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Assessing Young Hungarian EFL Learners' Vocabulary and Learning Strategies

PhD dissertation

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Contents

List of acronyms in the dissertation

ANC = American National Corpus
ANOVA = analysis of variance
BNC = British National Corpus
COCA = Contemporary Corpus of American English
EFL = English as a foreign language
FL = foreign language
ICT = info-communication technologies
HNCC = Hungarian National Core Curriculum
KMO = Kaiser-Mayer-Olkin
LLS = language learning strategies
NL = native language
PVLT = Productive Vocabulary Levels Test
RQ = research question
SILL = Strategy Inventory of Language Learning
SD = standard deviation
SLA = Second language acquisition
VLS = vocabulary learning strategies
VLT = Vocabulary Levels Test
VKS = Vocabulary Knowledge Scale
VOLSI = Vocabulary Learning Strategy Inventory
YL = young learner

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Introduction

The domain of foreign language (FL) vocabulary assessment has experienced numerous research in the past years. However, hardly any attention has been focused on FL vocabulary assessment of young learners (YLs). In this dissertation, YLs' English as a foreign language (EFL) vocabulary is investigated. The dissertation is divided into three parts. In the first part, the general purpose of assessment is stated and the literature on vocabulary assessment and vocabulary learning strategies (VLS) is reviewed. Since the basis of the development of the vocabulary test presented in the dissertation is corpora, the application of the results of corpus linguistics is also included in the literature review. As the participants of the study YLs and the acquisition of their native language (NL) are close in time to their foreign language learning, findings of NL acquisition are also reviewed and synthesized.

In the second part of the dissertation, two pilot studies are presented with a focus on validating instruments. First, the development, the results, the item-analysis and how the tests functioned are described and discussed. As a second step, the development, results and the item-analysis of the self-report vocabulary learning strategies (VLS) questionnaire are expounded.

In the third part of the dissertation, the results of a large-scale investigation with the new instruments adapted for online use are elaborated on. The correlations between the online vocabulary assessment and the VLS use are revealed. The ultimate goal of the analysis of the correlations is to unveil a model that best describes the predictors of foreign language word knowledge.

Part I Literature review

Chapter 1 Purpose of research

1.1 Introduction

The 1990s saw an increasing number of studies focusing on FL vocabulary learning and the literature has been growing ever since then by extending the knowledge on such areas as FL vocabulary assessment (Laufer, Elder, Congdon, & Hill, 2004; Nation, 2001; Schmitt, 1997), the FL mental lexicon (Singleton, 1999; Zareva, 2007), corpus studies (Horváth, 2001; Kilgarriff, 1997; Nation & Macalister, 2010) and vocabulary learning strategies (Chostelidou, Griva, Ioannidis, & Panitsidou, 2012; Nation, 1990; Schmitt, 2000). It has also been affirmed that vocabulary knowledge is a good predictor of reading comprehension (Henrikssen, Albrechtsen & Haastrup, 2004; Nassaji, 2003; Shiotsu & Weir, 2007) and general language proficiency (Boers, Demecheleer, Coxhead, & Webb, 2014; Henriksen, 1999; Zimmerman, 2004). It has been reported that receptive vocabulary knowledge predicts productive vocabulary knowledge (Laufer & Nation, 1999, p. 42). With the emergence of the lexical approach (Lewis, 1993) in language teaching, a new avenue was opened for vocabulary research. An expert on language teaching uncompromisingly concludes "Without grammar very little can be conveyed, without vocabulary nothing can be conveyed" (Thornbury, 2002, p. 18).

The learning and teaching of vocabulary is a popular research area in the FL learning literature. These two processes are in the center of attention of both scholars and teachers. Educators have been encouraged (Lewis, 1993; Thornbury, 2002) to promote intentional learning of words in the classroom. Since the early 1990s textbook and FL syllabus writers have laid special emphasis on integrating the results of vocabulary research into the curriculum (Fitzpatrick, Al-Qarni & Meara, 2008) since successful language learning is greatly determined by FL word knowledge (Schoonen & Verhallen, 2008; Thékes, 2014a).

The field of vocabulary and word knowledge has been investigated by several actors in scientific domains. Education researchers (Nagy, 2004), psycholinguists (Ellis & Beaton, 1997), neurolinguists (Paradis, 2004), and morphologists (Jackson & Zé Amvela, 2011) contribute to or exploit the empirical results of vocabulary learning research and assessment. In this chapter the domain of vocabulary is elaborated on and I state what motivation and purpose have inspired me to conduct the research that not only assesses EFL of Hungarian young learners' (YLs)' vocabulary but it also seeks to explore the VLS used by the YLs.

Vocabulary is also considered as one of the strongest predictors of FL proficiency (Schmitt, 2008, p. 352). Significant correlations have been found between receptive vocabulary knowledge and FL reading comprehension (Henriksen et al., 2004; Koda, 1989; Laufer & Ravenhorst-Kalovski, 2010; Qian, 2002; Schmitt, Jiang & Grabe, 2011; Stæhr, 2009).

1.2 The purpose of the studies reported in the dissertation

In this section, I will elaborate on the reason for adventuring into the domain of assessing YLs' English word knowledge and VLS. I will also highlight the importance of knowing the necessary vocabulary size for the understanding of FL texts. It will also be emphasized that vocabulary is one

of the strongest predictors of language proficiency as asserted in the introduction. Finally, the principle will be highlighted that by developing a new word learning strategy questionnaire, valuable data can be gained in regarding how YLs learn FL words.

