	150	150	200	250	300	400		
active & passive vocabulary	350	400	700	850	1,100	1,600		

The study reported in this paper focuses on students' vocabulary advancement in grades from three to twelve, the last year of compulsory public education. The data in the chart suggest that after six years of English language learning, by the end of the general primary school, students are expected to have an active knowledge of 1,200 and an additional passive knowledge of 400 vocabulary items. Active words refer to productive, whereas passive words refer to recognition vocabulary in addition to productive vocabulary knowledge. Altogether, by the end of twelfth grade, learners are required to know 3,250-3,750 words.

3.2.3 Vocabulary learning in other countries

The vocabulary knowledge and progress of learners in private EFL schools in Greece has been reported in the previous chapter. Every learner in a frontisteria received 100 hours of classroom instruction per year over the first five years (Junior to level D) and 125 hours of input in years six and seven (class E and the FCE class) and were tested using Meara and Milton's *X_lex* (2003) test. Learning, as measured by classroom mean scores, appeared to be very consistent with about five new words added to their vocabularies per contact hour of study in every year. These figures suggest that Greek learners of English learn approximately 500 words per year and after four years they have a vocabulary size of some 2,000 words. This is considerably larger than the 850 word target identified in the Hungarian *National Core Curriculum.* It suggests too that learners taking the B2 level FCE in Greece know approximately 3,500 words on average as suggested by Meara and Milton (2003). If learners continued to learn vocabulary at the same rate as indicated by the Hungarian National Core Curriculum then it would seem they should fall far short of this figure by the time they reached the 12th grade. In the absence of evidence we do not know whether Hungarian learners do have vocabularies at the curricular level or at the more elevated levels of the Greek learners.

The Greek figures also reveal considerable individual variation. While most learners clearly make good and regular progress in their vocabulary development, it is also clear that many students do not. Some students make what appears to be spectacular progress. There is considerable overlap between the classes. The best students, these results suggest, can acquire over 1,000 new lexical items in the first year and,

subsequent figures imply, continue to make considerable progress thereafter. Some learners, at the end of this course of study, seem to have real knowledge of the vast majority of frequent words in English and are presumably well placed to read with understanding and communicate through English. Not all students are so good, of course, and the lowest scoring students have estimated vocabularies in the region of 400 to 500 words across all the levels up to the FCE group (where the least able learners deemed unable to pass the exam, are excluded). Again, in the absence of evidence, we have no idea whether this kind of variation is a feature of vocabulary learning in Hungary. These figures provide data against which figures obtained from Hungarian learners can be compared.

It may be that learners in Hungary are more like the British learners of French reported in Milton (2006) where a rather different pattern of lexical growth emerges. Over the first four years of study in Britain it seems that learners acquire only a few hundred words of French on average, mostly gained in the first year of study. They make very little progress in this vital area of language knowledge until the fifth year of their study. Hourly rates of progress are as small as one word in the first four years suggesting an absence of systematic input. Learners taking the national GCSE exam at the end of the fifth year of study, notionally at B1 level can pass with substantially less than 1000 words in their foreign language lexicon. Students passing the B2 level A level exams know, on average, less than 2,000 French words.

The Literature Review has raised the possibility of using aural tests of vocabulary knowledge rather than the more widely used written test forms. The evidence from Milton *et al.* (2010) is that a test delivered in this format links to success in spoken language rather than the written format does. Good correlations were found between vocabulary size scores on Aural-Lex and grades on the IELTS spoken and listening sub-tests, higher than found with the written X-Lex. It may be that these tests will offer a better indication of Hungarian learners' communicativeness than a purely written test can and this may help to unravel whether such learners are performing as poorly in their foreign language study as seems to be believed. Normative scores from Aural-Lex among language learners over lengthy periods of study are absent so there do not seem to be figures against which Hungarian learners could be compared. Both Milton and Hopkins (2006) and Milton and Riordan (2006, p.79) suggest that

phonological forms in the mental lexicon are smaller in number than the written forms, and that the spoken text includes the most frequent vocabulary more frequently than in case in the written language, that considerable oral fluency can be gained with knowledge of only some 3,000 English words or so, far fewer than would be possible in writing. Not all learners perform like this and native Arabic speaking learners tend, it seems to have oral and written vocabularies in roughly equal proportions to each other. Hungarian learners, of course, do not have a first language like Arabic and nor do they use Arabic script so there seems little reason to expect they will behave differently from the other European learners in the studies which use Aural-Lex.

3.3 Research questions

The purpose of the investigation reported in this study is to measure the English foreign language vocabulary size among learners of English in Hungarian schools. This information will allow a number of specific objectives to be achieved.

a) It will allow us to measure the progress of learners over time in this vital element of language learning and give feedback about how learners' general English knowledge is improving.
b) In combination with information on the hours of study it will allow us to estimate vocabulary uptake per contact hour both in written and in phonological form.
c) It will allow us to compare participants' vocabulary size with that of the Greek learners whose knowledge and progress have been reported above, and with the targets set by the *National Core Curriculum.*
d) It will allow us to compare the results with international data.

3.4 Participants

Data was collected from two groups of students, one group taking only the X-Lex written test form, and a second smaller group, which took both X-lex and A-lex tests. A-lex requires the use of a laptop and students could be tested only individually hence a much smaller group size is obtained.

The participants in the first group, Group 1, were a convenience sample of seven hundred and twenty-six (726) students in an average general primary and secondary school in Szeged (a large town in the South of Hungary) were tested at the end of the academic year 2006. Learners' ages ranged between nine and eighteen (3^{rd} – 12^{th} grades). Participants started learning English in grade three in two lessons a week (76 lessons a year). The same pattern of teaching is followed in the fourth grade. In grades five, six, seven and eight learners studied English in three lessons per week, a total of 111 lessons per year. From the ninth to the eleventh grades they had seventy-four lessons a year, which means two lessons a week, but in the twelfth year they had 111 lessons a year, again, which means three lessons a week. Lessons are 45 minutes in duration.

The participants in the second group, Group 2, were students from different schools but similar to those in group 1 and with slightly higher volumes of input. 30 students from each of the levels 6, 7, 9, 10 and 11 were tested, a total of 150 students in all.

3.5 Testing Instruments

The testing instruments were firstly, Meara and Milton's (2003) X-Lex; the same test was used in the Greek study reported above (Milton, 2006c) to allow a direct comparison of vocabulary knowledge between the two groups of learners. This test is a checklist test where learners are presented with 120 words, one at a time, and they are required to say whether they know the meaning of the word or not. 100 of these words are real ones selected at random from each of the first 5,000 word frequency bands provided in Nation's (1984) and Hindmarsh's (1990) lists. There are also 20 pseudo or false words constructed to look and sound like real English words, whose purpose is to provide a check for guesswork and overestimation on the part of the test takers. The score on the real words allows a vocabulary size estimate, out of 5,000, to be made. The score on the pseudo words allows this score to be adjusted for guessing. The adjusted score is the one reported in this study.

The second testing instrument, A-lex was used to measure phonological vocabulary. 'Aural-lex (Milton & Hopkins, 2005) is designed as a phonological equivalent test to

the orthographic X-Lex (Meara & Milton, 2003) and is also designed to estimate the phonological size of learners in a way that can be directly compared to the measures of orthographic vocabulary knowledge that X-lex produces' (Milton, 2005, p.93).
A-lex investigates the vocabulary knowledge of the most frequent 5,000 words in English. The decision whether each word presented in the test is real or not, is based on identifying the phonological representation of the word. The written form of the word does not appear on the screen. Learners taking A-lex need to listen to 120 words, one by one, read by a native speaker and decide whether each word is a real English word or not and click on the right button accordingly. The scoring system is identical to that in X-lex. Test takers can listen to each word in the test as many times as they want to before making their decision, without affecting their score.

3.6 Procedure

For Group 1, the test was delivered in a paper and pencil format at the end of the school year 2005/2006 in order to minimise the disruption to classes and to represent annual progress. The test instructions, an example, and the first few lines of test items are shown in Appendix B. As Meara and Milton report (2003, p 2),

> Since each response takes only a few seconds, the entire test takes only about 10 minutes. A further advantage of testing vocabulary using this YES/NO [checklist] method is that it is possible to test many more items than would normally be the case in traditional language tests. This means that the scores are likely to be more accurate and reliable than in tests with fewer items.

Another advantage is that even young learners can do it in a few minutes. The instructions and the example were given in Hungarian to ensure that the students could really understand what to do and nothing could disturb their understanding of the task. Data was also collected at this time to confirm the hours of instruction each class had received and the approximate number of words the teacher believed they were introducing.

The data collected is used in the following ways in order to provide answers to the questions raised. Firstly, the mean score for each year can be calculated and this information can be used to suggest progress from year to year. A learning rate per classroom hour can also be estimated for each year of study. Secondly, these scores

can be compared with data from other countries and with the targets set by the guidelines of the *National Core Curriculum*.

With Group 2, the selected primary and secondary school students were asked to do the X-lex first and then the A-lex test. The X-lex they did in a paper and pencil format and the A_lex in front of the computer. The X_lex procedure was described in detail in Chapter Three. They did A-lex by listening the words and then they decided if they knew them or not by indicating this by clicking on the smiley or the sad face on the computer screen. When they finished, their results were recorded into the database. Later their X-lex and the two A-lex results were compared and analysed.

3.7 Results

3.7.1 Exposure to English

The learners in Group 1 participated the numbers of lessons reported in Table 3.2.

Table 3.2. *Class hours attended by learners in Group 1*

Grade	*Lessons*	*Lessons/week*
3rd grade	74	two lessons a week
4th grade	74	two lessons a week
5th grade	111	three lessons a week
6th grade	111	three lessons a week
7th grade	111	three lessons a week
8th grade	111	three lessons a week
9th grade	74	two lessons a week
10th grade	74	two lessons a week
11th grade	74	two lessons a week
12th grade	111	three lessons a week
Altogether:	981	

A survey of teachers indicated that ten new words, on average, were introduced in each class. This is a believable number because eight to twelve productive items are considered to be an optimal number of new vocabulary items in one lesson, but they may not be retained (Gairns & Redman, 1986, p.66). With this information, however, we have some idea of the rate of exposure of learners to EFL vocabulary during the course of their study and this might be as large as about 9,000.

3.7.2 Growth in vocabulary size of students in Group 1 measured by X-Lex

The results in Table 3.3 below indicate that Hungarian students' English vocabulary grows year by year, although this development is not always completely smooth. The mean scores for each of the four grades, and the inferred growth per year, are given in Table 3.3.

Table 3.3. *Mean vocabulary size estimates in grades 3 – 12th grades*

	3rd grade	4th grade	5th grade	6th grade	7th grade	8th grade	9th grade	10th grade	11th grade	12th grade
mean	348	696	1177	1457	1818	2251	2170	2728	2859	3079
s d	229	486	540	648	621	541	395	464	429	390
annual growth	348	348	481	280	361	433	-81	538	131	220

An ANOVA confirms there is an effect between groups and that the differences in the mean scores for each grade are statistically significant, $F(250) = 48.852$, $p < .001$.

3.7.3 Overall growth in vocabulary size in Group 1 measured by X-Lex

Learners in this study had a total of 981 lessons in English over the course of their studies in public education, which means about 736 hours in input. The vocabulary uptake of the learners is recalculated to show how many words on average are learned per lesson and per hour; the figures are shown in Table 3.4.

Table 3.4. *Vocabulary uptake per hour and per lesson*

	3rd grade	4th grade	5th grade	6th grade	7th grade	8th grade	9th grade	10 grade	11th grade	12th grade
mean vocabulary gain per lesson	4.70	4.70	4.33	2.52	3.25	3.90	1.09	7.27	1.77	1.98
mean vocabulary gain per hour	6.27	6.27	5.77	3.36	4.33	5.20	1.45	9.69	2.36	2.64

Some of the apparent inconsistencies of the mean vocabulary growth figures in section *3.7.2* are ironed out here. In the first three years, vocabulary uptake appears to be consistent and very high at about six words per contact hour. Only in grade six does this progress decrease but the rate of learning is still above three words per contact hour.

3.7.4 Growth in vocabulary of students in Group 2 measured by X-Lex and A-Lex

The results for the learners in Group 2, who took both X-lex and A-lex are presented in Table 3.4 and it should be noted that the hours of input are greater in this group than for the learners in Group 1.

Table 3.5. *Mean vocabulary size estimates among Group 2*

		6th grade	7th grade	9th grade	10th grade	11th grade
X-Lex	mean	1623	2044	3000	3412	3305
	s d	831.22	914.67	644.98	1010.8	872.62
	annual growth	406	421	478	412	-107
A-Lex	mean	1192	1536	2110	2912	2225
	s d	924.57	869.46	683.63	689.33	794.59
	annual growth	298	244	287	802	-687

An ANOVA confirms that the trend for growth from year to year is statistically significant. In X-lex $F = 3.404$, $p. < .01$ and in A-lex $F = 5.667$, $p. < .01$). A t-test confirms that in Group 2 as a whole the difference between the A-lex and X-lex scores is statistically significant ($t = 5.455$, $p. <.001$).

3.8 Discussion

3.8.1 Volumes of English vocabulary input

If it is true that the students in Group 1 receive an input, on average, of about 10 words per lesson then, in theory, they may have been exposed to as many as 9,000 words during their studies. If all these words were retained then knowledge on this scale would correspond to native speaker levels of vocabulary knowledge (Milton, 2009), which level school learners do not reach. We have no idea, of course, how many of the words the teachers introduce might be repeated and uptake of vocabulary will almost certainly be less than exposure; not every word will be learned by every learner even in the best regulated systems. Nonetheless, the conclusion to be drawn from these figures is that the volumes of classroom contact for learners in Hungary, nearly 1,000 hours in this school, appear quite good:

comparable to the Greek learners and far more than the British and German learners who were studied in Milton and Meara (1998). It would seem that there is ample opportunity for learners in Hungary to perform at least as well as similar learners in other countries.

3.8.2. Vocabulary uptake in Group 1 and comparison with National Core Curriculum targets

Over the first three years of learning vocabulary uptake appears very regular. The jump between grade 4 and grade 5 scores in particular suggests that nearly 500 new words might be added in some years. This may be a result of the cross-sectional techniques used where one of these classes might contain more able learners than the other with different rates of progress as a result. Nonetheless, overall vocabulary appears to be gained at a rate of over 300 words per year. Only in one year, the ninth grade, does the rate of progress appear to fluctuate. There may be good reasons for progress to change at this point, which is the first year after the switch from primary to secondary school. Learners' circumstances may affect the appearance of progress or actual progress: they are in new schools, there are new people around them, the language teachers' teaching style may be different, and a different choice of textbooks may mean that the same material is being covered for a second time. It seems unlikely that vocabulary knowledge would actually diminish at this period but it is conceivable that it might slow down at this time.

Uptake in grades 11 and 12 are also small compared to previous years. Again it is possible to hypothesise reasons for this. With end of school exams coming in this period there may be a tendency to teach exam techniques, so learners can make the most of their knowledge and skills in English, rather than continue to input new materials. It may be that the materials are deficient in their content of vocabulary in these years and something like this has been noticed in other educational contexts (e.g. Alsaif and Milton, 2012).

We have no idea if these are general trends or something particular to this group. A similar cross sectional study in another school would help reveal if the drop in the

rate of vocabulary uptake is really a tendency and the possible reasons can be uncovered.

These figures may be very useful in identifying the nature and amount of progress learners make in vocabulary, but they stand in isolation. Only when they are compared with other systems and with national targets do they begin to tell us whether progress is in line with the expectations of the *National Core Curriculum* and whether this progress appears satisfactory compared with learners elsewhere. Table 3.6, therefore, compares the annual vocabulary knowledge of learners with *National Core Curriculum* targets, and I have included in this table what I presume are the vocabulary targets in grades 11 and 12 based on figures for vocabulary knowledge required at B1 and B2 levels.

Table 3.6. *Vocabulary growth compared with Curriculum targets*

	3rd grade	4th grade	5th grade	6th grade	7th grade	8th grade	9th grade	10 grade	11th grade	12th grade
mean vocabulary size estimate	348	696	1177	1457	1818	2251	2170	2728	2859	3079
National Core Curriculum cumulative targets	350	400	700	850	1,100	1,600	B1 CEFR level 2,750 – 3,250		B2 CEFR level 3,250 - 3750	

The observed progress of the learners in this study exceeds the targets of the National Curriculum itself. It is not clear from the curriculum how these figures were derived or why anticipated progress appears to be episodic and inconsistent. The reality of student learning up to 9th grade, as indicated by mean vocabulary size, appears consistent and above what is expected. This must mean, given the size of standard deviation shown in Table 3.2, that there are many students who exceed these estimates by a great margin and there must be others who fall below the curriculum requirements. Again, there is no guidance in the curriculum as to how these numbers should be interpreted in the environment of varying student performance.

The Curriculum gives no figures for attainment in secondary school and the assumption that students, generally, will come close to the kind of vocabulary norms expected for CEFR levels B1 and B2 are tested. Here, it seems that the Hungarian learners in Group 1 do fall short of the expected norms. In the case of 10th grade learners at B1 level the mean score falls only marginally short of the range suggested

by Meara and Milton (2003) for this level. Learners at 12th grade and B2 level fall far short, maybe 20% short, of the kind of levels suggested by Meara and Milton and it can be concluded that the majority of learners will not achieve the B2 level in vocabulary that is expected in other countries in Europe.

3.8.3 Vocabulary uptake in Group 2 and comparison with National Core Curriculum targets

The students in Group 2 receive more hours of classroom contact, and therefore potentially more vocabulary instruction, than those in Group 1. They were also tested using two vocabulary size tests X-Lex, to test their written, and A-lex, to test their oral vocabulary knowledge. The progress of these students make during the course of their studies, compared with cumulative figures drawn from the National Core Curriculum, is shown in Table 3.6. Again, I have added what I presume to be the targets for students taking the B1 and B2 level exam in a secondary school.

Table 3.7. *Mean vocabulary size estimates among Group 2 compared to the National Core Curriculum*

	6th grade	7th grade	9th grade	10th grade	11th grade
X-Lex mean	1,623	2,044	3,000	3,412	3,305
A-Lex mean	1,192	1,536	2,110	2,912	2,225
National Core Curriculum cumulative targets	700	850	2,750 – 3,250		3,250 – 3,750

As might be expected, these students make faster progress per year than the students in Group 1 in vocabulary acquisition as measured by X-lex. Their progress exceeds the targets of the National Core Curriculum by considerable margins. In both the 6th and 7th grades the learners' achievements are more than double the targets. In relation to the assumed targets at B1 and B2 level in the secondary school, the mean scores on X-lex from the students in Group 2 fall well within the ranges suggested in Meara and Milton (2003). Again, these are mean scores and there is variation around the mean so while many, even, most students in this Group, appear well positioned in terms of vocabulary knowledge to take and pass B1 and B2 level exams, there will be some who appear to be below this level. Nonetheless, the general conclusion is

that students who study EFL within the Hungarian state system can, with sufficient classroom time, reach levels of vocabulary knowledge which appear to be in line with the aims of the curriculum.

These scores are vocabulary estimates drawn from a written version of the vocabulary size test. It is conceivable that these students, despite good progress in written knowledge, may lack the experience and opportunity in class, to turn this knowledge into communicative skill (Fekete *et al.* 1999). It is possible that their knowledge may be merely passive and that they are, as previously reported, underperforming in communication in comparison with comparable students in other countries. To investigate this the second vocabulary test A-Lex was administered since scores in this, oral, version of the tests have been shown to correlate well with, and predict, scores in communicative tests of language such as IELTS speaking grades (Milton *et al.* 2010).

The scores on A-lex suggest process of regular growth from year to year as might be hoped and expected. They are lower than scores on X-Lex and this is in line with expectations. European students using a roman alphabet generally appear to score higher in tests of written vocabulary knowledge than they do on comparable tests of oral knowledge Milton and Hopkins (2006) and Milton and Riordan (2006). Since spoken English generally uses the most frequent vocabulary more frequently in written communication than in writing (Adolphs and Schmitt, 2003), this result need not compromise the conclusion that learners in Hungary possess good knowledge in relation to the curriculum aims and almost certainly this knowledge can be translated into communicative skills. Learners in grade 10, for example have A-lex estimates approaching 3,000 words, a level which can give something like 98% coverage of normal spoken text (Adolphs and Schmitt, 2003). There is a drop, and quite a large fall, in A-Lex scores between grades 10 and 11 and it is not clear why this should occur unless it is an artefact of a cross-sectional survey and still rather small sample sizes. Nonetheless, even in grade 11, a year before the B2 test, the learners are approaching the levels where they have the vocabulary for good oral communication, in line with the targets of the curriculum.

3.8.4 Comparing the results with international data

Making international comparisons in language learning is a difficult process since the circumstances and the hours of learning can vary so much from one country to another. Measured simply in terms of vocabulary achievement, the results gained from the two groups examined above suggest that many students, probably even more in Group 2, are performing at the level of knowledge they are expected to be, for EFL performance at B1 and B2 level. Scores on the aural tests suggest that these students are also likely to perform communicatively in line with their written knowledge at these levels.

Against some learners in other countries, the Hungarian learners are faring much better in their vocabulary learning. British students took their GCSE, CEFR level B1 exams in French with under 1,000 words on average, and their CEFR level B2 exams with on average slightly less than 2,000 words in French (Milton, 2006). The average learner in both Hungarian Groups (1 and 2) in this study knows substantially more than indicated in the requirements. Against others their level of performance appears comparable. Thus, the Greek students in Milton (2006) attained FCE level, CEFR level B2, with approximately 3,500 words as measured on X-lex which is very close to the levels of attainment by students in grades 10 and 11 (the participating classes of Group 1 and Group 2) in Hungary who still have one or two years of study before they actually take an exam at this level.

Of course, the hours of input are very different with British learners receiving much less input in French than Hungarian learners receiving in English. A more useful metric might be to compare uptake of words per contact hour between countries to get an idea whether learners in Hungary are experiencing greater difficulty in learning than students in other countries. Table 3.7 compares mean vocabulary size estimates among Group 2 compared to the National Core Curriculum.

Table 3.8 compares annual progress and vocabulary uptake per hour among the learners in Group 1 in Hungary against the figures for Greek learners in Milton (2006) and includes figures for overall differences in X-lex score level, being an indicator of annual vocabulary growth, and also uptake per hour of tuition.

Table 3.8. *Vocabulary growth in Group 1 compared with learners of similar background in Greece up to grade 6*

	3rd grade	4th grade	5th grade	6th grade
mean vocabulary size estimate Hungary	348	696	1,177	1,457
mean vocabulary size estimate Greece	628	1,141	1,558	2,279
mean vocabulary gain per contact hour Hungary	6.27	6.27	5.77	3.36
mean vocabulary gain per contact hour Greece	6.28	5.13	4.17	7.21

While the volume of learning over grades, three to six, is clearly different with the learners in Greece acquiring substantially more vocabulary in this period of learning, when these figures are viewed from the point of view of uptake per contact hour they become much more similar. Uptake of around 5 or 6 words per hour appears the norm in both groups with only one exception in the sixth grade where learners in Hungary appear to learn rather less. Viewed in this light the two sets of learners are more similar than they are different and EFL learning in Hungary does not appear to be as bad as was first thought when reading the literature mentioned in Chapter two.

The rate of EFL vocabulary growth also appears good compared with the international figures summarised in Milton and Meara (1998). Their table is reproduced in Figure 3.9 with Hungarian data added for comparison.

Table 3.9. *Hungarian students' mean annual vocabulary gain compared to international data*

Learners	***Foreign language***	***Annual gain***	***Source***
European	English	500-600	Milton & Meara (1995)
Japanese	English	520-600	Yoshida (1978)
Greek	English	578	Med students Athens
Hungarian	**English**	**538**	**Orosz 2006**
Greek	English	462	Vassiliu (1994)
India	English	200-400	Barnard (1961)
Indonesia	English	200-400	Quinn (1968)
British	French	200-225	Milton & Meara (1998)
Saudi	English	150-200	Al-Hazemi (1993)
Saudi	English	340	Abdullah*

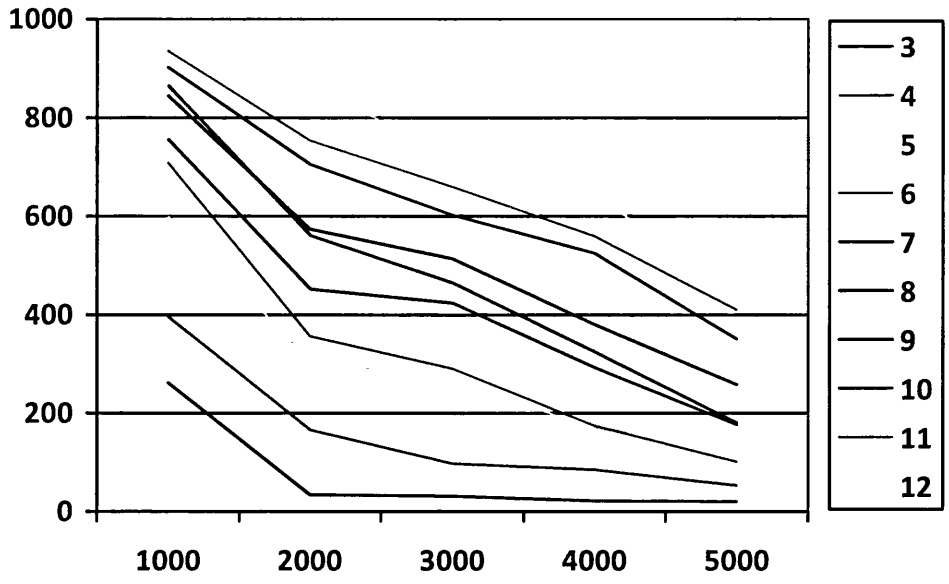
*Unpublished PhD dissertation

The results suggest, therefore, that the Hungarians are probably wrong in thinking that they are bad at languages and, in fact they are in a relatively good position compared to their international counterparts. Their vocabulary shows regular and consistent growth, which might refer to a 'robust foreign language environment' (Milton, 2009 p.79). The figures for A-lex and the links that these possess to communicative ability as measured by scores on IELTS suggests that Hungarian learners are likely to be just as communicative as other learners in Europe. There is no obvious reason in this data for thinking that learners of foreign languages in Hungary are underperforming.

3.8.5 Vocabulary learning and frequency

The data presented thus far has presented information about mean rates of vocabulary knowledge and has inferred learning per year of study. On the basis of these materials, learning appears good. There is also variation around these mean scores which also appears to be a normal feature of learning. The learning displayed by learners in Hungary also appears normal in another respect in terms of the relationship between word frequency and uptake. There is a clear frequency effect in the vocabulary acquired by the learners. The vocabulary in the most frequent vocabulary bands is much more likely to be acquired than that in the less frequent bands. That is probably good. As Milton (2006b) points out, this suggests the exposure to English the learners receive is pretty naturalistic and this should promote good coverage and maximise comprehension. If courses in Hungary were to unduly emphasise infrequent vocabulary this would deny learners the opportunity to develop their knowledge of structure, which requires knowledge of the most frequent vocabulary, and would inhibit comprehension. This effect is visible and can be seen when the results for each grade level are divided to show knowledge in the five frequency bands separately. This is shown in Figure 3.10.

Figure 3.10. *Word knowledge in the five frequency bands*



The frequency effect is very clear even at the outset of learning in grade 3 when the presence of infrequent, subject vocabulary, required to provide thematic content, might be expected to unbalance the kind of frequency effects normally seen in larger corpora. Again, this may be interpreted as an impressive feature of the vocabulary teaching system in Hungary. Milton (2006b) notes the absence of this feature in the foreign language acquisition of French in British schools, and connects this to the very low levels of vocabulary uptake among these learners. This helps confirm the impression that foreign language learning in Hungary looks to be at a higher level than is the case than in other countries such as Britain.

3.9 Conclusions

At the outset of this study it was explained that we have no normative data to tell us how progress in vocabulary, an essential element of a foreign language, progresses during the course of English study in Hungarian schools. Such data can be enormously useful and can be used as a basis for comparison over time and to check the maintenance of standards. It can also be used for comparing learners at different levels of language knowledge and to provide targets for levels of knowledge for important milestone qualifications such as the new two-level school-leaving exams

in Hungary. It can allow comparisons of performance in different schools and different countries. This information would also be particularly useful in informing the debate over standards in Hungary, given the prevailing belief often expressed by learners and teachers that the English language teaching system is not as good as elsewhere.

The results reported in this chapter suggest that progress in vocabulary learning in the first four years of English appears remarkably consistent up to grade 6 at about six words per contact hour. This result is impressive and suggests a well prepared programme of study. It is not entirely clear what happens in grade six where the rate of uptake decreases to about 3.4 words per contact hour. This may be due to the idiosyncrasies of the course books or, since this is a cross-sectional study, differences in the academic make-up of different years of study. It would be well worth repeating this study with different students and in different schools to see whether these results are generalisable to the whole system. If they are generalisable, then this kind of progress will be compared with vocabulary uptake noted in other schools and countries, with older learners, in Milton and Meara's (1998) review.

Notwithstanding this conclusion, the standard deviations reported in Tables 3.2 and 3.4 suggest that the kind of variation in scores which was noted among Greek learners also occurs in Hungary. In the first year of English, the most able performers appear to learn approximately 1,000 words which is a believable figure, since this kind of progress at the outset of learning is noted in both Greece and Britain (Milton, 2006b). The least able learners may have acquired only a handful of words in the same period. Rapid progress among the most able learners appears to continue, since in grade six the most able learner scored over 3,000 words in the vocabulary size test, while the least able continue to struggle with the lowest scoring learners knowing only a few hundred English words.

Progress also appears rather good. The number of words learned is substantially greater than the vocabulary targets prescribed in the *National Core Curriculum*. It also appears better than the similar Greek learners' in grades 3, 4 and 5 although worse in grade 6. Overall, progress as assessed in terms of vocabulary uptake per hour is almost identical over four years of study to the learners in Greece. This

should be reassuring to those teachers and administrators who believe English is not taught well in Hungary. Learning of vocabulary appears well ahead of target and at least as good, if not better, than learners of English in other systems. If vocabulary learning is good then this suggests general progress in passive knowledge of English will be good, as will progress in orthographic productive skills such as writing. This conclusion has to be placed in context, as this estimate, a figure based on knowledge of the most frequent 5,000 words in English, is likely to be an underestimate of learners' total word knowledge. Very infrequent lexis, included in lessons and teaching materials to provide thematic content, has been omitted from this count.

This investigation of Hungarian primary and secondary school students was designed to provide an insight into their English language vocabulary size development in Hungarian schools. Results show that in Hungarian students' vocabulary development in public education has some impressive characteristics. Good progress appears to be made, especially at the outset of learning, although further study would be useful to test whether the decline in uptake towards the end of primary school is a general feature of learning and, if it is, whether this is a deliberate feature of the syllabus. Nonetheless, uptake over the whole period of 4 to5 words per contact hour appears very good compared to learners elsewhere. The fact that learning appears so closely connected to word frequency is probably also an encouraging finding.

Now that we are in possession of this data it becomes legitimate to speculate how the results changed if students had better learning strategies and teachers had more effective teaching techniques. It should not be forgotten that part of the motivation for this study was doubt concerning the word repetition and recycling strategies (spaced and massed), which were noted in the surveyed teachers' vocabulary teaching practices described in the first part of this chapter. There may actually be room for improvement in these already good findings. It should not be forgotten that the teachers of the students tested in this study suggested that, potentially, their learners might have been exposed to about 9,000 English words during the course of study and if this is true, clearly, not all of these have been learned. Assuming there will be some repetition of words then uptake rates are probably quite good and closer to the Greek learners than the British learners in the studies by Milton. But, with the present data, this is just a supposition. This provides another motivation and direction

for further study to discover what is the vocabulary input to learners in Hungary and what the quality of this input is.

The testing project provides an insight into some inconsistencies of the *National Core Curriculum*. The surveyed primary school students performed much better than expected on the basis of the requirements of the curriculum. The vocabulary knowledge of grade six learners corresponds with the *Common European Framework* A1 level at the time of the test carried out. They are approaching A2 level, which is between 2,000 and 2,750 words. These numbers correspond with the secondary school intermediate-level school-leaving exam requirements. This is an unexpected conclusion and the *National Core Curriculum* requirements might usefully be reconsidered and, perhaps, better matched with the *Common European Framework* requirements in the future. Nevertheless, lower primary students are on the right track, as their vocabulary size level grows progressively and if they were to continue at this rage, their vocabulary would reach the A2 level in the upper primary school.

It would be a mistake to let this study and its conclusions stand in isolation. In the future some further investigation is needed in order to test whether these findings are in line with vocabulary size growth in other schools in Hungary. This should provide a better understanding of English vocabulary size development in Hungary at different stages of learning, and across different schools and different regions.

Chapter Four

Experiment two

The effect of teacher talk and book content on English language vocabulary expansion in the Hungarian public education

Introduction

The previous chapter examined EFL vocabulary uptake in two state schools in Hungary, which suggested that vocabulary knowledge, and by extension probably overall communicative language performance, appeared to compare well with learning in other countries and against the kind of standard, which are expected for exams at CEFR levels B1 and B2. The idea, which has been circulated in Hungary that foreign language learning compares poorly with other countries appears to be contradicted. The study raised further questions in that we have only measured uptake so far and have no idea how these figures for uptake compare with the language, which the students are exposed to; the input. If learners in Hungary required substantially more input to achieve these levels than in other countries then there may be a reason to question the methods and approaches for foreign language teaching used in Hungarian schools. There is really no evidence, currently available in the literature, to suggest what the nature of the input in these schools is.

For most language learners input in the foreign language is restricted to the classroom and can come from the textbooks they are given to work with and the language that the teacher speaks (Häcker, 2008). It is in this last form of input that it is thought there is the potential for problems in Hungarian schools since the prevailing methodology, carried over from the teaching of Russian, de-emphasises the role of oral input. Oral input plays an important role in first language acquisition and it also can have a crucial role in foreign language acquisition. However, foreign language oral input sources can be very limited in a school environment whether in Hungary or elsewhere. These can be the teacher, the other students, audio or video materials, but in my observation the last two are not used too often in school settings. The potential input in oral English may be further reduced since Nikolov (in Fekete *et al.* 1999) revealed in a classroom observation project that almost a third of teachers' input in the English lessons is in Hungarian. There are often good reasons for using the mother tongue instead of English in EFL classes. It may be used to speed up and expedite the process of explaining grammar and word meanings, for example. However, as Nikolov notes, 'Observers thought that students would have understood more in the target language than teachers tended to expect them' (in Fekete *et al.* 1999).

By contrast with oral input, it appears difficult even to speculate what the quality of written and textbook language is in the classroom. There appear to be few studies which even comment on this. However, it does appear that Hungarian learners are dependent on their textbooks and the teachers' use of them for much of their input. Classroom observation projects (Fekete *et al.* 1999, Nikolov, 2002) and a nation-wide survey into the frequency of typical classroom activities in primary and secondary schools revealed that teachers in Hungary most often apply techniques of the audio-lingual and grammar-translation method both in English and in German classes (Nikolov and Csapó, 2002; Nikolov, 2003). Another study (Nikolov in Fekete *et al.* 1999) revealed that course book tasks are not being approached in the way as the course book writers had intended, but instead the communication tasks are used as reading and translation tasks, and interesting, memorable teaching is missing. Vocabulary uptake, and therefore progress in language generally, might not be as good as it could be therefore. Orosz (2007) revealed in a study that teachers in Hungary appeared to spend very little time on vocabulary teaching. The most common practice of teaching vocabulary is giving the mother tongue translation (Grammar-Translation Method), automatically writing it in the vocabulary notebook and then the learners' task is to memorise it at home. At the same time teachers regularly test whether their students have memorised the new words. The tests usually appear in the form of word lists. If the teacher gives the English word, the students have to write the meaning in their mother tongue. If the word is given in the mother tongue the students have to write the corresponding words in English. New materials appear to be introduced without any preparation and recycling of the vocabulary to facilitate memorization, but instead when learners read a new reading material and there's an unknown word in the text the teacher automatically gives its mirror translation or asks students to look up the meaning in the dictionary.

4.1 Background, and context

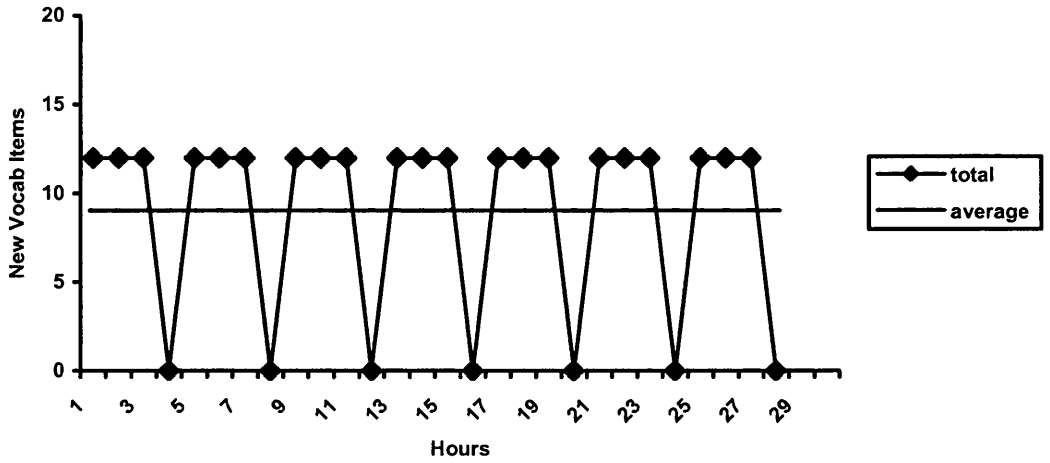
4.1.1 The volume and sequence of vocabulary presentation

A global figure for the content of vocabulary in a scheme of study or curriculum does little to help explain how these words should be sequenced or presented. If, for example, fluency in English is the goal of learning with a vocabulary required of about 9,000 word families then this represents a lot of learning and it is unlikely that it will be learned quickly. The aims of the curriculum in Hungarian schools are for learners to reach B2 level, this means they should know about 3,500 words from the first 5,000 words, because these words are so frequent and important to communication, and maybe a 1,000 more beyond this range (Milton and Alexiou, 2009, and Milton 2010). So how vocabulary should optimally be presented?

In Chapter Two the work of Gairns and Redman (1986) was referred to and this suggests in input rate of between 8 and 12 words per class would appear ideal. As Scholfield (1991) points out, this presumably has to be a generality since not every lesson can contain systematic vocabulary input and some lessons must, presumably, be given over to revision and recycling, to testing or to grammatical instruction. Optimally, Scholfield suggests, vocabulary input should be cyclic, with periods of input and periods given over to other things. Where there is input, however, it should be presented in regular manageable quantities. Scholfield draws up a vocabulary rate plot of the way new words might be introduced in a hypothetical course where an average of 9 new items per lesson are introduced. This is shown in Figure 4.1.

Ideally, therefore, it might be hoped that the course books used in Hungarian schools should look something like this. However, the examples that Scholfield examines suggest that real course books can be rather different. His examination of Book 1 of The Cambridge English Course indicated that vocabulary input can be argued to have both fairly regular input and the cyclic quality he describes. Another, the American Language Course 2101 was significantly different and it was difficult to argue that either of these qualities was present.

Figure 4.1 *Vocabulary Rate Plot for Imaginary Course (Scholfield, 1991, p.27)*



In addition to how quickly to introduce the desired vocabulary to students, there is also the question of which vocabulary to introduce. There seems to be a general belief that it is imperative to teach the most frequent 2,000 words of English (e.g. Nation 2001 and Gairns and Redman, 1986) because of the importance of this vocabulary to coverage and to comprehension. But to teach only this vocabulary would also be a mistake since this volume of vocabulary means only gist understanding is possible and communicability can only be limited. This frequent vocabulary has to be extended to include infrequent vocabulary selected by availability, learnability, and words that are opportunistically available or are related to the learners' level or needs and interests (Milton, 2009).

4.1.2. Repetition and recycling

The work of Scholfield, mentioned above, has already indicated that the teaching of words should include repetition and recycling. 'Repetition is essential for vocabulary learning because there is so much to know about each word that one meeting with it is not sufficient to gain this information, and because vocabulary items must not only be known, they must be known well so that they can be fluently accessed' (Nation, 2005 pp. 74). If the word is subsequently retrieved during the task then the memory of that word will be strengthened (Nation, 2005). Not only repetition is important but the repeated opportunity to retrieve the item to be learned (Baddeley, 1990). It may be possible to calculate how much input a learner needs to get within a certain time in order to meet a recently met word again before the memory of the previous

meeting fades away (Nation, 2005). If the vocabulary items are recycled, especially in a memorable way, the general problem of learning, namely, forgetting can be easier avoided. The memory of a word may last even for several weeks or months, but after a while without recycling/repeating it might be easily forgotten. Meeting the word might happen in the form of different tasks. The words appear in course books again and again, in teachers' talk or in different tasks. Certain research has suggested that the amount of new words the learners encounter in their course-book may be much smaller than what they encounter in the teacher's speech, as Donzelli (2007) points out. In the Hungarian schools repetition as described here may not be occurring. According to Nikolov (in Fekete *et al.* 1999) and in line with my own observations, in Hungary teachers usually just read or say the course book instructions word by word or make the learners read them. Unless the course book recycles the words then they are not recycled in class.

Many experts agree that repetition has a very important role in the learning process. If the vocabulary items are repeated the general problem of forgetting can be avoided. Frequency of occurrence in the input influences acquisition. According to the calculations provided by Nation at least 5-10 times of repetitions are needed for effective learning. Pimsleur (1967, p.76) suggests approximately 10-11 repetitions. Kachroo (1962) found that words repeated 7 times or more in his course books were known the best by his learners. Others like Crothers and Suppes (1967) found that 6-7 repetitions are needed. The most recent research suggests that only 3 repetitions may be needed. (Edwards and Collins, 2013). Nevertheless, if the words are only read a few times in the books but nothing is done with them they do not help too much vocabulary acquisition.

As a rule repetition should occur very soon after it was first studied and then several times after on a regular basis. The reason for this is that forgetting is initially very fast after learning and then slows down (Nation, 2005). The books and the teaching process should help that the teaching material, in our case vocabulary, would not be forgotten so fast.

Of course it has to be noted that vocabulary acquisition does not solely depend on the times of repetition. There are some other criteria which can influence learning (Schmitt, 2005):

- Whether the new words are incorporated into language that is already known.
- Whether the teaching material is well organised since organized material is easier to learn.
- Whether the new words are taught with similar words since words which are very similar should not be taught at the same time.
- Whether word pairs are presented for list learning since this technique can be used to learn a great number of words in a short time.
- Whether greater depth of word knowledge is needed beyond just knowing its meaning.
- How else the word is used in the course of learning since the deeper the mental processing used when learning a word, the more likely that a student will remember it.
- Whether learners are required to recall the words taught since the act of recalling a word makes it more likely that a learner will be able to recall it later again.
- Whether learners are in a position to concentrate on the learning process - efficient learning happens when students are concentrating on their mental resources on the task at hand.
- Whether the presentation and practice conforms with the learners' learning style, learners are individuals and have different learning styles.

In addition the above mentioned criteria the learnability of words also depends on the words' pronouncability, its length, its imageability, synformy (Batia-Dvorkin *et. al.* 1991) etc.

4.1.3 Previous studies of textbook vocabulary content

There are very few studies which systematically examine the vocabulary input that goes on in the foreign language classroom based on the textbooks that are used.

Alsaif (2009) makes an examination of the textbooks in the EFL program in Saudi Arabian public schools suggests they provide around 2,800 words from the most frequent 5,000 words and an additional 1,000 less frequent words over a period of 7 years. Here there is a clear emphasis on the most frequent words in English to the detriment of a broader, content vocabulary. Most of these words, he notes, were introduced in the first three or four years and thereafter, in the secondary stage, there was little input and much repetition in the final years of school learning. He reports little thematic variation and described the textbooks as dull and demotivating as a consequence. He explains the small volumes of vocabulary uptake which are noted in Saudi schools to poverty of input. This is an interesting study since the age of the learners is similar to those in Hungary and the hours of input, around 1,000 hours, is also similar.

Vassiliu (2001) examines the volumes of EFL input in the first year of classes in Greek private language schools. As it have become apparent from the previous chapter, learners in Greece at these schools appear to be good learners who make good progress compared to others, internationally, such as the British learners of French. The characteristic of the vocabulary input among these learners is that there is a lot of vocabulary, about 1,500 lemmatised words in the first year of study alone, and these words are much more evenly distributed between frequent and infrequent vocabulary, suggesting wide thematic ranges and more interesting and accessible materials. Uptake appears very good with, on average, 50% of the words. A study which tested how increasing the volume of words in the year suggested the effect of increasing the vocabulary load in the first year was that more words were learned and, presumably, progress to communicability was faster.

4.1.4 Input from teacher talk

Ideally the teacher talk in the English classroom should be a model and obviously it should be in English. The teachers sometimes use the mother tongue to solve discipline problems, to explain grammar rules, to give translations, to explain something, which might be difficult to understand in English or just to check the students' work. Teachers' English talk is expected to provide *roughly tuned* or *comprehensible input*, which means that the students understand what is said to them

although the language input is a bit 'higher level than students are capable of using, but at a level they are capable of understanding (Krashen, 1985)'. Harmer (1994) compares this kind of input to the parents' talk when they try to simplify the language in order to their children could more or less understand it. The *finely tuned input* (Krashen, 1989) on the other hand is the level where the language is carefully adjusted to the students' language level. This kind of input is good for teaching new grammar for example and *roughly tuned input* is good to teach new words and new contents.

'L2 acquisition can only take place when the learner has access to input in the L2' (Ellis R, 1994). Ideally in a well organised classroom teacher talking time (TTT) and student talking time (STT) are well balanced where students have enough time to talk. Teachers like talking, too and even for them it is the classroom where they practice English. That is why there is a danger that the teachers might dominate the classrooms. Obviously the nature and the level of the class might also affect the amount of the teacher/student talk. In a beginner or elementary class teachers talk more, simply because the students cannot.

4.1.5 *Previous studies of oral input from teachers*

There have been earlier attempts to measure the quantity and quality of the teacher talk. It has been observed that teacher talk make up around 70% of the total talk in classroom as stated by Cook (2000), Legarreta (1977), Chaudron (1988) and Zhao Xiaohong (1998) (cited in Xiao-yan, 2006, p. 16). Legarreta (1977) concludes from her observation on Spanish kindergartens bilingual classrooms that teacher talk constitutes 80-85% of the classroom talk. In Hungary in a Classroom Observation Project, which provides more detailed information on the teacher talk, Nikolov (1999) concludes that in year 10, 11 and 12, 55-56% of the interaction is based on frontal work, which suggests that it is mostly filled in with teacher talk. It is also revealed in the same project that in a grammar school (secondary school) the teacher talk is 77.66% English in and 23% Hungarian, while in vocational secondary schools this ratio is 65.79% and 35.61%. 'Most probably this rate is related to students' levels rather than teachers' proficiency, as the more teachers think students

understand, the more they rely on the target language' (Nikolov in Fekete *et.al*, 1999).

Teacher talk is important as this stimulates most of the talk, which may include not only the teaching, but also the practice of the old and the new vocabulary. Nevertheless, some researchers seem to put little importance on vocabulary taught in the classroom. Harris and Snow (2004, p. 55) report for example that several studies claim that only little retention is found from the vocabulary learned or taught by direct instruction. This seems to correspond with Ellis R (1994) who suggests that most L2 vocabulary is learned incidentally, much of it from oral input. If the classroom instruction is not only about teaching, but practicing the old and new vocabulary even if incidentally learnt, the chances are definitely bigger to acquire and remember them better even later. On the other hand if the classroom instruction is not in the target language or it is not satisfactory L2 acquisition will not or just partly take place.

There are several studies which attempt to measure the lexical richness of teacher talk in order to estimate the potential for learning from this form of input. Lexical richness mostly means the quality of the teacher talk, the volume of infrequent words which are used, but of course the quantity of teacher talk might also make the classrooms effective. It has been discussed earlier that the most frequent 2,000 words in English make around 94.76% lexical coverage of any spoken discourse (Adolphs and Schmitt, 2003). Consequently, most vocabulary gained from the oral/aural input may lie within this relatively limited frequency range which does not help learners expand their vocabulary size.

The assumption that the classroom environments are lexically poor might not always be true. Some empirical studies, e.g. Meara *et.al.* (1997) and Donzelli (2007) for example write about rich lexical environment in their studies. Rich lexical environment is determined by the usage of the less frequent words, often called *unusual words*, forming a considerable proportion of the classroom lexis. Both of them found that in the observed classes the lexical environment was rather rich. Their research is different from the one described from the one in this chapter. Meara's experiment was carried out in Canada in an intensive communication class where the students' mother tongue was French and they had known lots of cognate

words, which also contributed to making the classroom lexical environment rich. In this class students were exposed to a lexical input of about 50 unusual words every day and 250 words every week.

A repetition of Meara *et al.*'s study (1997) would very likely show different results in Hungary. Firstly, the lessons recorded in Canada are taken from an intensive communicative programme, which is different from the general English lessons in the observed classes in Hungary. This refers not only to the number, but also the length and the nature of the lessons, namely the application of different teaching techniques, the huge quantity of teacher talk compared to student talk. Secondly, there could be more cognate words between English and French than between English and Hungarian, which influences the lexical richness of the classroom.

Donzelli (2007) examines the amount of vocabulary presented in the classroom by the teacher and the textbook and how much is learned from each source. Donzelli examines the oral input of an English native speaker teaching English at an Italian elementary school. This situation is also different from the classroom situation described in this chapter where the teachers, mostly, are Hungarian. The analysis of the Italian teacher's talk during the 55 hours of classroom instruction reveals that the teacher provides the total of 1,322 word types. This means that the teacher introduces 24 different words per classroom period which might be a heavy load for such low-level learners.

The analysis of the Italian course book shows variations in the number of word types presented in each unit. The total number of types presented by the textbook during the academic year is 740 types which is nearly half of the words presented by the teacher's oral input. This means that the book introduces 13.4 new words per classroom period compared to 24 words from the teacher. It appears that the teacher provides almost double the vocabulary presented by the book.

In terms of lexical richness, Donzelli concludes that both the teacher and the course book provide a rich lexical input for the learners. The richness of the input is determined by the number of unusual words, i.e. words that do not belong to the most frequent 2,500 words.

The EFL situation described in Italy cannot easily be compared with the situation in Hungary. One of the reasons is that the teacher in this study is a native speaker of English while the English teachers in Hungary are mostly Hungarians and English is a foreign language to them. Oral input from a native speaker can be different from that of a non native one. Although the richness of the course books might be relevant as the ones used in Hungary might provide rich vocabulary sources as well. As it has been pointed out previously the teacher's vocabulary might be influenced by the course book material, but it does not necessarily mean that just because of that the teachers' oral input will be rich.

4.2 Research questions

The purpose of the investigation reported in this study is to examine the nature of classroom vocabulary environment in an average secondary school EFL class in Hungary. It will examine both the contents of the course book and the teacher talk used during the class. The secondary purpose of the study is to examine how much the course book material promotes learning. The lesson observations will allow a number of other specific objectives to be achieved.

In relation to the course book it is intended to investigate:

1. How much vocabulary learners are exposed to from the course book and from the teacher talk.
2. How much repetition and recycling of vocabulary is contained in the course book material, and how much is recycled by the teacher.
3. The quality of the lexical environment, the proportions of frequent and less frequent words contained in the course book material and the oral language of the teacher.
4. How much of this vocabulary is retained and how much oral and written presentation of words contributes to retention.

4.3 Methodology

4.3.1 Lexical exposure, recycling and the quality of the lexical environment provided by course books and teacher talk

Course books from three average general primary schools in Szeged (South Hungary) were selected for study. The texts were used by grades three, four and five, and the students' age range is from 9 to 11. As they are beginner students it is assumed that the source of their English knowledge is primarily the classroom. Even if they browse English websites or watch English programmes on television it is not as much as it could affect their vocabulary knowledge. The participating schools in this research are called *School 1, School 2* and *School 3.* In each school three different EFL course book families are used. Course book is an umbrella term in this case and it covers both the text books and the workbooks which belong to them as they are all used in the language classrooms. Three popular course book series, 18 books altogether were examined, namely: Chatterbox 1-2-3 (coursebook and activity book) (Strange, 2005), three books from the Happy series, namely, Happy Street 1 (classbook and activity book) (Maidment, and Roberts, 2005) Happy Street 2 (classbook and activity book) (Maidment, and Roberts, 2005) and Happy Earth 1 (Bowler and Parminter, 2005). The Chatterbook series are named in this research as Course book A, the Happy series are Coursebook B. They are British publications and follow the traditional European course book pattern and contain lots of pictures, dialogues and songs, but Course book C is different. The books in Coursebook C are Második angolkönyvem (Odzené Szemenyei, 2006) Harmadik angolkönyvem (Odzené Szemenyei, 2006) and My English Book Class 5 (Csikós Marton, 2006). The latest ones are Hungarian publications, probably the cheapest in the market and this could be the reason why the teachers in some schools use these in their lessons. The books are black and white, full of reading materials and grammar and all in all it is not a very attractive piece and provides only little visual input. The number of classes and teaching hours dedicated to teaching these courses is provided in Table 4.2.

Table 4.2. *The number of classes and teaching hours dedicated to teaching in the observed classes*

Course book s	Grades	Number of lessons/hours
Course book A	Grade 3	111/83.25
	Grade 4	111/83.25
	Grade 5	111/83.25
	total	**333/249.75**
Course book B	Grade 3	74/55.5
	Grade 4	74/55.5
	Grade 5	111/55.5
	total	**259/166.5**
Course book C	Grade 3	185/138.75
	Grade 4	185/138.75
	Grade 5	185/138.75
	total	**555/416.25**

The texts of these books were scanned into a digital format and then processed by using the Compleatlextutor software in order to provide word lists and the numbers of repetitions of each word. Of course books do not only contain new material, but many of them are shared with the previous year material. This material allows us to find out how much vocabulary is introduced via the course book from year to year, how much language is repeated and whether the pattern of repetitions appears sufficient for learning.

To assess the nature and quality of teacher talk, four classes from grade 10 were recorded and later analysed with the VocabProfile (Cobb, 2003) computer programme on the Internet. These were matched against the word lists from the *British National Corpus* and frequency lists on VocabProfile to provide information about the number of words used in the recorded classes and the quality of these words; the distribution of them across the frequency bands.

4.3.2 Uptake and retention from lexical input

To estimate the uptake of vocabulary from the course books students in grades 3, 4 and 5 in the above mentioned three schools were tested, altogether 490 participants. Students in grade 3 were beginners and it was assumed they had not known too much English vocabulary at the outset of the course. It was also assumed that uptake from

sources outside the classroom would be negligible; English is very much a foreign language in Hungary and students will not have experienced much systematic English language exposure from TV or other sources. Students were tested using X-lex (Meara and Milton 2003) at the end of school year 2007 to provide an estimate of the vocabulary size at the end of each year of study and to allow an estimate of the growth of vocabulary from one year to another.

To gain an understanding of the oral language of the classroom four, 45-minute English classes in grade 10 were recorded, transcribed and analysed using VocabProfile computer programme (Cobb, 2008). This gives information about how many words the text contains from 20 frequency bands of roughly 1,000 word families in size from the 100 million word British National Corpus. Fourteen students participated in the recorded classes, which had been tested before against the new words using a translation test of 8 words which were covered verbally in Class 1. The teacher had identified that these words would be a feature of teaching prior to the class. Three of these words were also presented in writing in either Class 1 or 2. The classes were recorded and the occurrence of these words noted. Students were then tested on their knowledge of these words before the classes, and after periods of six weeks and seven months had elapsed from the time of the classes.

4.4 Results

4.4.1 The lexis of the course books

The words contained and new words introduced over grades 3, 4 and 5 in each of the three courses examined are summarised in Table 4.3.

Table 4.3. *Summary table of course book lexis*

	level	Tokens per book	Word families per book	New word families per book
Course book A	Grade 3	5,632	323	323
	Grade 4	9,121	602	79
	Grade 5	10,035	715	252
	(total)	(24,788)		(654)
Course book B	Grade 3	5,956	482	482
	Grade 4	10,887	868	126
	Grade 5	12,903	1,102	355
	(total)	(29,746)		(963)
Course book C	Grade 3	5,982	643	643
	Grade 4	6,041	779	204
	Grade 5	21,778	1,346	763
	(total)	(33,801)		(1,610)

The frequency distributions of the word families in each course book are summarised in tables 4.4, 4.5 and 4.6. Figures in brackets are the coverage of the whole text provided by the words in each of the frequency bands.

Table 4.4. *Vocabulary frequency distribution in Course book A*

	Grade 3	Grade 4	Grade 5
K1	221 (87.13)	356 (86.53)	453 (87.86)
K2	45 (94.73)	94 (93.69)	101 (92.71)
K 3-5	19 (97.01)	43 (96.47)	57 (96.74)
K 6-25	6 (98.1)	27 (97.29)	28 (97.72)
Off-list	32 (100)	82 (100)	76 (100)
total	323	602	715

Table 4.5. *Vocabulary frequency distribution in Course book B*

	Grade 3	Grade 4	Grade 5
K1	303 (88.15)	482 (87.38)	559 (85.97)
K2	79 (93.99)	144 (92.44)	180 (90.86)
K 3-5	52 (97.29)	87 (95.29)	128 (94.53)
K 6-25	17 (98.48)	52 (96.75)	84 (96.88)
Off-list	31 (100)	103 (100)	151 (100)
total	482	868	1,102

Table 4.6. *Vocabulary frequency distribution in Course book C*

	Grade 3	Grade 4	Grade 5
K1	363 (85.89)	414 (87.32)	566 (83.78)
K2	108 (92.28)	117 (91.82)	190 (88.75)
K 3-5	58 (94.74)	64 93.61)	162 (92.54)
K 6-25	49 (96.93)	46 (95.46)	96 (94.18)
Off-list	65 (100)	138 (100)	332 (100)
total	643	779	1346

4.4.2 The lexis of the teacher talk

The volume of teacher talk (number of tokens), and that of the students, in the four classes recorded is summarised in Table 4.7.

Table 4.7. *Summary table of classroom oral lexis*

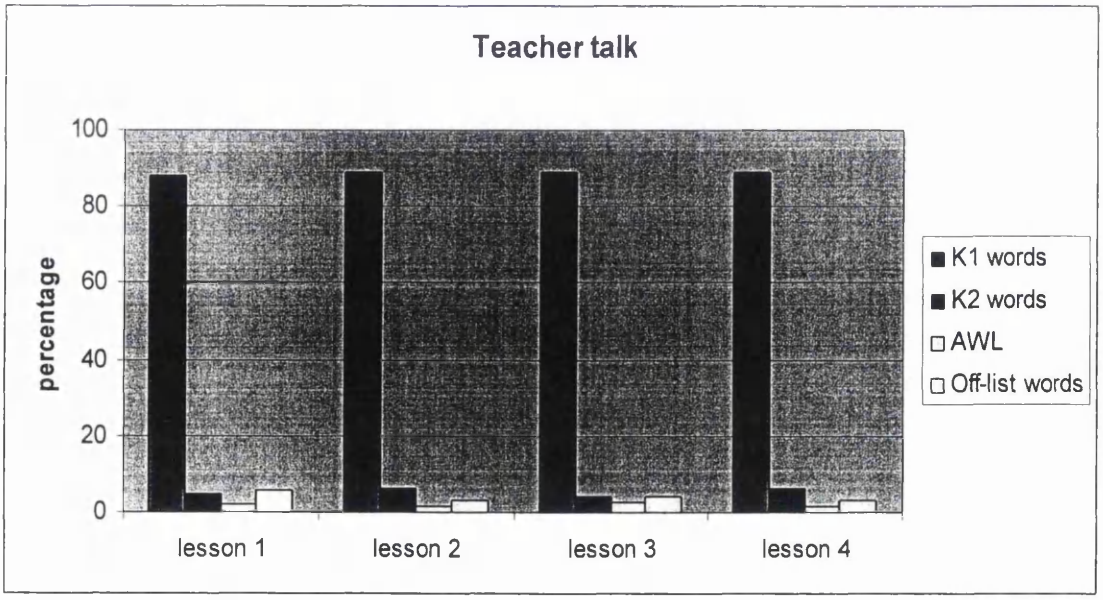
	Teacher talk	**Student talk**
Class 1	3289	28
Class 2	3635	121
Class 3	3480	51
Class 4	3151	29

The student contributions to the class have been discounted and the frequency distributions, in word families to match the information drawn from the course books, of the teacher talk alone are shown in Table 4.8 and presented visually in Figure 4.8. Figures for cumulative coverage are given in brackets in Table 4.8.

Table 4.8. *Frequency distributions of teacher talk*

	Class 1	Class 2	Class 3	Class 4
K1	331 (87.65)	282 (89.12)	285 (88.92)	261 (90.02)
K2	46 (94.6)	32 (95.79)	42 (95.09)	53 (95.19)
AWL	15 (96.01)	11 (97.93)	16 (96.53)	13 (96.31)
Off-list	49 (100)	21 (100)	35 (100)	22 (100)
total	441	346	388	349

Figure 4.9. *Graph showing the frequency distributions of the teacher talk*



4.4.3 Repetition and recycling in the course books

One idea of the degree of repetition in a text is given by the number of tokens per word family in the text, an average, in effect, of how many times each base form in the text is repeated during the course. The figures from the three course books examined, drawn from Vocabprofile are given in Table 4.10.

Table 4.10. *Tokens per type in the course book data*

	Grade 3	Grade 4	Grade 5
Course book A	15.39	12.46	11.46
Course book B	10.56	9.22	11.5
Course book C	8.26	7.02	13.43

Given the presence of function and structure words in these lists, which must be repeated frequently for the text to be grammatical, these figures may not give a useful indication as to the degree to which the lexical words are repeated sufficiently for the purpose of learning. A second indication of repetition and recycling, or its absence, is given by calculating the number of base word forms which are repeated five times or more in each text. These figures are given in Table 4.11.

Table 4.11. *Base words with 5 or more repetitions in the course books*

	Grade 3		Grade 4		Grade 5	
	Total word families	Word families with 5+ repetitions	Total word families	Word families with 5+ repetitions	Total word families	Word families with 5+ repetitions
Course book A	323	255	602	323	715	205
Course book B	482	219	868	210	1102	241
Course book C	643	452	779	329	1346	654

4.4.4 Repetition and recycling in teacher talk

One idea of the degree of repetition in the teacher talk is given by the number of tokens per word family in the text, an average, in effect, of how many times each base form in the text is repeated during the course. The figures from the teacher talk, drawn from Vocabprofile (Cobb, 2008) are given in Table 4.12.

Table 4.12. *Tokens per word family in the teacher talk*

	Tokens per word family
Class 1	6.21
Class 2	8.8
Class 3	7.91
Class 4	7.54

A second indication of repetition and recycling is given by calculating the number of base word forms which are repeated five times of more in each text. These figures are given in Table 4.13.

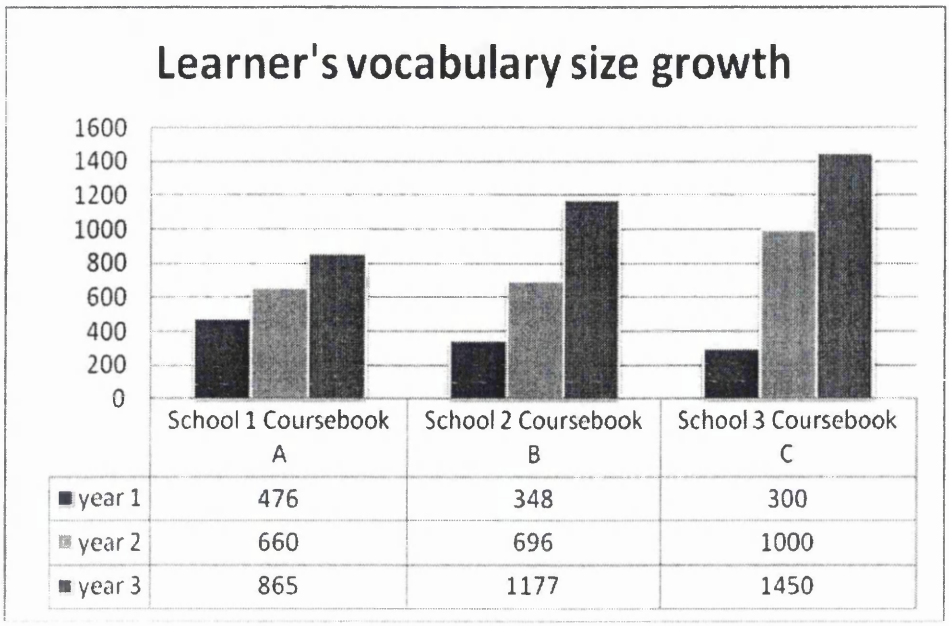
Table 4.13. *Base words with 5 or more repetitions in the teacher talk*

	Total word families	Words families repeated 5+ times
Class 1	441	223
Class 2	346	102
Class 3	388	116
Class 4	349	251

4.4.5 Lexical uptake from the course books

The figures for vocabulary knowledge in each of the three schools and for each of the three grades are given in Figure 4.14.

Figure 4.14. *Growth in learners' vocabulary size*



4.4.6 Lexical uptake from teacher talk

The words tested in the test of uptake from teacher talk are shown in Table 4.15 together with information on the classes they occurred in and whether they were presented orally only or both orally and in writing.

Table 4.15. *Table shows the words used to test uptake from teacher talk, and their occurrence in the classes recorded and the course book*

words	Lesson 1		Lesson 2		Lesson 3		Lesson 4	
	teacher	*course book*	*teacher*	*course book*	*teacher*	*course book*	*teacher*	*course book*
accuse	1	0	0	1	0	0	0	0
brisk	1	0	0	0	0	0	0	0
eventually	1	0	0	0	0	0	0	0
fixed	2	0	0	0	0	0	0	0
prediction	1	0	0	2	21	0	0	0
proposal	1	1	3	0	0	0	0	0
steady	1	0	0	0	0	0	0	0
wire	3	0	0	0	0	0	0	0

The results of the pre-test of these words are shown in Table 4.16.

Table 4.16. *Results of the context-free translation pre-test*

words	**Students**													
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
accuse	-		-	-	-	-	-	-	-	-	-	-	-	-
brisk	-	-	-	-	-	-	-	-	-	-	-	-	-	-
eventually	-	-	-	-	-	-	-	-	-	-	-	-	-	-
fixed	-	-	-	-	-	-	-	-	-	-	-	-	-	-
prediction	-	-	-	-	✓	-	-	-	-	-	-	-	-	-
proposal	-	-	-	-	-	-	-	-	-	-	-	-	-	-
steady	-	-	-	-	-	-	-	-	-	-	-	-	-	-
wire	-	-	-	-	-	-	-	-	-	-	-	-	-	-
totals					1									

The results of the post-tests are shown in Tables 4.17 and 4.18. It should be noted that students 5 and 10 who took the pre-test were unable to take either of the post-tests.

Table 4.17. *Translation post-test six weeks after teaching*

words	**students**													
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
accuse (4)	-	✓	✓	-		-	✓	-	-		-	-	✓	-
brisk (-)	-	-	-	-		-	-	-	-		-	-	-	-
eventually (-)	-		-	-		-	-	-	-		-	-	-	-
fixed (6)	✓	✓	-	-		-	✓	✓	✓		-	-	-	✓
prediction (6)	-	✓	✓	✓		✓	-	✓	-		-	-	✓	-
proposal	-	-	-	-		-	-	-	-		-	-	-	-
steady	-	-	-	-		-	-	-	-		-	-	-	-
wire (11)	✓	✓	✓	✓		✓	✓	✓	-		✓	✓	✓	✓
96/27	**2**	**4**	**3**	**2**		**2**	**3**	**3**	**1**		**1**	**1**	**3**	**2**

Table 4.18. *Context-free translation test seven months after teaching*

words	**students**													
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
accuse (6)	✓	✓	✓	-		-	✓	✓	-		✓	-	-	-
brisk (-)	-	-	-	-		-	-	-	-		-	-	-	-
eventually (1)	-		-	-		-	-	✓	-		-	-	-	-
fixed (5)	✓	-	-	-		✓	-	✓	✓		-	-	-	✓
prediction (3)	-	-	✓	-		✓	-	-	-		-	-	✓	-
proposal	-	-	-	-		-	-	-	-		-	-	-	-
steady	-	-	-	-		-	-	-	-		-	-	-	-
wire (11)	✓	✓	✓	✓		-	✓	✓	✓		✓	✓	✓	✓
96/26	**(2) 3**	**(4) 2**	**(3) 3**	**(2) 1**		**(2) 2**	**(3) 2**	**(3) 4**	**(1) 2**		**(1) 2**	**(1) 1**	**(3) 2**	**(3) 2**

4.5 Discussion

4.5.1 The lexis of the course books

The three course books examined vary in size in terms of the number of words they contain. The Hungarian text book, Course Book C, provides the most tokens of the three and is some 40% larger, with nearly 34,000 tokens in it, than the smallest which is Course Book A with 24,000 tokens. This need not to be a problem since much will depend on what the teacher does with this material in class. Nevertheless, the course book does determine a good deal of what the teacher is able to do, of course, so potentially more problematic is the number of different words, the number of word families, which the three books introduce. Course Book C introduces new 1,610 word families during the three years of Grades 3, 4 and 5. Course Book A, again, provides the smallest number, introducing only 654 different word families.

These figures suggest that the rate of introduction of new words for learning are considerably less than suggested by, for example, Gairns and Redman (1986) or by Scholfield (1991) who suggest 8 – 12 and about 12 words per lesson. The course books examined in this study suggest a vocabulary input rates, per lesson and per hour of classroom instruction as indicated in Table 4.19.

Table 4.19. *Vocabulary input rates in the course books*

	Number of lessons (hours)	Vocabulary per course	Mean input
Course Book A	333 (250)	654	1.96 (2.61)
Course Book B	259 (195)	963	3.71 (4.93)
Course Book C	555 (416)	1,610	2.90 (3.87)

Input rates of less than 5 per hour challenge the opinions of teachers reported at the outset of this chapter who believe they teach double this and the difference is conceivably made up by oral input. The numbers, even in Course Book C which is the most heavily loaded of the three, mirror the observations in, for example, Konstantakis and Alexiou (2012) in English and in Tschichold (2012), that text books are frequently so lightly loaded with lexis that the communicative goals of the

courses cannot be met without significant and additional vocabulary input outside the classroom.

The analysis of the three course books also suggests that it is not just the number of new words presented, which are problematic, but also the quality and the selection of the words, may also create problems. The data in Tables 4.3, 4.4 and 4.5 suggest that in each of the courses the content is very heavily skewed to only the most frequent words. In Course Book A which is the most lightly loaded, over 92% of all the words included fall within the most frequent 2,000 words. This is probably an underestimate in that the off-list words are almost entirely names where no learning or translation is required. These highly frequent words are, of course, important because of their contribution to coverage and their importance in every form of normal communication. However, failure to present and teach the less frequent words, particularly what Schmitt and Schmitt (2014) call the mid-frequency vocabulary, also makes all normal communication effectively impossible since this vocabulary comprises much of the lexical vocabulary needed to provide content to language. It must also make, as Milton (2009) points out for a course book shorn of a variety in subject content and which is likely to be dull and uninteresting as a consequence.

The course book with the least heavy loading of highly frequent vocabulary is Course Book C where by grade 5 the text material contains a volume of words from the most frequent 2,000 words which is below 90%. Much of the text it contains, superficially at least, resembles relatively normal English.

4.5.2 The lexis of the teacher

It might be anticipated that the teacher talk for a class would closely resemble the language of the text book and there are observations in the literature, for example Tang and Nesi (2003) and Alsaif and Milton (2012), which suggest that the teacher can restrict oral input almost solely to this material. At the opposite end of the spectrum, however, Donzelli (2008) reports a teacher who uses her language of the classroom to significantly increase, in this case double, the lexis of the course book. Given the small volumes of vocabulary presented to learners, and the low rate of

input, which are observed in the course books it was anticipated (maybe hoped is a better word) that the teachers in Hungary would be among those who use the opportunity for teacher talk to enhance the lexical environment of the classroom. The results of the 4 classes observed and recorded for this study suggest, however, that this was not entirely the case.

One of the most striking observations to be found in Table 4.6 is how much the classes are dominated by the teacher and how little oral practice is given to the learners. It can be difficult to engineer a huge volume of oral language from students' oral classes (as noted by Alsaif, 2012 cited in Alsaif and Milton, 2012) and not every class can be given over to oral practice. However, these classes suggest that pupils contribute very little to the oral language of the classroom and in all four classes pupils contribute less than 1% of the oral language the class contained.

Table 4.7 reinforces how heavily the teacher talk focuses on the most frequent words in English and in doing this it appears to mirror the language which was observed in the text books. It might be noted too that part of this might be due to the way that spoken language particularly emphasises the more frequent lexis (as in Adolphs and Schmitt, 2003) but, nonetheless, the effect of this is a remarkably small number of words outside the first 2,000 most frequent words contributing to what Meara *et al.* (1997) characterise as a lexically poor classroom environment which does not appear well constructed to promote the growth of the large vocabularies needed for full comprehension and communicability.

4.5.3 Repetition and recycling in the course books

The figures for the repetition and recycling of words are harder to interpret. It might be thought that in an ideal course all the words presented for learning would be recycled in a variety of contexts and productive and receptive formats in order to expedite learning. There is evidence that a minimum number of repetitions of a word is necessary to promote retention. This may be as few as 3 (Edwards and Collins 2013) or as many as 10 or 11 (Pimsleur, 1967). However, as Vassiliu (2001) observes in his data, which compares lexical uptake to repetition in the teaching text, there often appears to be much learning of words where the words concerned occur

only once in a text and the presumption is that that either they are being recycled orally or learned in activities outside those presented by the text book. Nearly 50% of the words in his texts were not repeated.

As Table 4.10 shows the course books examined vary in the degree of repetition. In Course book A grade 3, which contains the smallest number of new word inputs, nearly 80% of all these words are systematically repeated 5 or more times. In Course Book B Grade 5, however, this figure is very close to 20%. There is no simple relationship here between the number of new inputs and the opportunity for recycling. The Course Book with the highest volume of input, Course Book C grade 5, has a comparatively high rate of recycling with nearly 50% of all the words it contains recycled 5 or more times. It seems that course book writers can be highly idiosyncratic in their practice. Since repetition and recycling within the text is varies, this ought to place an addition burden on the teachers using these texts to interpret this data and provide recycling of poorly repeated words either in oral language in the classroom or in extra-classroom activities.

4.5.4 Repetition and recycling in teacher talk

The calculations of tokens per word family, an indicator of the degree of repetition within a text and given in Table 4.11, are smaller in the teacher talk than in the textbooks but this is almost certainly due to the difference in the sizes of the corpora used. The teacher talk is much smaller and the opportunity for repetition is much less therefore. Much of this repetition, as in the course book data, must be the result of the way function and structure words are repeated to provide grammatically correct language.

Table 4.12 provides figures which indicate how many of the word families which occur in the teacher talk are repeated 5 or more times, the kind of numbers of repetition which might be calculated to aid learning. While the teacher talk of reach class is strikingly similar in some cases, as in the volume of talk, here there is variety with Class 4 containing a very large volume of repetition and Classes 2 and 3 and much smaller proportion with only about a third of words repeated five times or

more. It is not immediately from the subject matter or the learning aims of the class why this variety should occur.

4.5.5 Lexical uptake from the course books

The figures for the vocabulary sizes of the students using the course books examined in this chapter have been used to provide an estimate, admitted a rather crude one, of the lexical uptake from year to year and this can be used to give an idea of how much of the vocabulary taught by the text book is being retained by the learners. This information is provided in Tables 4.20, 4.21 and 4.22.

Table 4.20. *Lexical input and estimated uptake in Course Book A*

	Lexical input	Estimated lexical uptake
Grade 3	323	474
Grade 4	79	184
Grade 5	252	205
total	(654)	(865)

Table 4.21. *Lexical input and estimated uptake in Course Book B*

	Lexical input	Estimated lexical uptake
Grade 3	482	348
Grade 4	126	348
Grade 5	355	474
total	(963)	(1,170)

Table 4.22. *Lexical input and estimated uptake in Course Book C*

	Lexical input	Estimated lexical uptake
Grade 3	643	300
Grade 4	204	400
Grade 5	763	750
total	(1,610)	(1,450)

The results here are rather surprising and require some thought as to how they can be explained. In two cases, the learners using Course Books A and B, learning appears to exceed the volume of lexis being presented by the text book. In Course Book C learning appears to be at a rate where an average of 90% of the vocabulary is retained from presentation. Other studies of course book vocabulary, where uptake from the books has been measured, show nothing like this trend. Tschichold's (2012) analysis of French beginning course books in UK schools suggests that mean uptake

is very low at about 20% (Milton and Alexiou, 2012). Even in successful schools such as the Greek frontisteria described in Milton (2006) uptake rate is an average of about 50%. Even the figure of 90% uptake in Course Book C seems unlikely. It should be noted too that the figures for lexical uptake exceed too the lexical targets for the National Core Curriculum and this is shown in Table 4.23.

Table 4.23. *Hungarian National Core Curriculum vocabulary guidelines (Krizsán, 2003) and students' vocabulary achievements in School 1, School 2 and School 3*

	3rd grade	4th grade	5th grade
School 1	476	660	865
School 2	348	696	1170
School 3	300	700	1450
National Core Curriculum targets	*350*	*400*	*700*

It is possible, of course, that the vocabulary size measures are not performing well and frequency-based vocabulary size test have been criticised in the past for working unreliably among very low level learners. The figures for growth in the 4th and 5th grades are extrapolations drawn from cross-sectional data and this may also destabilise the results. But learner scoring patterns, and the outcomes, are very consistent. It could be that the teachers are supplementing the volumes of text book vocabulary with, it would seem, considerable oral lexical input as was noticed by Donzelli (2007 and 2008). This idea has, of course, been a focus of this chapter. It may be too that learners are engaged in learning outside the classroom and that there are sources of lexical input which we have not yet considered and this will be a focus of the next chapter.

4.5.6 Lexical uptake from teacher talk

The test of learners prior to the recorded classes indicate that the words being introduced orally by the teacher were almost entirely unknown by the learners. Only one word was identified and correctly translated by one learner, the theoretical maximum on this test had all words been known by all learners would have been 96.

It can be noted that the teacher did appear to be introducing words which were not containe in the textbook. Only three of the eight words tested were also covered in

the course book. It may be, therefore, that there was some attempt to expand the vocabulary of the book though oral exposure in the classroom. However, it may be that these were covered in later classes which were not recorded.

Retests suggest that these words were not being systematically learned by the students. Retention rates among these words are of the order of 27% both after six weeks and after seven months. This is a long way away from the minimum 90% uptake rate which appeared to be occurring from the words contained in the course book. It is also much closer to the rates of uptake noted among other learners in the literature. There are only a handful of words here but it is not noticeable that neither massive repetition, as in the case of the word *prediction*, nor exposure to words in both oral and written form, as in the case of the words *proposal* and *accuse*, makes them noticeably more learnable.

This brief study was highly experimental and a bigger study of both the language of the class and the textbook might make better sense of what is being learned and why learning is occurring as it does.

4.7 Conclusions

At the outset of this chapter it was reported that, contrary to what seems to be the generally held opinion, the learning of vocabulary in Hungary, and by extension the learning of foreign languages for communicative purposes generally, appeared good and comparable with learners in other countries. It was expected that Hungarian learners' vocabulary uptake, and their overall level of knowledge, would be poor and that this would explain their communicative failure. Without an investigation of vocabulary input, to place alongside these figures for vocabulary uptake, it was not clear how this result had come about or how this situation might be improved still further. It was suspected that the traditional methods for foreign language teaching might limit the kind of learning and communicability learners achieve with learners given very little opportunity for communicative practice in class. And yet, if this is occurring, then the learners appear to overcome this and to gain comparatively good levels of vocabulary. The study reported in this chapter, therefore, seeks to examine

the input and to investigate whether the learners' outcomes are the result of good input which has, as yet, been unsuspected.

The results of the study conducted in this chapter are not always easy to interpret. It appears that the course books used by students in Hungary are not providing learners with huge vocabularies. If learning was restricted solely to the content of the textbooks then the learners probably would not attain the levels of vocabulary knowledge, and by extension the communicative competence, they appear to have achieved. The degree to which these textbook focus on only most frequent vocabulary is also a feature, which seems likely to restrict communicative competence since without quite extensive mid and low frequency vocabulary it is impossible to gain the levels of coverage associated with comprehension an communicability.

Taken at face value the rates of vocabulary uptake among the learners examined here appear very impressive in the sense that uptake is greater than the content of the textbooks and this needs explaining. Potentially, it was thought that the teachers might be supplementing the content of the course books and that the learners' vocabularies might have grown through oral rather than written exposure and that communicative ability might be fostered by the use of this language in the classroom. However, it seems that teachers dominate the classroom orally and monopolise oral language. There is some evidence that the teachers may be adding to the vocabulary exposure of learners but where the uptake of words, which are known to have occurred in class is measured, the uptake rate is much lower than suggested by the use of a general and frequency-based vocabulary size test, and much more like the sorts of figures obtained by other studies in the literature. It is somewhat doubtful, therefore, that the learners examined in Hungary are getting this vocabulary from the classroom. This leads to a further question, therefore, which is what are they doing outside the classroom which could account for the lexical growth which was measured in the previous chapter. The final empirical element of this dissertation, as a result will be an investigation of this area of vocabulary learning among Hungarian school learners.

Chapter Five

Experiment three

Results of an informal strategy questionnaire on learners' formal and informal vocabulary learning

Introduction

In this chapter Hungarian learners' learning strategies will be investigated in order to supplement the picture we have already gained about English vocabulary learning in Hungary. Before discussing the vocabulary learning strategies it has to be determined what language learning strategies are. Oxford (1990) cited in Kafipour (2011, p.626) defines language learning strategies as particular activities used by language learners to make their learning 'easier, faster, more enjoyable, more self-directed, more effective, and more transferable to new situations.' According to Chamot (1987) cited in Zhi-liang (2010, p.154) language learning strategies are 'techniques, approaches or deliberate actions that students take in order to facilitate the learning, recall of both linguistic and content area information.'

Vocabulary learning strategies are very important and part of general learning strategies, which enable language learners, be able to learn words independently and more successfully. Nation (2001) points out that vocabulary learning strategies make learners able to take more responsibility for their own learning. According to him a large number of words can be acquired by using appropriate vocabulary learning strategies both inside and outside the classroom.

There are different vocabulary learning strategy classification systems. Schmitt (1997), for example, developed an extensive taxonomy of vocabulary learning strategies using Oxford's social, memory, cognitive and metacognitive categories. However, Schmitt produced a new category for those strategies learners apply when they discover the meaning of a new word without consulting anybody. These are called *Determination Strategies*.

Gu and Johnson (1996) also developed a vocabulary learning strategy list, including beliefs about vocabulary learning. These are metacognitive, guessing, memory (rehearsal), memory strategies (encoding) and activation strategies. Williams (1985) determines five strategies for working out the meaning of unknown words in a written text. These are: inferring from context, identifying lexical familiarization, unchaining nominal compounds, synonym search and word analysis.

Nation's (2001) taxonomy of various vocabulary learning strategies involves three general classes: 1) planning vocabulary learning, 2) sources: finding information about words and 3) processes: establishing vocabulary knowledge. Each of them is divided into a subset of key strategies. The strategies in the first category *planning* involve deciding on where, how and how often to focus the attention on the vocabulary item. The strategies, which belong to this category, are selected words, selected aspects of word knowledge to focus on, selected strategies and planning repetition. The second category in Nation's (2001) taxonomy includes getting information about the word. This information can come from the word itself, from the context, from reference sources like dictionaries, glossaries, analogies and from the connections with other languages. In Nation's (2001) taxonomy, processes the third category refers to vocabulary learning strategies. It includes establishing word knowledge through noticing, retrieving and generating strategies.

As presented by the classification of vocabulary learning strategies, suggested by different researchers, the range of different vocabulary learning strategies is huge. From this huge range Schmitt's classification (1997) was chosen as the measuring instrument for further use in this chapter. The following part of the study aims to take a closer look at Schmitt's (1997) taxonomy of vocabulary learning strategies.

Schmitt (1997) divides the strategies into five groups: *Determination, Social, Memory, Cognitive* and *Metacognitive strategies*. *Determination strategies* are used to help learners to clarify the meaning of a new word by using dictionaries, guessing the meaning with the help of context and structural knowledge of language. *Social strategies* are used to discover the meaning of unknown words by asking for help from someone. These strategies can motivate learners to interact with their teachers, classmates and native speakers. After the initial discovery of a word meaning, learners have to apply a variety of *Social, Memory, Cognitive* and *Metacognitive strategies* to stabilize new vocabulary. *Social strategies* are used to consolidate the meaning of new words in cooperative groups by studying and practicing together.

Memory strategies, traditionally known as Mnemonics, are a large number of strategies that help learners to acquire the new words through mental processing by linking their background knowledge to the new words. *Memory strategies* include

three subgroups: 1) using images to create a connection between the word and its meaning 2) using strategies to link words together to help vocabulary retrieval 3) using vocabulary knowledge aspects to stabilize the meaning of the words. *Cognitive strategies* are similar to *Memory strategies,* but are not focused on manipulative mental processing. They include repetition, note-taking and highlighting, making lists, using flashcards to make the meaning of the new words clear, labelling physical objects, and using a vocabulary notebook.

Metacognitive strategies include conscious planning, monitoring, decision-making, and assessment of one's advancement. They can also help learners to select suitable vocabulary learning strategies. Specific examples include using English language media, studying new words, paying attention to words when someone is speaking English, studying a lot of new words and skipping or passing new words.

The taxonomies demonstrated above all provide a list of widely applicable vocabulary learning strategies. Due to the class time limits there are many words that teachers do not have time to teach. Thus, students should be equipped with a large number of vocabulary learning strategies to acquire these words on their own.

Equally important, as Loucky (2006) states in his study, different vocabulary learning strategies are more appropriate at different levels of language learning and proficiency. 'Learners at beginning levels seem to benefit more from the use of bilingual dictionaries and word pairs. More advanced language learners, however, benefit from the use of both L1 and L2 tools because they are ready to process L2 explanations and use the L2 expressively' (Loucky, 2006 p.370).

From the point of view of this dissertation, it might be expected that learners use many of the strategies, mentioned above, both to access new words by language related activities outside the classroom, and to retain and recall these words once they have been accessed. One way to explain the growth of learners' vocabulary knowledge in Hungary beyond the input provided by the textbook and teacher, is to suggest that learners engage in activities, which supplement their learning activities.

Nowadays, besides the traditional language learning activities, many students use modern technologies as well, like mobile/smart phones or the internet, which potentially can provide an extremely large amount of foreign language input. Some of the input is made for the purposes of helping foreign language learners, but most of it comprises authentic programmes or applications, which are also useful sources for language learning purposes. Through these applications it is easy to access a lot of foreign language words and phrases, and understand longer talks without practicing the language in the language classroom. Due to the spreading of computers the internet has been playing a very important role in language learning and teaching. On the one hand English teachers can use it as a source to look for additional teaching materials and like this they can provide their students with numerous authentic texts. On the other hand, language learners can also use the internet for their independent learning. They communicate cheap and fast with native speakers or other learners of the target language from all over the world. Furthermore, learners of English and other languages have access to a large amount of authentic information in the target language.

Using these technologies is not just useful as language learning tools, but also very modern and therefore extremely motivating. In the following part some of these modern technologies will be introduced, like Computer-Assisted Language Learning (CALL), and Mobile-Assisted Vocabulary Learning (MAVL).

5.1 Computer-Assisted Language Learning as a tool for vocabulary learning

According to Ittelson (2000) computers have been used since the first half of the twentieth century, but in education they have been used only since the 1960s and in language teaching since the 1980s. Warschauer & Healey (1998) cited in Gündüz (2005) made a distinction between three stages of the history of CALL. These are the following: behaviouristic CALL, communicative CALL and integrative CALL. Behaviouristic CALL appeared in the late 1960s and was used in the 1970s as a useful tool for teachers who applied the techniques of the Audio-lingual method. Computers were used as mechanical tutors for repetitive language drills. Communicative CALL was used in the 1980s. The number of personal computers has been increased and the teachers who applied the techniques of the

Communicative Language Teaching method could apply computer based activities, which focused more on using forms like text reconstruction programs and simulations. Interactive CALL was created in the 1990s as a consequence of social and learner centred methods. Interactive CALL uses computers for task-based, project-based and content-based activities to integrate learners into authentic environments.

In terms of vocabulary learning Ma and Kelly (2006) identify two main periods in the history of CALL. They regard the 1980s as the early stages of CALL when technology was rather simple and vocabulary learning could be easily integrated in CALL programs. 'The earlier programs typically included a single type of language activity, such as text reconstruction, gap-filling, speed-reading, simulation and vocabulary games' (Ma and Kelly, 2006 p.15). In the later stages of CALL from the 1990s vocabulary learning had been viewed as a sub-component of a multimedia package especially in commercialized materials. In these CALL programs vocabulary learning was embedded in a context instead of being treated as an isolated activity. Furthermore, learners are given as much freedom as possible to choose what they want to learn and how to learn.

There is now a history of research, which aim to investigate whether modern technology can make language learning more effective, including vocabulary learning, than the traditional environment, methods and techniques. Kilickaya and Krajka (2010), for example, conducted a research which compared the efficiency of online vocabulary teaching and the traditional methods used in upper-intermediate Academic English classes. Students in the control group learned vocabulary items through vocabulary notebooks and cards while learners in the experimental group practised the same vocabulary items through *WordChamp*, which was a language teaching software. The study showed that the learners in the experimental group, who studied online, could recall the words better than the learners in the control group.

With the advent of technology, it can be argued too that the approach to language learning can be changed. According to Hai-peng and Li-jing (2007) with the emergence and popularity of Computer-Assisted Language Learning and Teaching

the teacher is no longer the key factor of the learning process and teacher-centred or book-centred instruction has been replaced by student-centred way of learning. This is a necessary change as far as the learning of vocabulary is concerned since, as it has been pointed out by Nation (2001) and Hai-peng and Li-jing (2007), teachers are not able to give explicit tuition and recycling to all the new words which their students need so they have to support students to develop their own vocabulary learning strategies, read and listen extensively outside of the classroom to obtain the required exposure to vocabulary.

Hai-peng and Li-jing (2007) suggest that CALL can help learning pronunciation, morphology and semantics as well. Through a multimedia environment students can acquire vocabulary from sounds, pictures and three-dimensional animations as multimedia applications help learners study words in context, which means that the can learn additional linguistic, semantic, syntactic and collocational features of a word, not only the ones mentioned in the English classes at school. Finally, computers can be used for vocabulary games as well through which students can learn new vocabulary in a more interesting, more motivating way instead of just reciting traditional word lists.

To sum up, it can be stated that since computers can play many different roles in language learning, they can be regarded as one of the most interesting and useful supports so far available to language teachers and learners. On the computers students can practice drills or communicate with native speakers. However, the computer is only a device which can be applied well or badly thus mindful choice of materials is needed.

5.2 Mobile-Assisted Vocabulary Learning

Mobile telephones/smart phones have gained large popularity nowadays. Everybody has at least one mobile or smart phone which can be used all the time and everywhere. Smart phones are very useful tools not only for our daily lives but for language learning purposes as well, providing an informal language learning environment. They are miniature computers with internet access and with lots of applications.

Bahrani (2011) argues that in our digitally dominated age characterized by the fast and extensive growth of mobile phones 'everybody should be able to learn as much English language as they want at ease even without having to attend any English classes. This may be somehow difficult but is not impossible to achieve' (Bahrani, 2011, p. 245).

According to Pea& Maldonado (2006) cited in Bahrani (2011, p.245):

> Rapid advancements in information and communication technology have together made this potential of mobile phones to a great extent possible. Moreover, the increase in processing power, storage memory, and connectivity through the internet or the Bluetooth technology have resulted in an extensive growth in media richness that can provide access to highly personalized learning environment for everyone in informal setting.
>
> (Bahrani, 2011, p.245)

After having discussed the literature focused on the pedagogical aspects of mobile phones, in his study, Bahrani (2011) focuses on some important effects of use of mobile phones in improving reading comprehension. According to him teachers can develop pedagogically effective and culturally appropriate reading content for language learners so that they can read on their mobile phones. Smart phones, having a large capacity to store content, can store a large number of words and texts which could be read again and again exposing the language learners' informal settings to the language they want to acquire.

Moreover, there have been an increasing number of studies examining how mobile phones are used for vocabulary learning purposes. Thornton and Houser (2005) conducted a study in which learners watched video lessons about English idioms on their mobile phones in class and did short multiple choice activities on their mobile phones afterwards also in class with the idioms they had learned. In the end a positive feedback was given by the participants who found the materials both fun and useful.

Basoglu and Akdemir (2010) cited in Zhang, Song and Burston (2011) carried out a research to investigate vocabulary learning with mobile phones and with paper flashcards. The experimental group studied the target words by using a vocabulary

program on the phones for six weeks in their extracurricular classes while the control group studied the same words using paper flashcards during the same period of time. The results of their study revealed that the performance of students in the experimental group was better than that of the students in the control group.

5.3 Other means of vocabulary learning outside the class

In addition to these very modern means of accessing vocabulary in English, there are other and more traditional techniques which can support learning opportunities. Horst and Meara (1999) investigate the learning of Dutch vocabulary from reading and re-reading a comic book, *Lucky Luke* again and again once a week for eight successive weeks. The students was tested each week against the vocabulary of the comic book to discover the volume of words gained from reading. The results were surprising and encouraging given the low levels of lexical uptake described in activities elsewhere in the literature. This could be as small as one word per hour in (Horst *et al.* 1998), and between one and five words per hour from a normal classroom work, depending on the quality of the teaching and the learners (Milton and Meara, 1998). By contrast in Horst and Meara's study the rate of uptake has been calculated at over 30 words per reading hour (Milton, 2008). If reading is given a vocabulary learning focus, as it was the case in this study, given the weekly tests and the interests of the researchers, then it seems vocabulary learning really can be a more rapid process than it has previously been thought.

Milton (2008) extends Horst and Meara's (1998) case study methodology to examine learning vocabulary from songs and from films with subtitles. Uptakes are larger than classroom learning in both of these cases. Rodgers and Webb (2011) suggest that passive exposure to television programmes may also have an important role to play in vocabulary acquisition. Here the rates of uptake may not be so great but given the hours that learners are prepared to spend watching TV programmes in a foreign language, the rate of uptake of only one or two words per hour can, over time, make a significant contribution to the growth of a well-formed foreign language lexicon. This leads Milton (2011) to suggest that the use of these activities can explain how learners can develop vocabularies of native-like size when formal classes appear not

to provide the exposure to vocabulary required to achieve this.

5.4 Aims of the study

This chapter discusses the methods and procedures being used in the data collection process. Firstly, the statement of the problem as well as the research purposes and the research questions are illustrated. Secondly, the hypotheses are described. Thirdly, the participants and the setting in which the study was conducted are introduced. After that, the data collection instrument, the data collection procedure, and the data analysis are discussed. Finally, this chapter discusses the results received from the questionnaire to investigate vocabulary learning strategies used by the respondents participated in this survey, and lastly the most and least frequently used vocabulary learning strategies are compared. Mean scores and standard deviation of each vocabulary learning strategy are shown in the Tables 5.2, 5.3, 5.4 and 5.8 for illustration. The results are described into two parts: the respondents' general background information and the use of vocabulary learning strategies.

As stated earlier the aim of the study is to examine the use of vocabulary learning strategies in a formal and an informal learning environment, the most and least frequently used strategies by the same secondary school students who had been the participants of the orthographic and aural vocabulary research. Consequently, the results of the study will hopefully get us closer to understand English vocabulary learning processes, and this will in turn facilitate better understanding of overall second language acquisition. To accomplish such purposes, the study investigates the following research questions:

1. What vocabulary learning strategies do English language learners, in a secondary school, in Hungary use?
2. What strategies are used to enhance vocabulary studied in the classroom?
3. What types of strategies are favoured by learners in Hungary?
4. What differences in strategy use can be found among learners in different grades?
5. Do secondary school students prefer vocabulary learning supported by technology to traditional ways of vocabulary learning?

5.5 Expectations

At the outset of this study and from current understanding of foreign language teaching in Hungary, it might have been expected that the range of vocabulary learning strategies actively employed by Hungarian secondary school students is limited. However, given the findings of the study it may be that learners are taking more of the initiative and are able to enhance their language learning experience both inside and, especially, outside the classroom to promote the growth of vocabulary to the levels where they become communicative.

Earlier in this study, too, it was thought that the vocabulary learning environment of the classroom might be unstimulating for learning of extensive vocabulary. Such evidence as we have so far, for example, the way the teacher monopolises talk in the classroom and creates a lexically poor environment, might be seen as supporting this assumption.

Given the availability and attractiveness of modern technology-driven learning techniques it might be expected that the secondary school students would prefer Computer-Assisted vocabulary learning to traditional vocabulary learning.

In the next part learning strategies of students with two different levels of English knowledge are examined. It might be expected that students use a lot of out of classroom English tasks on their computers or on their mobiles and it can also be expected that the preferences for strategy use would change with age and level.

5.6. Methodology

5.6.1 Participants

Twenty-one students participated in this study, including those who had participated in the X_lex and A_lex testing before. The number of the new participants was ten who were studying in a language preparatory class, which means that they had twelve English lessons a week in grade 9 where they had four General English, four English Vocabulary and Communication Development and four English Grammar

classes. However, from grade 10 they had only four English lessons a week altogether, similarly to the students in the control group who studied in regular classes. The other eleven students had already participated in the previous projects. The subjects' age ranged between 15 and 18 years of age.

5.6.2 Questionnaire

The method employed to collect data in this study was a seventy-one-item questionnaire based on Schmitt's Taxonomy. It was designed specifically for the goals of this study. Some items in the questionnaire (e.g. items 8, 10, 11, 12, 15, 16, 18, 19) regarding classroom work strategies that students do not use without teachers asking them to do so. For example: item 19 *'I study new words with solving crosswords.'* students cannot use this strategy unless the teacher provides them with the suitable tools and asks them to do this task. Thus, some of the items included in this questionnaire give valuable insights into the strategies the teacher promotes and become students' own strategies. However, most of the strategies are related to informal home learning context.

The questionnaire for this survey is based on Schmitt's Taxonomy for vocabulary learning strategies since it provides one of the most comprehensive lists of strategies available and it is matched with the purpose of this study. However, some modifications were made in order to suit the subjects' learning environment.

Many of the items were chosen from Schmitt's questionnaire but some other items were also added, taking into consideration the fact that vocabulary learning as part of learners' second language learning can take place in a computer-supported informal learning environment and that their mother tongue is Hungarian. For example: *I watch films in English with Hungarian subtitles. (home) or I use online language translator programs.(e.g.: Google Translator) (home) and I watch English language videos on YouTube. (home).* After the items in the questionnaire were finalized the questionnaire was translated into Hungarian since it was assumed that it would not be valid if the students did not understand the questions.

The questionnaire in Hungarian language consists of 71 items classified by six types of strategies, which were adapted from the vocabulary learning strategy classification based on Schmitt's Taxonomy (2000): *Determination* (Discovery), *Social* (Consolidation), *Memory*, and *Cognitive* in order to make them suitable for the subjects of the study.

5.6.3 Details of the Questionnaire

The vocabulary learning strategy questionnaire consists of two parts.

The first part of the questionnaire focuses on information concerning the students' general background. Data in this section included the respondents' details about their age, class, group and how long they have been studying the English language.

The second or main part of the questionnaire lists, in the format of a chart, altogether 71 items concerning different vocabulary learning strategies. Distinction was made between learning words at home and learning them at school. The first 19 items were directed to learn about the types of strategies used while learning words in the English classes and the following 52 items were directed to learn about the strategies used while learning English words outside of the classroom. Because of the 'home' and 'outside of the classroom' division some items appear in both sections. Moreover, a further distinction was made between strategies for discovering the meaning of a new word and strategies for memorizing the meaning of a new word. The following scales were used to indicate the frequency of the use of each strategy:

0=never	1=seldom	2=sometimes	3=often	4=very often

(See Appendix B)

5.6.4 Data collection procedures

1. The survey was carried out between March 5th and 7th, 2006.
2. The questionnaires were distributed to the participants by the teacher and they completed during an English class.
3. The participants were explained how to respond to the items and were asked

to respond to the questionnaire honestly without consulting the answers with their classmates since they may learn words totally differently. They were asked to cross the right columns depending on how frequently they use the strategies presented. It took about 25-30 minutes for the students to complete the Hungarian language questionnaire.

4. The questionnaires were collected right after the respondents finished filling them out.
5. From all of collected respondents' answers, 21 questionnaires had been distributed and 21 questionnaires were returned that is, 100% of the respondents' responses. All of the questionnaires were analyzed. They were retrieved and were ready for coding.

5.6.5 Data analysis

Quantitative data analysis was carried out in this survey. Descriptive statistics with means, standard deviation, percentage and frequencies were calculated to sum up the respondents' answers regarding the 71 strategies in the questionnaire and the differences between the responses of the 10^{th} grade students and the 11^{th} grade students.

5.7 Results

5.7.1 General background information

The participants' background information includes their class, age and their experience with the English language. The proportion of the 10^{th} grade students was 48% and the proportion of the 11^{th} grade students is 52% (see Table 1). This, indeed, provides a rather balanced distribution.

As it can be seen from the results the majority of the students (52%) were 17 years old, seven students (33%) were 16 years old, two students (10%) were 18 years old and one student (5%) was 15 years old. Regarding the years they had been learning English for the majority of the students (48%) this is 4 - 7 years, eight students (38%) had been learning English for 8 - 10 years, two students (10%) had been

learning English for 1-3 years and one student (5%) had been learning it for more than ten years.

Table 5.1. *The Respondents' General Background Information*

Characteristic	Frequency	Percentage
Class		
10th grade class	10	47.62 %
11th grade class	11	52.38 %
Total	21	100 %
Age		
15 years old	1	4.76%
16 years old	7	33.33%
17 years old	11	52.38%
18 years old	2	9.52%
Total	21	100 %
Years of English		
1-3 years	2	9.52%
4-7 years	10	47.62%
8-10 years	8	38.10%
More than 10 years	1	4.76%
Total	21	100 %

5.7.2 The use of vocabulary learning strategies

As illustrated below in Tables 5.2 and 5.3, many vocabulary learning strategies were not very frequently exploited by the respondents of this survey. These tables display the most used strategies and the mean scores they obtained. Rarely used strategies can be found in Appendix C.

Table 5.2. *Frequently used strategies with the means of over 3*

Item Number	Item in the questionnaire	Mean	Standard Deviation
68	I listen to English songs. (home)	3.33	1.06
13	I write the new words in the (vocabulary) notebook. (lesson)	3.14	1.28
65	I watch English language videos on YouTube. (home)	3.05	1.28

Table 5.3. *Often used strategies with the means of between 2 and 3*

Item Number	Item in the questionnaire	Mean	Standard Deviation
66	I pick up new words when playing computer games in English. (home)	2.90	1.26
22	I look up the meaning of an unknown word in an online dictionary. (lesson)	2.86	1.24
61	I watch films in English with Hungarian subtitles. (home)	2.76	1.41
2	I try to understand the meaning of an unknown word on the basis of the text. (lesson)	2.67	1.35
6	I ask the meaning of an unknown word from the teacher. (lesson)	2.57	1.16
58	I watch online videos in English. (home)	2.57	1.33
7	I ask the meaning of an unknown word from my class mate. (lesson)	2.33	1.20
40	I write new words in the (vocabulary) notebook. (home)	2.33	1.62
54	I use online language translator programs.(e.g.: Google Translator) (home)	2.29	1.06
25	I try to understand the meaning of unknown words on the basis of the text. (home)	2.24	1.22

5.7.3 The use of different vocabulary learning strategies

The questionnaire allowed different categories of vocabulary learning strategy to be identified and the mean scores for items in each category are summarised below.

Table 5.4. *The use of the six categories of strategies*

The strategy type	Mean
Social (Discovery)	1.90
Metacognitive	1.46
Determination	1.41
Social (Cons)	0.91
Cognitive	0.90
Memory	0.82

5.8 Discussion

5.8.1 The use of vocabulary learning strategies outside the classroom

There are three strategies in the questionnaire, which inquire about out of the classroom language learning strategies:

- item 68 *'I listen to English songs'*,
- item 13 *'I write new words in the (vocabulary) notebook.'* and
- item 65 *'I watch English language videos on YouTube.'*

These three strategies have a mean over 3, which means that they are used *often* by many students. The average of 10 strategies out of 71 is over 2 and are therefore quite widely used. The average of 27 items are between 1 and 2, and 33 are virtually not exploited by the students at all. Item 44 *`I put labels on the objects or the wall.* (home)` having a mean of 0 is not used by anybody from the participants.

A list of the five most and five least used strategies outside the classroom is provided in Table 5.5.

Table 5.5. *The five most and five least used strategies outside the classroom*

No	Item No	Item in the questionnaire	Mean
Home: Five most frequently used strategies			
1.	68	I listen to English songs. (home)	3.33
2.	65	I watch English language videos on YouTube. (home)	3.05
3.	66	I pick up new words through playing computer games in English. (home)	2.90
4.	22	I look up the meaning of an unknown word in an online dictionary. (lesson) (home)	2.86
5.	61	I watch films in English with Hungarian subtitles. (home)	2.76
Home: Five least frequently used strategies			
1.	44	I put labels on the objects or the wall. (home)	0.00
2.	45	I tape new words and listen to them. (home)	0.10
3.	48	I repeat new words by spelling them. (home)	0.14
4.	43	I use vocabulary cards for studying new words. (home)	0.14
5.	39	I keep a diary in English. (home)	0.14

This information is interesting in providing a picture of language learning outside the classroom which might explain how learners gain the vocabularies they know. There are four activities, included in the list of the most used strategies, which were noted in section 5.4 as particularly conducive to rapid vocabulary growth. Many students in Hungarian schools listen to English language songs, watch English language videos and films with subtitles, and use computer software in English. If the responses are to be believed they like to do these activities quite frequently so the opportunity for vocabulary growth outside the formal lessons appears considerable. There may not be a wide variety of these activities which are well used but the ones which are used appear particularly effective.

The list of least used activities is less informative and some of them would probably be more suitable for beginner level learners, such as, 'I put labels on the objects on the wall' if they were told to do so.

5.8.2 The use of vocabulary learning strategies inside the classroom

As it was expected vocabulary learning in the classroom is rather traditional in nature. The five most and least used strategies are given in Table 5.6.

Table 5.6. *The five most and five least used strategies inside the classroom*

Item No	Item in the questionnaire	Mean
13.	I write new words in the (vocabulary) notebook. (lesson)	3.14
2.	I try to understand the meaning of an unknown word on the basis of the text. (lesson)	2.67
6.	I ask the meaning of an unknown word from the teacher. (lesson)	2.57
7.	I ask the meaning of an unknown word from my class mate. (lesson)	2.33
4.	I try to understand the meaning of an unknown word by looking at the accompanying picture. (lesson)	1.90
11.	I repeat new words with the tape. (lesson)	0.38
12.	I repeat new words after the teacher. (lesson)	0.48
16.	I group words in the notebook based on a topic or I do a mind map. (lesson)	0.62
10.	I learn some new words when working in group work. (lesson)	0.71
5.	I associate English words with Hungarian words based on the pronunciation or spelling. (lesson)	0.71

It seems that strategies are directed to exploit the language of the classroom itself which is centred on the reading material provided by the course book. Thus, students learn vocabulary by working out the meaning from context, from pictures, or by asking classmates or the teacher. The most frequent strategy is *the use of a notebook to record new words.* Item 13 *'I write new words in the (vocabulary) notebook'* is the most frequently used vocabulary learning strategy in the lesson. This strategy is not among the five most frequently used strategies although it could be used there and this suggests that informal language learning can be just as effective as more formal approaches.

The activities which are well used activities identified in Milton and Fitzpatrick (2014) as the ones least associated with vocabulary growth and include meaningless repetition (item 11) and sound games also divorced from meaning (item 5). This is likely too, to reflect the style of many teachers' vocabulary teaching. In these cases the students cannot practice the new words unless their teacher does not ask them to do so.

5.8.3 The use of different categories of vocabulary learning strategy

The 71 items of the questionnaire are classified by six types of strategies: *Determination, Social* (Discovery), *Social* (Consolidation), *Memory, Cognitive* and *Metacognitive*, which were adapted from Schmitt's (2000) vocabulary learning strategy classification. The findings (see Table 5.4) show that in the six categories, the students used *Social* (Discovery) strategies most frequently at the highest mean score (1.90). At the same time the least used strategies were *Memory* strategies with the lowest mean score (0.82).

Regarding the *Determination* strategies, the results show that the students use the strategy item 22 *'I look the meaning of an unknown word up on an online dictionary'* most frequently (mean: 2.86) (see Appendix D for a complete overview). In the meantime, the least used strategy was item 23 *'I use a CD-ROM-based dictionary to find out the meaning of it'* (mean: 0.19).

In terms of *Social Strategies* for Discovery, the results show that to ask people for help in vocabulary learning the students use item 6 '*I ask the meaning of an unknown word from the teacher*' most frequently (mean: 2.57). Meanwhile, the least used strategy was item 27; "*I ask the meaning of an unknown word from my mother, brother or sister*' (mean: 0.81).

According to the frequency of *Social Strategies for Consolidation* the results show that the strategy, which the respondents exploit most frequently was item 31 *'I chat in English with foreign people on the internet*' and item 33 '*I read blogs, forums and comments made by readers in English'* with equal means 1.71. While the least used strategy was item '*I write blogs in English'* (mean: 0.29).

The *Memory Strategy*, which the students most frequently use for memorizing and retrieving new words, was item 18 *'I study words of an expression as if they were just one word (e.g. What a pity!)'* (mean: 1.29). The strategy which the respondents use least frequently was item 39 '*I keep a diary in English*' (mean: 0.14).

The *Cognitive Strategy* that the respondents use most frequently to improve their vocabulary retrieval was item 13 *'I write new words in the (vocabulary) notebook'* (mean: 3.14). While the strategy '*I put labels on objects or the wall.*' is not used at all.

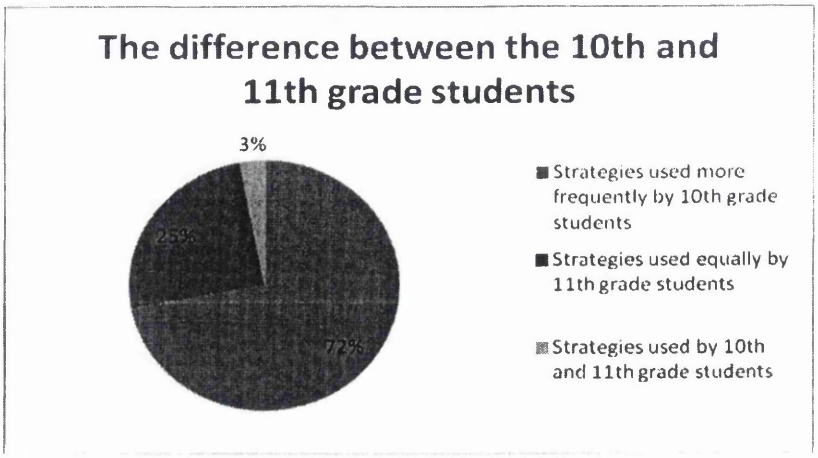
The most frequently used strategy of *Metacognitive* was item 68 '*I listen to English songs'* (mean: 3.33), meanwhile the least frequently used strategy was item 53 '*I read English texts on my e-book reader*' (mean: 0.33).

5.8.4 The use of different strategies in different grades

To look at the answers given by 10^{th} grade students differed in many aspect from the answers given by 11^{th} grade students as it is seen in Diagram 5.7 (see Appendix E for a complete overview of the differences). The diagram shows that the 10^{th} grade students had average scores higher than 72 percent of the strategies (51 items) and the 11^{th} grade students than 25 percent of the strategies (18 items). The mean was equal for two strategies which is 3 percent. As expected, this shows that the 10^{th} grade students use three times more strategies more frequently than the 11^{th} grade

students. Moreover, the differences between the means are more than 1 in case of 6 strategies (see Appendix E).

Diagram5.7. *The difference between 10th and 11th grade students*



The results are not surprising because the 10th grade students were studying in a language preparatory class, which means that they had 12 English lessons a week in their 9th class including four vocabulary and communication development classes where they had opportunities to learn and practice more words and expressions as well as vocabulary learning strategies than the students attending regular classes.

The 10th grade students tend to learn new words when listening to songs, English language media and Podcasts (items 68, 52, 56); watching English language videos and films with subtitles or without them (items 65, 61, 58, 62, 63); playing computer games (item 66) and reading the rules of computer games (item 59). While the 11th grade students prefer using online translator programs (item 54); chatting on the internet (item 31); reading blogs, forums (item 33) and texts on their e-book readers (item 53) and corresponding with native speakers in writing (item 30).

In order to find out the meaning of new vocabulary the 10th grade students use online and printed dictionaries more frequently than the 11th grade students who show preference for asking the meaning of the new words from the teacher, from their classmates or from their family members. This could be explained by the fact that much more dictionary use is taught for language preparatory students than regular class students.

5.8.5 The use of modern and more traditional technologies

Additionally, as the results show, learning vocabulary through modern technology, for example the use of computers and videos, is more popular than traditional ways of vocabulary learning, for example, using printed dictionaries, verbal repetition among secondary students (See details in Appendix E .).

Table 5.8. *CALL vocabulary learning strategies versus traditional vocabulary learning strategies*

	Mean	Standard deviation
Traditional vocabulary learning strategies	0.95	1.00
CALL vocabulary learning strategies	1.44	1.17

The table shows that the average mean of the strategies for which some kind of modern technology device is needed is 1.44. While the average mean of traditional vocabulary learning strategies is 0.95. The results are not surprising because secondary school children spend much of their spare time in front of their computers so it is understandable that they exploit the opportunities offered by computers for language learning purposes, too.

5.9. Conclusion

This research set out to investigate vocabulary learning strategies in a formal and in an informal context used by secondary school students in Hungary. It focused on how new vocabulary is studied in the classroom and at home, and whether students prefer the use of Computer-Assisted Vocabulary Learning to traditional ways. The results suggest that the range of vocabulary learning strategies actively employed by Hungarian secondary students is rather limited. The majority of strategies in the questionnaire recorded relatively low means. The strategies used in the classroom aer used to consolidate the language of the classroom itself and particularly the textbook. The top five strategies in the classroom are all concerned with elucidating the meaning of a new word in a text or helping to memorise it. There are no obvious strategies used to expand the language of the textbook and enhance vocabulary size and understanding beyond the realms of the textbook.

It has been noted that the course books are limited in their range of vocabulary and might not offer to learners a wide range of opportunity to develop to the levels of competence that the learners might aspire to or that the education system in Hungary more generally might hope and expect. However, the activities identified outside the classroom seem likely to contribute to the expansion of vocabulary perhaps to the point where it can reach fully communicative levels. This observation may explain the disparity between the vocabulary of the textbook and the vocabulary sizes noted among learners.

Language preparatory students had 12 English lessons a week in their 9th class including four vocabulary and communication development classes where they had opportunities to learn and practice more words and expressions as well as vocabulary learning strategies than the students attending regular classes.

It seems too that learners are very comfortable learning vocabulary informally using modern technology including computers and tend to avoid the more traditional methods such as repetition, and this has, it might be suggested, given rise to the learners' ability to enhance their knowledge beyond the resources provided them by the teacher, the textbook and the classroom.

Chapter Six

Discussion

Introduction

The starting point for the studies in this dissertation was the belief that seemed to be present in the academic literature on foreign language learning in Hungary, that the Hungarian system was performing poorly especially in relation to comparable learners in other countries. Nagy and Krolopp (1997) and Noijons and Nagy (1995), for example, compared listening and reading skills with learners in Croatia and the Netherlands and concluded that Hungarian learners performed the least well. Nikolov (in Fekete *et al.* 1999) investigated all the four skills and concluded that Hungarian learners ranked close to bottom in a European scale and lagged 40% behind learners in the top scoring countries in this story. This tied with the impression which also abounded in Hungary that teachers were still tied to traditional modes of delivery, a product of the teaching of Russian, from which background many teachers came, and this might limit the kind of communicative progress which Hungarian learners were capable of making.

Nikolov's conclusion is an interesting one since, as Milton (2009) points out, assessment of performance of language skills has to be graded rather than measured and the quantification of the differences in grades, as performed by Nikolov, can lead to conclusions which are questionable. Milton goes on to suggest that if a quantification of language knowledge is required then measurements of vocabulary are probably the only aspect of language which can be quantified in any meaningful way. Measuring vocabulary knowledge is a useful metric in its own right, as a crucial element of language, but also ties in with other aspects of language knowledge (N. Ellis, 1994), such as grammatical knowledge, and with performance on language skills (e.g. Stæhr, 2008). There already exist measurements of learners' vocabulary knowledge, tied to hierarchies of skill and ability as in the CEFR, from a variety of countries. Reassessing the performance of Hungarian learners from the standpoint of vocabulary knowledge seemed like a useful thing to do to confirm the conclusions of earlier researchers quantify the shortcomings of these learners and, maybe, help plan a way to improve the situation of these learners.

As the three studies reported here show, things have not worked out quite so neatly. The results of vocabulary size tests on learners English in Hungarian state schools, in the first study, contradicted the conclusions of the earlier comparative studies. Hungarian learners, it seems, are probably highly comparable with learners elsewhere. This was a surprise given the impression of limited and communicatively undemanding teaching which, it was believed, was taking place. This led to the second study, to investigate the vocabulary of the classroom, to see whether the text books and the language of the teacher were significantly different to what was expected and could explain the unexpectedly large vocabulary sizes which Hungarian learners displayed. The results of the second study suggested that it was not clear at all that the large vocabularies and likely good communicative performance of Hungarian learners could be explained by learning in the classroom. The course books appeared limited in their vocabulary demands, and the teachers appeared to supplement this little, leading to a lexically poor classroom environment. It did not seem likely that the learners' knowledge, at least on the scale that appeared to exist, came exclusively from the classroom. This occasioned the third study into the strategies of learners which was designed to assess what learners were doing in class, and also what they were doing in English outside of class, which might explain their good vocabulary knowledge. This confirmed that in the classroom learning focussed on the teaching texts, but also suggested that many learners like to undertake activities in English, such as listening to songs and watching English language videos, which might well explain high vocabulary knowledge. The language learning environment in Hungary, it seems, is not as bad as was imagined but its good features come from the interests and motivations of the learners rather than the calculations of the syllabus or the methods of the teachers.

It is worth considering each of these steps along the way to this conclusion, in greater detail.

6.1 Vocabulary size in Hungarian school EFL learners

Assessments of vocabulary size have proven themselves to be very useful and reliable measurements which can be highly informative of all the language skills. Measurements of vocabulary size correlate well with reading comprehension (for

example, Laufer 1992; Beglar and Hunt 1999; Qian 1999; Stæhr 2008), with writing ability (for example, Astica 1993; Nation 1995; Laufer 1998; Stæhr 2008), with listening comprehension (Zimmerman, 2004; Stæhr, 2008; Milton *et al.* 2010), and with oral fluency (Zimmerman, 2004; Milton *et al.* 2010). If learners in Hungarian schools were truly performing poorly in relation to comparable learners elsewhere in tests of their communicative ability, one of the features of their knowledge which would be expected would be lower levels of vocabulary knowledge.

The Hungarian education system does contain some information on its vocabulary requirements in the *National Core Curriculum* vocabulary guidelines (Krizsán, 2003) which is summarised in Table 2.4 in Chapter 2. These guidelines suggest that comparatively little vocabulary learning is expected and that learning is expected in the first six years, up to grade 8, maybe only 200 or 300 words annually, and that progress is expected to be uneven. No vocabulary guidelines are provided for learners at grades 10 or 12 when they typically take the *Matura* exams. However, these exams are pitched at CEFR levels B1 and B2 and the literature contains vocabulary sizes which learners typically display when taking and passing these exams (e.g. Milton and Alexiou 2009 and Milton 2010). The literature also includes figures for lexical uptake per hour of teaching, from a wide variety of countries and sources, against which Hungarian learners might usefully be compared.

Both groups of students investigated in Chapter 3 exceeded the vocabulary demands of the *National Core Curriculum*. It is not clear from the *National Core Curriculum* document, exactly how these figures it contains have been arrived at, nor how literally they should be taken. The *National Core Curriculum* figures do not appear to mesh well with the aim for learners to achieve level B1 at the end of Grade 10 and B2 at the end of Grade 12. It may be the creators of the curriculum have underestimated the vocabulary demands of exams at these levels or else they appear to require a substantial burst of vocabulary progress during the years after grade 8 and leading up to the *Matura* exams. The students tested in this dissertation were, approximately, at B1 level in Grade 10 and B2 level at Grade 12 at least as far as their vocabulary knowledge is concerned. Clearly, whatever the learners were doing, they were making more realistic progress towards their goal than the curriculum was able to provide them with. On this assessment, the learners in Hungary appear

exactly comparable with learners in other countries who take these exams and whose performance is reported in Milton and Alexiou (2009) and Milton (2010). If the curriculum document is to be useful to teachers and students, however, then it would make sense if this information were revisited to include vocabulary figures for the entirety of the language learning programme and to include better targets at the exam levels. Without this, learners taking externally validated exams are likely to fall short of the requirements, or the internal *Matura* exams will compare badly to external exams such as Cambridge FCE and CPE.

As measured by rate of learning progress, the learners in Hungary also compare well with learners in other countries. Milton and Meara (1998) suggest that an uptake rate of 3 to 4 words per contact hour would appear to be good progress in relation to rates observed elsewhere. Learners in Hungary apparently grow their English lexicon at a rate of about 500 words per year, well in excess of this rate and comparable with the best learners in Milton and Meara's review. This is summarised in Table 3.8 in Chapter 3. As measured by vocabulary knowledge, therefore, Hungarian learners display nothing that could suggest that they are a foreign language learning 'poor relation' in Europe. But the relationship between vocabulary knowledge and performance in language skills is so strong that this ought to mean too that Hungarian learners are comparable communicatively with other learners in Europe. The observations and conclusions made by Nikolov (in Fekete *et al.* 1999), (Nagy and Krolopp (1997) and Noijons and Nagy (1995) have to be challenged in the light of this information.

It is not at all clear how Nikolov and the others could have arrived at conclusions so different from those made here. It may be a product of the methodology used for assessing language skills. It has already been noted that language skills are usually graded rather than measured. Indeed, they have to be graded against performance criteria since we have no quality within the construct of, say speaking skill, which can be objectively measured. Because these assessments are made subjectively by many individuals in different countries, the possibility for different kinds of interpretation of the performances and the grade criteria, creeps in. The potential effect of this for destabilising large scale assessments of this kind is illustrated in Daller and Phelan (2007) in Daller *et. al.* (2007). Figures for inter-rater reliability in

their study of the assessment of written essays, even among experienced and fully trained assessors, sometime failed to reach even 0.7. The implication of this is that the grade a script or a student receives may depend as much on who is marking it as much as the content of the script. The studies provide us with little reassurance that the test and methods they used have avoided this shortcoming.

The possibility of a discrepancy between a measurement of knowledge, as in the tests of vocabulary, and communicative ability was contemplated in the creation of the testing methodologies in Chapter 2 and led to the inclusion of the aural A-Lex test (Milton and Hopkins, 2005) in addition to the written X-Lex test. There is potentially a big difference between knowledge of language and having the ability to activate and use that knowledge communicatively. The significance of the A-Lex test is that scores on this test correlate well with scores on tests of speaking performance as measured by the IELTS speaking component where there the written equivalent, X-Lex, predicts fails to do this so well but does predict scores on written performance and reading well (Milton *et al.* 2010). Despite the fact that the tests conducted are tests of receptive knowledge they are generally taken to be excellent predictors of productive performance and therefore of communicability and therefore should give a good idea of how well Hungarian learners are able to perform in English.

One final reason for the disparity between the scores on the tests conducted in this study and those conducted elsewhere may lie in the degree of test preparedness for the type of language activity used in the studies by Nikolov and others. If the Hungarian students were unfamiliar with the test or activity types then their scores may possibly have been lower than students elsewhere with the same knowledge and skill but with higher test preparedness. Details of the test themselves, and the characteristics of all the learners are lacking but the results of the tests in this dissertation does suggest the results gained elsewhere might also be revisited and the learners performance reinvestigated with a rather more rigorous control of test format to try to eliminate this kind of difference.

6.2 Course book and teacher input to learning

It was hoped that an investigation of the vocabulary content of the course books used in Hungarian state schools, and of the teacher talk to which these learners are exposed, might be revealing in explaining the test scores. Course books are considered to be a good source for vocabulary, which are obviously to be found in the different reading and practice materials these books contain. Course books might be used as a framework or guide that helps learning both inside and outside of the classroom, during discussions, while doing activities and exercises, studying on their own, doing homework, and preparing for tests (Hutchinson and Torres, 1984, p. 318). Häcker (2008) describes them as the predominant lexical input for the majority of children who neither use the target language outside of the school nor read books in the target language. It was expected that the learners Häcker (2008) describes would be similar to most students in Hungary.

Course books, however, have been criticized by some specialists. Thornbury (1999, p. 83) claims that topics and texts in the course books lack the capacity to engage learners cognitively. He adds that those texts are presented only for the purpose of language presentation. Thornbury and Meddings (2001) go beyond that by suggesting that textbooks should be abandoned. They describe texts in these books as dead which do not add anything to the language in the classroom. Language, as they propose, should be learned from authentic materials like magazines, novels, anthology or encyclopaedia. This criticism of course books, particularly to their texts, does not seem justified. As far as lexis is concerned, texts that provide necessary words for learning in the right contexts are authentic. In fact, a closer observation of the texts in many language books shows that they are taken from those sources which Thornbury and Meddings (2001) suggest. Some language teachers believe these books save them time and help them perform effectively in the classroom. In fact any kind of modern interactive English language course books are good for learning communication by using them if there is a teacher who leads the students and helps them to be communicative with their techniques of this kind of language teaching. Course books are: "the starting point for the class and for the teacher that should lead to creative and spontaneous improvisation, adaptation, and

interaction; a potential syllabus; and a reference for grammar and vocabulary without suppressing the teacher's creativity" (López-Jiménez , 2010, p. 156).

It is not clear from the course books investigated in this study that they represent the totality of vocabulary input that Häcker envisaged, and the learners in this study may not have been as similar to her students as was expected. The lexical content of the three courses investigated was quite small. The British-produced books were the smallest and seemed to contain an unchallenging volume of learning for the time devoted to study. It may be, as Wilkins (1972) and others have pointed out, that the emphasis in Britain on theoretical approaches to learning that sideline vocabulary have had their effect here. Wilkins mentions structural approaches to learning in this regard and Milton and Alexiou (2012) point to Communicative Approaches where some of the principal works in the field fail even to mention vocabulary (e.g. Littlewood 1983). The books themselves do not admit to a theoretical standpoint which would offer an explanation. But, certainly, the loading of these books appears slim although it is in line with the lexical demands of Krizsán's *National Core Curriculum* vocabulary guidelines (2003). Just conceivably, the lack of interest in vocabulary over the years from the second world war (pointed to by Meara 1980) has resulted in ignorance of just how much vocabulary should be presented to reach the communication goals of the Curriculum.

It was also noted from the course books investigated, how heavily weighted towards the most frequent words in the language they were. There are good reasons for wanting to teach these most frequent words and Nation (2001) identifies the most frequent 2000 words as most crucial. He suggests that almost anything a teacher can do to foster the learning of these words is worth doing. These 2000 words provide something like 80% coverage in normal English language and without these words anything like normal communication would be impossible. Nonetheless, to focus only these words to the exclusion of all others may be a mistake. Schmitt and Schmitt (1995) emphasise the importance of what they term 'mid-frequency vocabulary' since these are the words which raise coverage from 80%, where only gist understanding is possible and communication is very severely limited, to the 95% or 98% levels where something like full comprehension can be obtained. This vocabulary is contained in the 3000 to 9000 word ranges of the BNC. Milton (2009

and 2011) points to a further problem where this less frequent vocabulary is not present in the teaching text and that is the absence of thematic variety. To have a hope of being interesting to learners a good course book will have offer a variety of texts on a variety of topics which are current and relevant to the learners. Where the lexis of learning is restricted on only the most frequent words then this kind of variety is not possible. Perhaps it might be suggested that learners might benefit better from a more heavily loaded text book and the effects of this on motivation and learning is something that might usefully be studied.

With the vocabulary of the course book so limited in both quantity and quality it is surprising that the learners appear to make such good progress and one of the conclusions drawn from the vocabulary learning study was that learners appear to exceed in their vocabulary knowledge the resources presented to them by their books. It was intended to investigate the degree to which the teacher was able, or willing, to supplement the course book materials by explanations, exemplifications, definitions, stipulations, synonymy and non-verbal illustration. Potentially, if the teacher were creating a lexically rich classroom environment then this might explain how the limitations of the text book had been overcome by the learners.

The analysis of teacher talk appeared to be as limited as the text book in several ways. It was surprising to note how much teacher talk there was, or rather how little learner talk there was, although something similar has been noted by Alsaif (2009). The traditional tenets of language teaching through the Russian system, and continued by teachers now teaching English, may be responsible here the paradigm of a good lesson involves the teacher teaching and pupils listening. It seems a long way from the communicative and other approaches common in many English language classes elsewhere where the expectation is that learner participation is crucial to learning success.

The nature of the teacher talk was also similar to the text book but was even more heavily weighted towards the most frequent vocabulary. It was concluded that the teacher was replicating orally in the class much of the teaching text that learners were looking at. This is supported by the review of strategies in the classroom (in Chapter 5) where the most frequent vocabulary strategies or activities identified by

the learners involved reading text for words and seeking to discover meaning from context, pictures or by asking for explanations from the teacher. The volume of pupil talk found in the recordings shows they did not ask for very many explanations. The technique the teacher applied in all of these classes was defining in the second language (Nation, 2005) and there is nothing wrong with this technique in itself but it is very surprising to find quite so much of it. It is to be wondered what might emerge if teachers could introduce more variety into their classroom activities, particularly activities which involve learners engaged in using their target language. It is a tenet of the communicative approach that this is how learn best takes place (Brumfit 1984). This being said, where learners appear quite successful without these kinds of activity, then it is hard to criticise the teaching methods. Despite this, it is still hard to explain how the learners have gained the level of knowledge and presumed competence they have when the classroom environment appears not to offer the opportunity to learn the extensive vocabularies which many learners display. There literature does contain other examples of a lexical environment considered poor, as in Meara *et al.* (1997) and Tang and Nesi (2003). It is notable that in the example of a rich lexical environment, the Italian classes observed by Donzelli (2007), she was also able to demonstrate considerable volumes of uptake directly from the language of the classroom, something which has not been possible in the studies in this dissertation.

A final consideration to take from the study of the lexical environment of the classroom is that there seemed to be very little by way of systematic recycling of the vocabulary which was introduced in the text book either by the text book itself or by the teacher. The literature abounds with suggestions as to how much and when to recycle as in Gairns and Redman (1986), Kachroo (1962), Pimsleur (1967), Crothers and Suppes (1967) and Scholfield (1991). And how often words are repeated is associated with learning (Edwards and Collins 2013). There are models of lexical difficulty and uptake which demonstrate the primacy of repetition in any model of learning (Milton and Daller 2007, Willis and Ohashi 2012, Alsaif and Milton 2012). Yet, text books, like those examined in this dissertation, continue to be unsystematic (e.g. Vassiliu 2001). Once again it is to be wondered how learning might have been affected if the teacher had been able to systematically extend the vocabulary of the course book and recycle vocabulary through teacher talk or other activities.

The overall conclusion taken from the studies in Chapter 4 was that this offered little by way of explanation as to how learners gained the vocabulary they were able to display in the tests. If vocabulary learning did not take place in the class then perhaps the place to look is outside the classroom.

6.3 Strategy use and vocabulary input outside the classroom

The strategy survey in Chapter 5 attempted to investigate what the learners were doing both inside and outside the classroom which might expedite vocabulary learning. A first impression of these data was that there appeared to be very little going on. The majority of the strategies were scarcely used at all. This might be taken to suggest the kind of learning environment described by Häcker (2008) where learners are almost entirely dependent on the classroom and the text book for the vocabulary, and the language generally, they are exposed to. It was not immediately clear that there was much happening in the class or outside it which used English to the degree that classroom learning might be sufficiently well supplemented that significant vocabulary gains could be made.

The results of the strategy use in the classroom have already been mentioned. The highest scoring strategy suggested that many students like to keep a notebook for the new words they encounter in class and this is an activity which is thought very useful in aiding vocabulary learning (e.g. Harris and Snow 2004). But like the other most frequently used strategies, searching the text for a meaning of a new word, searching for a visual clue or asking the teacher or classmates, this activity does not supplement the vocabulary of the text book and cannot explain how learners grow lexicons much larger than the resources presented in the course book.

The strategies in use outside the classroom also appear small in number. It does not appear to be the case that learners are engaged in a wide variety of language learning activities which could be calculated to grow big vocabularies. However, the small range of things that they do is very interesting from a vocabulary learning point of view. There is a considerable literature on how learners gain complete fluency and appear to master the lexical resources the good natives can have. It is often assumed

that learners must learn this outside the classroom, and from reading in particular. This is not simply because of the limitations of time within a school class environment but also because of the way a written form of the language in particular is more densely loaded with less frequent vocabulary. Krashen (1989) explains vocabulary learning this way and it fits with his Input Hypothesis where vocabulary and spelling are mostly acquired though comprehensible input through reading. Krashen appears to have little empirical evidence to support this assertion and Laufer (1989) calls this a default hypothesis and explains that people use this explanation for learning because they cannot come up with a better explanation for learning so many new words. Cobb *et al.* (2008) have challenged Krashen's assumption by pointing out that comprehensible input requires knowledge of most of the words in a text. If most of the words in a reading text are known then there is very little left to learn and the volumes of new words available to learners is so great that it is not possible to gain them from reading exposure. His ideas appear to be supported with the study of incidental learning reported in the article where uptake appears negligible. There appears to be a vicious circle in the vocabulary gain from reading hypothesis where without comprehension you cannot learn new words but with knowing the words you cannot gain comprehension.

More recent thinking on this involves a change in the idea that word learning is a purely passive activity. Rather, the focus-on-form ideas of Laufer and Hulstijn (2001) and their involvement load hypothesis, suggests that learners use reading as a resource for learning and far from being passive in the learning process can actively engage with words they do not know in order to learning them. In fact, the more actively they engage, the better they learn. Case studies where learners are set the task of engaging with a text in a way where they may have limited comprehension but where various ways of knowing can be gained, have shown significantly large vocabulary gains. The types of activity described in these case studies: reading comic books (Horst and Meara, 1999), listening to popular songs (Milton, 2008), and watching films or videos with subtitles (Milton, 2008) and Garnier, (2013), are those few activities which many learners in this study appear to undertake. These studies suggest uptake rates that can exceed 30 new words per hour. Learning appears not to be restricted to passive recognition but includes knowledge of meaning and many aspects of lexical depth such as knowledge of collocations and grammatical function.

Milton (2011) suggests with learning at this rate it is more than possible to explain how good learners, allowed to engage with material they enjoy, can grow vocabularies large enough for very considerable fluency.

Since the learners in this study do not have appeared to have had the opportunity for extensive vocabulary learning in the classroom or from the teacher then learning via this route may hold the key as to where the lexis they have comes from. It seems entirely conceivable that time spent in these activities at home or with friends could produce this result. As Webb and Rodgers (2009) further point out, learning rates do not need to be very rapid for this result to be gained. Television is something that can occupy a learner for hundreds of hours a year. Even if uptake per hour were at the low levels reported in Cobb (2000), say a word an hour, over the course of weeks and years spent watching TV the vocabulary gains, a little bit every time, can mount up to something very substantial. The study in Chapter 5 is able to conclude that learners prefer this kind of activity over more traditional vocabulary learning methods such as list learning.

The only activity where is not yet clear that this kind of effect is occurring is learning through the use of computer games. Much here may depend on the nature of the game or the activity. The use of interactive games based on a graphic reading material may produce good vocabulary gains, comparable with reading storylines in comic books (Moore, 2013). It is not completely clear from this study, however, whether the learning came from the reading or the game activities that went with the game used. Where learning was studied in a 3-D online learning environment, it seems that learning could again be good where the activities were specifically designed to watch vocabulary, but in a virtual world where the learning and interactivity is not specified in this way then the environment appeared lexically poor and not conducive to learning a large vocabulary (Milton *et al.* 2012). It might be useful to investigate this kind of activity with Hungarian learners in more depth, perhaps using the case study format, to discover what it is they are doing by way of computer games and how much vocabulary they are learning.

6.4 Limitations of the studies

This dissertation has described three broad studies designed to address the issue of perceived shortcomings of Hungarian learners of English as a Foreign Language in state schools and has concluded that the evidence of the vocabulary size tests carried suggests that Hungarian learners are not very different from learners in other countries in the levels of knowledge they attain and the rates of progress they display. Because vocabulary size tests link so well to measures of performance in writing and speaking, the conclusion has also been reached that there is no reason here for thinking that Hungarian learners are performing poorly in relation to age comparable learners in other countries as has been suggested by Nikolov (in Fekete *et al.* 1999) and others. Nonetheless, the issue addressed in the research which motivated this investigation was the product of tests which attempted to examine communicability directly through speech and other performance tasks and to completely answer this question it would be necessary to go back to using tests of this communication and repeat them, and this study hasn't done that. The progress of research led us in other directions but nonetheless, this is a limitation of the current study.

A further potential limitation in the testing element of this dissertation lies in the fairly small sample of learners investigated and narrowly restricted to the schools in and around Szeged. It has been assumed that learners in Szeged and at the schools chosen are pretty typical of learners generally in Hungary but without replication of these activities elsewhere that is only an assumption. There appear to be no data available in Hungary, as exists in the UK, to tell us which geographical areas or which schools are outstandingly good and which are not. UK has leagues tables and other mechanisms to inform the choice schools for research and the discussion of the results. Potentially, sample bias, where the learners in Szeged are particularly good in relation to other Hungarian learners, might have led us to draw conclusions which are not valid for learners in the rest of the country. It is a potential problem although I do not really think that the learners investigated in this study are really very different from the norm in Hungary.

A final comment on the potential limitations of the research carried out might be suggested in relation to the size of X-lex Meara and Milton (2003) and A-Lex (Milton and Hopkins, 2005). These tests are based on a principled sample of the most frequent 5,000 words in English and use the answers on this sample to estimate a learner's vocabulary size tests used. The profiles the learners display, where they almost uniformly know more of the most frequent words than they do the less frequent words makes tests constructed this way appear good and capable of forming very useful size estimates at the lower levels of learning in particular. However, it is clear that learners at the upper end of the learning spectrum know a substantial quantity of words beyond these frequency levels and that ceiling effects can be observed. In one sense this is not so much of a problem since the scores obtained from Hungarian learners can be compared with scores on the same test by learners in other countries. However, it is not clear that these higher level learners have acquired their vocabularies in a fashion comparable to learners in other countries. It appears from this research that they are learning from authentic materials rather than the texts books and they may therefore differ from learners elsewhere who may have had different input via the classroom. Only further studies using tests with a vocabulary sample drawn from a wider variety of frequency bands cold say where this is really the case.

The studies of the books used in class and the teacher talk likewise have their limitations. Ideally, the study for this dissertation would have looked at the course book content and the teacher talk, and the progress the learners made, from the same classes over a period of learning. But studies of learners, as in this dissertation, rarely occur in circumstances which are truly ideal. In this study, compromises had to be made. These were driven by the classes and books which could be made available to me for study and time factor involved in a single part-time researcher trying to construct something to a deadline for a dissertation. Examining different classroom lexical environments from different levels does require assumptions to be made about how all classes and how all teachers perform from some very small data sets – although, again from the point of view of the lone researcher transcribing whole books and lessons for analysis, the look like big data sets!

Making assumptions about the whole of teacher input from talks from on teacher and four classes is a particularly big assumption. And, in addition to examining the teacher talk and course book content from a single class over time, it would have been particularly useful to have examined a more complete set of teacher lessons (as in Donzelli (2007). A bigger investigation of the teachers in this way might show the teacher in a better light. It is conceivable the data was collected on a bad day, or a day focussing on something that required teacher input rather than a conversation class, for example. Data collected in four short classes could not show the sort of periodicity, if it existed, which Scholfield (1991) suggests ought to be present in classes.

A final limitation is also the way estimates for lexical growth were made from frequency based data rather than, as in Vassiliu (2001) and Alsaif (2009) from the vocabulary of the course books. It is a fair assumption that the uptakes rates of 90% and better observed in Chapter 4 are very generous from the learners' point of view but this can only be established for sure of a different type of test is used to measure uptake from the text book itself.

There are potential limitations too in terms of the Strategies questionnaire use. Questionnaires are reliant on learner self-reporting and this is always a problem. Learners will have a tendency to say what they think you want to hear, or what they should be doing, or what they imagine they are doing, rather than reporting what they really do. Further reporting in this way about learning a whole lexicon of thousands of words when words are learned individually and potentially in many different ways, can also lead to genuine confusion about how accurately to report what learners really do. A series of case studies of Hungarian learners using the strategies they say they employ would be useful. I have suggested they are learning a lot with activities such as singing songs and watching videos with sub-titles, as has been observed elsewhere, but it would be very useful to discover if this learning really does take place. If linked to an in-depth study of the classroom environment, the case study investigation might be even better. But it would be difficult to carry out. In this study I have assumed that Hungarian learners are like other learners in uptake form informal tasks, but the research reported here has not clearly proven it.

6.5 Suggestions for further research

The investigations into the vocabulary knowledge of Hungarian learners of English as a Foreign Language are original, as are the two follow up chapter which instigate where these learners' vocabulary comes from. Since there is so little work done in this area, and since it is so potentially important, in terms of learners overall progress and performance, it would make sense if there were follow-up studies in this general area. The preceding section which considers the potential weaknesses and limitations of the studies presented here also suggest further research which might usefully be carried out.

The usefulness of repeating the international measures of communicative ability, but this time with control for difference in raters and maybe differences in test preparedness, would be interesting to carry out but because of the scale of such a study lie quite beyond the realm of a single researcher.

The studies of the text book and teacher in terms of vocabulary input have been identified as a weakness in terms of the comparatively poor lexical loading that these elements of input have. It has been suggested that lexically poor learning environments are likely also to be unmotivating lexical environments. It might be useful to load textbooks more and see if learner like them better or learn better. Again, it is to be wondered how learning might have been affected if the teacher had been able to systematically extend the vocabulary of the course book and recycle vocabulary through teacher talk or other activities and this might also make a useful further study.

A principal conclusion of this study is just how important informal activities outside the classroom are to vocabulary learning might be useful to investigate this kind of activity with Hungarian learners in more depth. Existing studies have not used Hungarian learners and further studies, using the case study format, would go some way to confirming that these learners really do acquire large volumes of vocabulary by informal methods. Case studies to investigate what it is they are doing by way of computer games, how much vocabulary is contained in these activities, and how

much vocabulary they are learning, would strengthen the research in this dissertation considerably.

It has also been pointed out that the instigation of teacher talk is very slight, only 4 classes, even if it does reproduce the kind of findings in terms of poor lexical environments which are discovered elsewhere. A more extensive investigation including more complete sequences of teacher lessons as in Donzelli (2007) might suggest how limited the classroom is in terms of learning and suggest many ways that in-service teacher training might go to enhance the teaching of foreign languages.

Finally, it might be useful to devise tests of vocabulary knowledge drawn from textbook vocabulary as in Alsaif (2009) to really test for uptake from the course books and compare this with overall vocabulary from frequency sources to check that the estimations of size made among the low level learners is really accurate.

Chapter 7

Conclusions

The Introduction to this dissertation began the piece is a rather negative and pessimistic way. Repeated international comparisons and other pieces of research represented the learning of foreign languages, and EFL in particular, suggested Hungarian learners were performing less well than learners in other countries in communicative and other language skills (e.g. Nagy and Krolopp, 1997; Noijons and Nagy, 1995 and Nikolov in Fekete *et al*, 1999). There was concern that the history of foreign language teaching in Hungary meant that the techniques and methodology employed by teachers would be rather old-fashioned. Many current teachers of EFL will have begun their careers teaching Russian in the much more restricted classroom format of Hungary behind the iron curtain. Communicative skills were unlikely to be a high priority in this kind of classroom and this may have contributed to the poor performance of Hungarian students. There seemed no particular reason for thinking that the conclusions of these international comparisons may have been wrong.

Having carried out the three project which make up the empirical work for this dissertation, it is possible to present conclusions which are much more positive than was thought possible at the outset. The results of several testing episodes using vocabulary size tests both in written and oral format, suggest that learners in Hungary at key points in the learning process, are very similar to learners in other countries. Thus, when learns in Hungary are taking the *Matura* school leaving exams which are intended to be at CEFR levels B1 and B2, they possess vocabulary sizes that are in line with the studies for vocabulary size for such learners elsewhere. In some ways the learning situation in Hungary appears better than in other countries. Thus, the rate of vocabulary learning per contact hour is among the highest reported when compared with the kind of international data collected in Milton and Meara (1998). Because vocabulary size correlates so well with performance in language skills such as writing and speaking, it can be confidently asserted also they Hungarian learners are likely to be equivalent to learners elsewhere in Europe in their communication skills. Viewed in this light EFL learning in Hungary appears quite robust.

The investigation into the language classroom, however, suggested that it may not be the teacher and the text book which are creating this encouraging state of affairs. It was possible to conclude that the text books which were examined are slim in their presentation of the kind

of vocabulary resources which learners need to achieve the ends of taking and passing exams at B1 and B2 level. The numbers of words presented were relatively small and there as a heavy concentration on only the most frequent words in English. They are like many text books examined elsewhere in the literature (e.g. Konstantakis and Alexiou, 2012, and Alsaif and Milton, 2012) in which are likewise limited in their vocabulary content and this may reveal a lack of awareness among teachers and textbook writers of the scale of lexical resources which learners need for communication. Or it may reflect the kind of calculation made by Nation (2001) that the onus for learning vocabulary beyond the most frequent 2,000 words or so, should rest with the learners since there are so many words needs that it would be impossible to explicitly teach them all. There is nothing in the text books themselves to suggest the writers' views on this. There is little, also, from the evidence of the teacher talk to suggest that the teachers are mindful of the need to promote vocabulary growth beyond the textbook for communicative success in the language. The teacher's language was even more heavily focussed on the most frequent lexis than were the text books and it was possible to conclude that the classroom language examine provided a lexically poor environment unpropitious for vocabulary growth. This conclusion must come with the warning, however, that this was an evidence of a single teacher and only four classes. Nonetheless, it might be tentatively concluded that this confirms the impression given at the outset about the methodologically limited manner of teaching English and this is an area that may benefit from a process of teacher updating and development. A further conclusion might also be that this is an area where extending the research conducted here to other levels, other teachers and a whole range of different classes would be a really useful way forward.

Further, the evidence of the data collected from the questionnaire it was possible to conclude that learners may be supplementing the lexical resources of the classroom by their informal learners activities carried out outside the classroom. This does not necessarily diminish the importance of the contribution made by the classroom to gaining a lexicon of the right scale and quality for communication, but the gap in this provision among the less frequent vocabulary left by classroom input, might be filled from songs, films with sub-titles and others kinds of entertainment carried out through English which the learners engage in more for pleasure than a sense of duty towards language learning. This is an implication drawn from the students reported activities and what is known of the kind of vocabulary uptake it is possible to take from informal activities, it has not been demonstrated by empirical testing of the students themselves engaged in these activities and it can also be concluded that further

investigation in this area would be very useful. This conclusion does much to lend support to Nation's comment above that learners can teach themselves vocabulary once lexical levels giving basic communicability have been reached, leaving valuable classroom time for other activities or foci of teaching.

Finally, it can be concluded that vocabulary teaching and the investigation of vocabulary learning among EFL learners appears a very fruitful area for further research and other kinds of work. It would surely be useful, for example, for learners and teachers to be aware of their lexical levels in relation to their learning goals. It would be a useful, and quick, measure for general progress over the course of learning and would help to lend credence, from an objective test standpoint, to subjective communicative measures which are often used for assessing language skills. Where learners are pursuing informal learning activities it can inform them how much progress they are making and this is likely to be highly motivating. It is strange that there has been such a silence in vocabulary research in Hungary as there has been until recently in the rest of applied linguistics research.

Appendices

Teachers' quetionnaire on vocabulary learning (Hungarian)

Nyelvtanári kérdőív

Kérdések:

- Általános, vagy középiskolában tanít?

  .....

- Hány éve dolgozik tanárként?

  .....

- Ön szerint a kimenő évfolyamon lévő diákjainak kb. mekkora az idegen nyelvi szókincse? (általános isk. 8. osztály, ill. 12. évf.)

  .....

- Ön szerint egy tanévben hány idegen (angol) szót tanulnak meg átlagos képességű tanítványai?

  .....

- Ön szerint hány szót tanulnak meg óránként tanítványai?

  .....

- Mi lehet az oka, ha (véletlenül!) kevesebb szóra emlékeznek a diákok, mint amennyi szót felad nekik?

  .....

- Ön szerinted, ha egy első félévben megíratott szódolgozatot év végén (előzetes figyelmeztetés nélkül) ismét megíratna diákjaival, milyen eredmények születnének?

  .....

- Saját véleménye szerint Önnek mekkora az idegen (angol) nyelvi szókincse? (Próbálja megbecsülni!)

  .....

- Röviden írja le, hogy melyik szótanítási technikát (technikákat) alkalmazza leggyakrabban az idegen nyelvórán.

  .....

- Kb. Hány szót tanít egy órán és mennyi időt szán a gyakorlásra?
-

  .....

- Hogyan gyakorolják az idegen szavakat?
-

  .....

- Ön szerint kb. hányszor kell egy újonnan megtanított szót újból és újból ismételni, hogy az maradandó legyen? Ill. milyen technikák segíthetnek még az idegen szavak rögzítésében?

  .....

- Ön hogy ítéli meg általában tanítványai angol szókincs ismeretét?

  .....

Teachers' quetionnaire on vocabulary learning (English)

Teachers' questionnaire

Questions:

- Do you teach in a primary or in a secondary school?

  .....

- How long have you been working as a teacher?

  .....

- In your opinion, how large is your students' vocabulary in the final years of their studies? (primary school, grade 8 and secondary school, grade 12)

  .....

- What do you think, how many English words your studens with general abilities acquire in one academic year?

  .....

- In your opinon, how many words per lesson your students acquire?

  .....

- What do you think the reason if your students (accidentally!) remember less words than you taught them in a lesson?

  .....

- What do you think about the resuls of a word test you gave to your students, if it was the same as the one they already did in the first term (Without warning the students.).

  .....

- Try to quess the size of your students' vocabulary size.

  .....

- Describe briefly the vocabulary teaching technique(s) you use in your lessons.

  .....

- Approximately how many words you teach a lesson and how much time do you spend on practicing?

  .....

- How do you make your students practice thenew words?

  .....

- In your opinion how many times a newly taught word neds to be practiced in order that your students remember it? What other techniques might help language learners to remember new words?

  .....

An example of the X-Lex test format

English XLex Paper Version 1
2006/ Hungary

Kérlek olvasd el a következő angol, vagy annak látszó szavakat. Pipáld ki azokat, amelyeket ismersz, példa szerint:

dog ✓

.....

név, osztály

Segítségedet köszönöm, kellemes vakációt kívánok! ☺

that	both	cliff	sandy	lessen	darrock
kennard	before	cup	normal	impress	antique
dose	diversal	number	earn	reward	grip
snowy	restore	effectory	bring	rain	inform
miserable	manager	screen	surman	take	climb
pack	deserve	glue	pad	gow	level
evening	avoid	collect	scatter	budget	tindle
vosper	book	hestitate	immense	expert	brand
sorrow	horozone	produce	sweat	provide	tube
outline	apparatus	pegler	add	guide	pole
guest	keeper	roast	ashment	build	pump
manage	reasonable	crisis	dam	manomize	arrive
spend	blade	terrible	decrease	curl	utting
ridall	anyone	remind	steel	splash	ridiculous
feeble	sumption	instead	earn	press	mount
humble	pedestrian	alden	believe	signal	slip
admire	leisure	creep	clarinate	read	harbour
weather	independent	conduct	violent	pardoe	table
night	oppose	bend	exist	rod	piccolotomy
spalding	because	responsible	director	mystery	compose

1 2 3 4 5 6

Students' questionnaire in Hungarian
Kérdőív az angol szótanulásról

Személyes információk:
Kor:
Osztály: Csoport:
Hány éve tanulsz angolul?

Az alábbi állítások az angol szótanulásról szólnak. Kérlek, tegyél egy keresztet a megfelelő oszlopba!

	Amit az angolórákon teszel,	soha=0	ritkán=1	néha=2	gyakran=3	nagyon gyakran=4
	hogy kitaláld egy új szó jelentését					
1.	Megnézem az ismeretlen szó jelentését egy angol-magyar szótárban.					
2.	Próbálom kitalálni az ismeretlen szó jelentését a szöveg alapján.					
3.	Kikeresem az ismeretlen szó jelentését a könyv szójegyzékében.					
4.	Próbálom kitalálni az ismeretlen szó jelentését a mellette lévő kép alapján.					
5.	Társítom az angol szavakat a magyar szavakkal a kiejtés és a helyesírás alapján.					
6.	Megkérdezem az ismeretlen szó jelentését a tanártól.					
7.	Megkérdezem az ismeretlen szó jelentését a pad- vagy osztálytársamtól.					
	hogy megtanuld az új szavakat					
8.	Szójátékokat játszva tanulom az új szavakat (pl. bingó, akasztófa, kitalálós játékok, stb.)					
9.	Kikérdeztetem az új szavakat a pad- ill. osztálytársammal.					
10.	Csoportmunkában tanulom az új szavakat.					
11.	Ismétlem az új szavakat kórusban a magnóval.					
12.	Ismétlem az új szavakat kórusban a tanár után.					
13.	Kiírom az új szavakat a szótárfüzetbe.					
14.	Társítom az új szavakat a korábban tanult szavakkal.					
15.	Mondatokat alkotok az új szavakkal.					
16.	Csoportokba szedve írom le a szavakat a füzetembe egy adott téma alapján vagy gondolattérképet készítek.					
17.	Társítom az új szavakat rokon értelmű szavakkal vagy ellentétükkel.					
18.	Kifejezésekben, nem önállóan tanulom a szavakat.					
19.	Keresztrejtvények megoldásával tanulom a szavakat.					
	Amit az órákon kívül teszel, hogy					
	hogy kitaláld egy új szó jelentését					
20.	Megnézem az ismeretlen szó jelentését egy angol-magyar szótárban.					
21.	Megnézem az ismeretlen szó jelentését egy angol egynyelvű szótárban.					
22.	Megnézem az ismeretlen szó jelentését egy online szótárban.					

23.	Megnézem az ismeretlen szó jelentését egy CD_ROM-on lévő szótárban.					
24.	Kikeresem az ismeretlen szó jelentését a könyv szójegyzékében.					
25.	Próbálom kitalálni az ismeretlen szó jelentését a szöveg alapján.					
26.	Próbálom kitalálni az ismeretlen szó jelentését a mellette lévő kép alapján.					
27.	Megkérdezem a szó jelentését az anyukámtól, apukámtól vagy testvéremtől.					
	hogy megtanuld az új szavakat					
28.	Egy osztálytárssal vagy baráttal tanulom az új szavakat.					
29.	Anyanyelvi angolokkal beszélek.					
30.	Anyanyelvi angolokkal levelezek.					
31.	Angolul chatelek külföldiekkel az interneten.					
32.	A barátaim angol hozzászólásait olvasom a Facebook-on.					
33.	Blogokat, fórumokat és olvasók hozzászólásait olvasom angolul.					
34.	Internetes barátokkal tartom a kapcsolatot angolul.					
35.	Hozzászólásokat írok blogokhoz, fórumokhoz és a Facebook-on angolul.					
36.	Blogokat írok angolul.					
37.	Csoportokba szedve írom le a szavakat a füzetembe egy adott téma alapján vagy gondolattérképet készítek.					
38.	Mondatokat alkotok az új szavakkal.					
39.	Naplót írok angolul.					
40.	Kiírom az új szavakat a szótárfüzetbe.					
41.	A tankönyv szószedetét használom az új szavak tanulásához.					
42.	Kiírom az új szavakat, melyekkel akkor találkozom, amikor TV-t nézek, vagy internetezem angolul.					
43.	Szókártyákat tanulok az új szavak tanulásához.					
44.	Címkéket rakok a tárgyakra vagy a falra.					
45.	Felveszem az új szavakat és visszahallgatom őket.					
46.	Kiírom az új szavakat a füzetbe, két oszlopba. (egyik oszlopba angolul, a másikba magyarul)					
47.	Hangosan vagy suttogva ismétlem az új szavakat.					
48.	A szavak többször leírom egymásután.					
49.	CD-t hallgatva tanulom a szavakat.					
50.	Folyamatosan ismétlem a korábban tanult szavakat.					
51.	Új szavakat tanulok amikor könyvet, magazinokat olvasok angolul.					
52.	Angol nyelvű médiát nézek és hallgatok.					
53.	Angol nyelvű szövegeket olvasok az e-book reader-rel.					
54.	Online fordító programokat használok. (p.l. Google Translator)					
55.	A számítógépemre vagy okos telefonomra letöltött angol nyelvű szövegeket olvasok.					

56.	Podcastokat hallgatok angolul.					
57.	Online szókincsjátékokat játszom.					
58.	Online videókat nézek angolul.					
59.	Online játékok szabályait nézem angolul.					
60.	Dalszövegeket olvasok angolul.					
61.	Angol nyelven nézek filmeket magyar felirattal.					
62.	Angol nyelven nézek filmeket angol felirattal.					
63.	Angol nyelven nézek filmeket felirat nélkül.					
64.	Angolul nézem a kedvenc sorozataimat.					
65.	Angol nyelvű videókat nézek a Youtube-n.					
66.	Új szavakat tanulok, amikor számítógépes játékokat játszom angolul.					
67.	Többször átismétlem az új szavakat a nap folyamán.					
68.	Angol nyelvű dalokat hallgatok.					
69.	Nem túlságosan aggódom az új szavak miatt, amikor olvasok vagy hallgatok valamit, csak átugrom őket.					
70.	Online feladatokat oldok meg, hogy teszteljem a szókincsemet.					
71.	Szótesztekkel tesztelem magam.					

APPENDIX C (b)

Students' questionnaire in English
A questionnaire about strategies of learning english vocabulary

PERSONAL INFORMATION
Age:
Class: Group:
How many years have you been studying English?:

These statements are about learning words in English. Please put a cross in the suitable column.

	Think what you do in English lessons.	**never=0**	**seldom= 1**	**sometimes= 2**	**often=3**	**very often=4**
	When discovering a new word's meaning					
1.	I look up the meaning of an unknown word in an English-Hungarian dictionary.					
2.	I try to understand the meaning of a unknown word on the basis of the text.					
3.	I look up the meaning of an unknown word in the textbook glossary.					
4.	I try to understand the meaning of an unknown word by looking at the accompanying picture.					
5.	I associate English words with Hungarian words based on the pronunciation or spelling.					
6.	I ask the meaning of an unknown word from the teacher.					
7.	I ask the meaning of an unknown word from my desk or class mate.					
	When studying new words					
8.	I study new words playing word games. (bingo, hangman, guessing game, etc.)					
9.	I check the knowledge of new words with my desk or classmate.					
10.	I learn some new words when working in group works.					
11.	I repeat new words in chorus with the tape.					
12.	I repeat new words in chorus after the teacher.					
13.	I write new words in the (vocabulary) notebook.					
14.	I associate new words with the words studied before.					
15.	I make up sentences with new words.					
16.	I group words in the notebook based on a topic or I do a mind map.					
17.	I associate new words with their synonyms (e.g. big=large) or antonyms (e.g old – new)					
18.	I study words of an expression as if they were just one word (e.g. What a pity!)					
19.	I study new words with solving crosswords.					
	Think what you do outside of the classroom					
	When discovering a new word's meaning					
20.	I look up the meaning of an unknown word in an					

	English-Hungarian dictionary.					
21.	I look up the meaning of an unknown word in an English monolingual dictionary.					
22.	I look the meaning of an unknown word up on an online dictionary.					
23.	I use a computer-based dictionary to find out the meaning of it.					
24.	I look up the meaning of an unknown word in the textbook glossary.					
25.	I try to understand the meaning of a unknown word on the basis of the text.					
26.	I try to understand the meaning of an unknown word by looking at the accompanying picture.					
27.	I ask the meaning of an unknown word from my mother, brother or sister.					
	When studying new words					
28.	I study new words with a mate (class mate, friend).					
29.	I speak with native speakers of English.					
30.	I correspond with native speakers of English in writing.					
31.	I chat in English with foreign people on the Internet.					
32.	I read my friends' English comments on the Facebook.					
33.	I read blogs, forums and comments made by readers in English.					
34.	I keep in touch with my penfriends in English on the Internet.					
35.	I make comments on blogs and forums or Facebook in English.					
36.	I write blogs in English.					
37.	I group words in the notebook based on a topic or I do a mind map.					
38.	I make up sentences with new words.					
39.	I keep a diary in English.					
40.	I write new words in the (vocabulary) notebook.					
41.	I use the textbook glossary for studying words.					
42.	I write down the new words I pick up when watching TV, using the Internet, etc.					
43.	I use vocabulary cards for studying new words.					
44.	I put labels on the objects or the wall.					
45.	I tape new words and listen to them.					
46.	I write the new words in the notebook in two					

47.	I repeat new words aloud or in whisper.					
48.	I repeat new words by spelling them.					
49.	I learn words by listening to vocabulary CDs.					
50.	I constantly revise words studies before.					
51.	I pick up new words when reading books, magazines, etc. in English.					
52.	I listen to and watch English language media.					
53.	I read English texts on my e-book reader.					
54.	I use online language translator programs.(e.g.:Google Translator)					
55.	I read texts downloaded on to my computer or my smart phone in English.					
56.	I listen to Podcasts in English.					
57.	I play online vocabulary games.					
58.	I watch online videos in English.					
59.	I read the rules of online games in English.					
60.	I read lyrics in English.					
61.	I watch films in English with Hungarian subtitle.					
62.	I watch films in English with English subtitle.					
63.	I watch films in English without any subtitle.					
64.	I watch my favourite series in English					
65.	I watch English language videos on Youtube.					
66.	I pick up new words when playing computer games in English.					
67.	I revise new words several times during a day.					
68.	I listen to English songs.					
69.	I am not worry very much about the difficult words found when reading or listening, I pass them.					
70.	I use on-line exercise to test my vocabulary knowledge.					
71.	I test myself with word tests.					

APPENDIX D

THE USE OF THE STRATEGIES ACCORDING TO SCHMITT'S CATEGORIES

Item number	Items according to Schmitt's categories	Mean
	DETERMINATION	
22	I look the meaning of an unknown word up on an online dictionary. (home)	2.86
2	I try to understand the meaning of a unknown word on the basis of the text. (lesson)	2.67
25	I try to understand the meaning of a unknown word on the basis of the text. (home)	2.24
4	I try to understand the meaning of an unknown word by looking at the accompanying picture. (lesson)	1.90
20	I look up the meaning of an unknown word in an English-Hungarian dictionary. (home)	1.62
26	I try to understand the meaning of an unknown word by looking at the accompanying picture. (home)	1.33
1	I look up the meaning of an unknown word in an English-Hungarian dictionary. (lesson)	1.10
21	I look up the meaning of an unknown word in an English monolingual dictionary. (lesson)	1.05
3	I look up the meaning of an unknown word in the textbook glossary. (lesson)	0.71
5	I associate English words with Hungarian words based on the pronunciation or spelling. (lesson)	0.71
24	I look up the meaning of an unknown word in the textbook glossary. (home)	0.52
23	I use a computer-based dictionary to find out the meaning of it. (home)	0.19
	Average mean	**1.41**
	SOC (DISCOVERY)	
6	I ask the meaning of an unknown word from the teacher. (lesson)	2.57
7	I ask the meaning of an unknown word from my desk or class mate. (lesson)	2.33
27	I ask the meaning of an unknown word from my mother, brother or sister. (home)	0.81
	Average mean	**1.90**
	SOC (CONS)	
31	I chat in English with foreign people on the Internet. (home)	1.71
33	I read blogs, forums and comments made by readers in English. (home)	1.71
34	I keep in touch with my pen friends in English on the Internet. (home)	1.14
29	I speak with native speakers of English. (home)	1.00
35	I make comments on blogs and forums or Facebook in English. (home)	0.86
8	I study new words playing word games. (bingo, hangman, guessing game, etc.) (lesson)	0.81
32	I read my friends' English comments on the Facebook. (home)	0.81
9	I check the knowledge of new words with my desk or classmate. (lesson)	0.76
10	I learn some new words when working in group works. (lesson)	0.71
30	I correspond with native speakers of English in writing. (home)	0.71
28	I study new words with a mate (class mate, friend). (home)	0.43

36	I write blogs in English. (home)	0.29
	Average mean	**0.91**
	COG	
13	I write new words in the (vocabulary) notebook. (lesson)	3.14
40	I write new words in the (vocabulary) notebook. (home)	2.33
46	I write the new words in the notebook in two columns (words in English – words in Hungarian) (home)	1.76
42	I write down the new words I pick up when watching TV, using the Internet, etc. (home)	1.71
47	I repeat new words aloud or in whisper. (home)	1.00
12	I repeat new words in chorus after the teacher. (lesson)	0.48
11	I repeat new words in chorus with the tape. (lesson)	0.38
41	I use the textbook glossary for studying words. (home)	0.38
49	I learn words by listening to vocabulary CDs. (home)	0.19
43	I use vocabulary cards for studying new words. (home)	0.14
48	I repeat new words by spelling them. (home)	0.14
45	I tape new words and listen to them. (home)	0.10
44	I put labels on the objects or the wall. (home)	0.00
	Average mean	**0.90**
	MEM	**Mean**
18	I study words of an expression as if they were just one word (e.g. What a pity!) (lesson)	1.29
14	I associate new words with the words studied before. (lesson)	1.24
15	I make up sentences with new words. (lesson)	1.05
17	I associate new words with their synonyms (e.g. big=large) or antonyms (e.g old – new) (lesson)	1.00
38	I make up sentences with new words. (home)	0.95
16	I group words in the notebook based on a topic or I do a mind map. (lesson)	0.62
37	I group words in the notebook based on a topic or I do a mind map. (home)	0.24
39	I keep a diary in English. (home)	0.14
	Average mean	**0.82**
	MET	
68	I listen to English songs. (home)	3.33
65	I watch English language videos on Youtube. (home)	3.05
66	I pick up new words when playing computer games in English. (home)	2.90
61	I watch films in English with Hungarian subtitle. (home)	2.76
58	I watch online videos in English. (home)	2.57
54	I use online language translator programs.(e.g.:Google Translator) (home)	2.29
60	I read lyrics in English. (home)	1.86
52	I listen to and watch English language media. (home)	1.67
64	I watch my favourite series in English (home)	1.67
69	I am not worry very much about the difficult words found when reading or listening, I pass them. (home)	1.48
59	I read the rules of online games in English. (home)	1.38

51	I pick up new words when reading books, magazines, etc. in English. (home)	1.14
62	I watch films in English with English subtitle. (home)	1.05
63	I watch films in English without any subtitle. (home)	1.00
55	I read texts downloaded on to my computer or my smart phone in English. (home)	0.95
19	I study new words with solving crosswords. (lesson)	0.81
67	I revise new words several times during a day. (home)	0.81
50	I constantly revise words studies before. (home)	0.76
56	I listen to Podcasts in English. (home)	0.43
70	I use on-line exercise to test my vocabulary knowledge. (home)	0.43
71	I test myself with word tests. (home)	0.43
57	I play online vocabulary games. (home)	0.38
53	I read English texts on my e-book reader. (home)	0.33
	Average mean	**1.46**

APPENDIX E

THE DIFFERENCES BETWEEN 10TH AND 11TH GRADE STUDENTS

Item Number	Items	Mean 10.	Standard deviation 10.	Mean 11.	Standard deviation 11.
1	I look up the meaning of an unknown word in an English-Hungarian dictionary. (lesson)	1	0.94	1.18	0.60
2	I try to understand the meaning of a unknown word on the basis of the text. (lesson)	2.9	1.20	2.45	1.51
3	I look up the meaning of an unknown word in the textbook glossary. (lesson)	0.8	0.92	0.64	0.81
4	I try to understand the meaning of an unknown word by looking at the accompanying picture. (lesson)	1.9	1.10	1.91	1.45
5	I associate English words with Hungarian words based on the pronunciation or spelling. (lesson)	0.8	1.14	0.64	0.92
6	I ask the meaning of an unknown word from the teacher. (lesson)	2.4	1.35	2.73	1.01
7	I ask the meaning of an unknown word from my desk or class mate. (lesson)	1.9	1.45	2.73	0.79
8	I study new words playing word games. (bingo, hangman, guessing game, etc.) (lesson)	1.1	1.20	0.55	1.04
9	I check the knowledge of new words with my desk or classmate. (lesson)	0.8	1.03	0.73	0.90
10	I learn some new words when working in group works. (lesson)	1.2	1.62	0.27	0.47
11	I repeat new words in chorus with the tape. (lesson)	0.5	0.71	0.27	0.90
12	I repeat new words in chorus after the teacher. (lesson)	0.5	0.71	0.45	0.82
13	I write new words in the (vocabulary) notebook. (lesson)	3	1.49	3.27	1.10
14	I associate new words with the words studied before. (lesson)	1.5	1.35	1.00	1.00
15	I make up sentences with new words. (lesson)	1.7	1.42	0.45	0.93
16	I group words in the notebook based on a topic or I do a mind map. (lesson)	0.8	1.03	0.45	0.93
17	I associate new words with their synonyms (e.g. big=large) or antonyms (e.g old – new) (lesson)	1.5	1.58	0.55	0.69
18	I study words of an expression as if they were just one word (e.g. What a pity!) (lesson)	1.7	1.16	0.91	1.22
19	I study new words with solving crosswords. (lesson)	0.9	1.10	0.73	0.90
20	I look up the meaning of an unknown word in an English-Hungarian dictionary. (home)	2	1.63	1.27	1.35
21	I look up the meaning of an unknown word in an English monolingual dictionary. (lesson)	1.3	1.25	0.82	1.17
22	I look the meaning of an unknown word up on an online dictionary. (lesson)	2.9	0.99	2.82	1.47
23	I use a computer-based dictionary to find out the meaning of it. (home)	0.2	0.63	0.18	0.60
24	I look up the meaning of an unknown word in the textbook glossary. (home)	0.7	0.82	0.36	0.67
25	I try to understand the meaning of a unknown word on the basis of the text. (home)	2.4	1.17	2.09	1.30
26	I try to understand the meaning of an unknown word by looking at the accompanying picture. (home)	1.7	1.06	1.00	1.26

27	I ask the meaning of an unknown word from my mother, brother or sister. (home)	0.5	0.85	1.09	1.45
28	I study new words with a mate (class mate, friend). (home)	0.6	0.70	0.27	0.65
29	I speak with native speakers of English. (home)	1	1.15	1.00	1.73
30	I correspond with native speakers of English in writing. (home)	0.7	1.16	0.73	1.42
31	I chat in English with foreign people on the Internet. (home)	1.7	1.34	1.73	1.56
32	I read my friends' English comments on the Facebook. (home)	0.9	1.20	0.73	0.90
33	I read blogs, forums and comments made by readers in English. (home)	1.7	1.42	1.73	1.49
34	I keep in touch with my penfriends in English on the Internet. (home)	1.3	1.16	1.00	1.41
35	I make comments on blogs and forums or Facebook in English. (home)	0.9	1.45	0.82	1.25
36	I write blogs in English. (home)	0.6	1.35	0.00	0.00
37	I group words in the notebook based on a topic or I do a mind map. (home)	0.5	0.97	0.00	0.00
38	I make up sentences with new words. (home)	1.9	1.29	0.09	0.30
39	I keep a diary in English. (home)	0.1	0.32	0.18	0.60
40	I write new words in the (vocabulary) notebook. (home)	2.3	1.64	2.36	1.69
41	I use the textbook glossary for studying words. (home)	0.5	0.71	0.27	0.65
42	I write down the new words I pick up when watching TV, using the Internet, etc. (home)	2.2	1.62	1.27	1.27
43	I use vocabulary cards for studying new words. (home)	0.3	0.67	0.00	0.00
44	I put labels on the objects or the wall. (home)	0	0.00	0.00	0.00
45	I tape new words and listen to them. (home)	0.2	0.42	0.00	0.00
46	I write the new words in the notebook in two columns (words in English – words in Hungarian) (home)	1.6	1.43	1.91	1.64
47	I repeat new words aloud or in whisper. (home)	1.4	165	0.64	1.03
48	I repeat new words by spelling them. (home)	0.1	0.32	0.18	0.60
49	I learn words by listening to vocabulary CDs. (home)	0.2	0.63	0.18	0.60
50	I constantly revise words studies before. (home)	1.3	0.95	0.27	0.47
51	I pick up new words when reading books, magazines, etc. in English. (home)	1.1	1.37	1.18	1.08
52	I listen to and watch English language media. (home)	1.8	1.32	1.55	1.44
53	I read English texts on my e-book reader. (home)	0.3	0.67	0.36	1.21
54	I use online language translator programs.(e.g.:Google Translator) (home)	2.1	0.99	2.45	1.13
55	I read texts downloaded on to my computer or my smart phone in English. (home)	1.1	0.88	0.82	1.25
56	I listen to Podcasts in English. (home)	0.7	1.34	0.18	0.40
57	I play online vocabulary games. (home)	0.5	0.97	0.27	065
58	I watch online videos in English. (home)	2.8	1.32	2.36	1.36
59	I read the rules of online games in English. (home)	1.5	1.84	1.27	1.49
60	I read lyrics in English. (home)	1.8	1.32	1.91	1.30
61	I watch films in English with Hungarian subtitle. (home)	3.2	1.03	2.36	1.63
62	I watch films in English with English subtitle. (home)	1.7	1.49	0.45	0.69
63	I watch films in English without any subtitle. (home)	1.6	1.26	0.45	0.69
64	I watch my favourite series in English (home)	1.6	1.43	1.73	1.68

65	I watch English language videos on Youtube. (home)	3.4	0.97	2.73	1.49
66	I pick up new words when playing computer games in English. (home)	3.4	0.97	2.45	1.37
67	I revise new words several times during a day. (home)	1.1	0.99	0.55	1.21
68	I listen to English songs. (home)	3.4	0.97	3.27	1.19
69	I am not worry very much about the difficult words found when reading or listening, I pass them. (home)	2	1.25	1.00	1.18
70	I use on-line exercise to test my vocabulary knowledge. (home)	0.7	1.06	0.18	0.40
71	I test myself with word tests. (home)	0.5	0.85	0.36	0.81

CALL VOCABULARY LEARNING STRATEGIES VERSUS TRADITIONAL VOCABULARY LEARNING STRATEGIES

Number of Items	CALL vocabulary learning strategies	Mean	Standard Deviation
68	I listen to English songs. (home)	3.33	1.06
65	I watch English language videos on Youtube. (home)	3.05	1.28
66	I pick up new words when playing computer games in English. (home)	2.90	1.26
61	I watch films in English with Hungarian subtitle. (home)	2.76	1.41
58	I watch online videos in English. (home)	2.57	1.33
54	I use online language translator programs.(e.g.:Google Translator) (home)	2.29	1.06
31	I chat in English with foreign people on the Internet. (home)	1.71	1.42
33	I read blogs, forums and comments made by readers in English. (home)	1.71	1.42
42	I write down the new words I pick up when watching TV, using the Internet, etc. (home)	1.71	1.49
52	I listen to and watch English language media. (home)	1.67	1.35
64	I watch my favourite series in English (home)	1.67	1.53
59	I read the rules of online games in English. (home)	1.38	1.63
34	I keep in touch with my penfriends in English on the Internet. (home)	1.14	1.28
62	I watch films in English with English subtitle. (home)	1.05	1.28
63	I watch films in English without any subtitle. (home)	1.00	1.14
55	I read texts downloaded on to my computer or my smart phone in English. (home)	0.95	1.07
35	I make comments on blogs and forums or Facebook in English. (home)	0.86	1.31
32	I read my friends' English comments on the Facebook. (home)	0.81	1.03
56	I listen to Podcasts in English. (home)	0.43	0.98
70	I use on-line exercise to test my vocabulary knowledge. (home)	0.43	0.81
57	I play online vocabulary games. (home)	0.38	0.80
53	I read English texts on my e-book reader. (home)	0.33	0.97
36	I write blogs in English. (home)	0.29	0.96
45	I tape new words and listen to them. (home)	0.10	0.30
	Average mean and standard deviation	**1.44**	**1.17**
	Traditional vocabulary learning strategies		
22	I look the meaning of an unknown word up on an online dictionary. (home)	2.86	1.24
40	I write new words in the (vocabulary) notebook. (home)	2.33	1.62
25	I try to understand the meaning of a unknown word on the basis of the text. (home)	2.24	1.22
60	I read lyrics in English. (home)	1.86	128
46	I write the new words in the notebook in two columns (words in English – words in Hungarian) (home)	1.76	1.,51
20	I look up the meaning of an unknown word in an English-Hungarian dictionary. (home)	1.62	1.50
69	I am not worry very much about the difficult words found when reading or listening, I pass them. (home)	1.48	1.29
26	I try to understand the meaning of an unknown word by looking at the accompanying picture. (home)	1.33	1.20

	I pick up new words when reading books, magazines, etc. in English. (home)	1.14	1.20
21	I look up the meaning of an unknown word in an English monolingual dictionary. (home)	1.05	1.20
29	I speak with native speakers of English. (home)	1.00	1.45
47	I repeat new words aloud or in whisper. (home)	1.00	1.38
38	I make up sentences with new words. (home)	0.95	1.28
27	I ask the meaning of an unknown word from my mother, brother or sister. (home)	0.81	1.21
67	I revise new words several times during a day. (home)	0.81	1.12
50	I constantly revise words studies before. (home)	0.76	0.89
30	I correspond with native speakers of English in writing. (home)	0.71	1.27
24	I look up the meaning of an unknown word in the textbook glossary. (home)	0.52	0.75
28	I study new words with a mate (class mate, friend). (home)	0.43	0.68
71	I test myself with word tests. (home)	0.43	0.81
41	I use the textbook glossary for studying words. (home)	0.38	0.67
37	I group words in the notebook based on a topic or I do a mind map. (home)	0.24	0.70
23	I use a computer-based dictionary to find out the meaning of it. (home)	0.19	0.60
49	I learn words by listening to vocabulary CDs. (home)	0.19	0.60
39	I keep a diary in English. (home)	0.14	0.48
43	I use vocabulary cards for studying new words. (home)	0.14	0.48
48	I repeat new words by spelling them. (home)	0.14	0.48
44	I put labels on the objects or the wall. (home)	0.00	0.00
	Average mean and standard deviation	**0.95**	**1.00**

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