There is an agreement among scholars (Jang, 2014; Laufer et al., 2004; Nation, 2001; Read, 1999) that a good predictor of general FL knowledge is vocabulary. As vocabulary is part of communicative competence (see section 1.6), it is underlined that the size of vocabulary is a good predictor of communicative knowledge (Peters et al., 2009; Schmitt & Schmitt, 2012).

Nation (2001, p. 22) uncompromisingly makes the claim that the first 2,000 most frequent words must be learned as soon as possible during any FL learning process. Schmitt and Schmitt (2014, p. 486) also hint at the fact that the most frequent 2,000 word families are the traditional cut-off point for high frequency vocabulary, a tradition cited in research publications to a large extent. This means that the most frequent words in the corpora need to be taught first. This is a general viewpoint that does not necessarily apply for YLs. Numerous frequent words do need to be taught, however, age characteristics must be taken into consideration. Words that have more direct reference to YLs' life are learned much earlier and more simply than such frequent words as 'evidently', 'unfortunately' and 'through', etc. Words having more direct reference are names of animals (e.g. 'lion', 'ostrich', 'monkey'), words occurring in digital games (e.g. 'harvest cropper', 'kite', 'lightning'), words heard in TV series intended for children (e.g. 'postman', 'moody', 'dragon'). These words are absolutely not frequent and do not belong to the first 2000 word family) but YLs learn them earlier than some of the items among the 2,000 most frequent words (Vidákovich et al., 2013, Thékes, 2014b; Thékes, 2015a); nevertheless, YLs must learn most of the 2,000 most frequent English words (see section 1.2). Moreover, a relatively small amount of well-selected lexical items can provide a lot of assistance in the success of efficient FL communication. Selection of words must be based on corpora and frequency list. Section 3.5 presents the different corpora that can be used for word selection.

Nation (2001, p. 22) established three categories of words that must be learned somewhere on the road of language learning: (1) a small amount of high-frequency vocabulary that must be learned by all means (frequency means how often a word occurs in a given language), (2) a large number of less frequent words for the learning of which strategies must be mastered, and (3) specialized vocabulary that is important for the individual learner. By examining precisely these categories with respect to YLs, it can be concluded that YLs definitely need to learn high-frequency words but at the outset of the learning process mastery of all the first 2,000 words is not as necessary as later because some of the most frequent words are not relevant for children. As far as low-frequency words are concerned, YLs learn them in an easier way than frequent ones since they can relate their life necessities and interests to them. Learning specialized vocabulary is not out of the question in terms of YLs as for instance most of the children are highly interested in learning vocabulary related to digital games or activities which they are encapsulated in such as fishing with the father, doing woodwork, reading about cars, etc.

There have been numerous attempts at validating diagnostic vocabulary tests in the past 30 years (Schmitt, Schmitt & Clapham, 2001). In section 3.3, a wide range of validated instruments assessing vocabulary will be presented and diagnostic testing of YLs is outlined in section 3.4. A characteristic feature of these instruments is that they test one dimension of knowledge. They either assess receptive or productive knowledge of words and hardly any attempt has been made to design an instrument that assesses both receptive and productive FL word knowledge. Besides the vocabulary tests assessing either the receptive or the productive dimension of word knowledge, several instruments (e.g., Jiménez Catalán & Terrazas Gallego, 2008; Orosz, 2009) have been adapted to testing YLs' FL

vocabulary. Most of the validated tests focus their attention on the diagnostic assessment of adult learners (Nation, 2001). Two instances of assessment of YLs' EFL vocabulary were reported: (1) Orosz's assessment (2009) was carried out with a previously validated diagnostic Yes/No test that is not likely to provide sufficient data concerning Hungarian YLs' English word knowledge. The findings of her study will be presented in section 3.4.; (2) Vidákovich, Vígh, S. Hrebik and Thékes (2013) assessed Hungarian YLs' English and German as a FL receptive vocabulary with a diagnostic tool that the researchers had developed in an online environment. Their online test is described in section 3.3.5.

The validated diagnostic vocabulary tests (see section 3.3) were originally used as paper-and-pencil tests and there is a lack of vocabulary measures carried out in an online environment. Albeit the paper-and-pencil vocabulary tests have been computerized and are available on Tom Cobb's website at www.lextutor.ca, hardly any study has been published on the assessment of vocabulary executed with an online instrument except for Vidákovich et al. (2013).

As this summary entails, a need came up to develop an online English as a FL vocabulary test assessing YLs' receptive and productive word knowledge. Besides developing and validating this vocabulary test, there was also an intention to reveal correlations between YLs' EFL word knowledge and word learning strategies. A self-report questionnaire was piloted and developed that looked into YLs' FL VLS in an online environment. The questionnaire was filled in by the students after they had taken the online vocabulary test. I also sought to reveal the correlations with some background data concerning the children's gender, socio-economic status and school grades.

Triangulating data is of utmost importance in educational research because the richness and complexity of the gathered information can be fully mapped out and explained by analyzing it from different perspectives (Cohen & Manion, 2000). Triangulation was executed both in terms of the vocabulary assessment and that of the vocabulary learning strategies. To be more precise, two types of triangulations were conducted: data and methodological triangulation (Rothbauer, 2008). Concerning the vocabulary test, teachers were requested to make an assumption of the score of an average 6th grader. Only those teachers were asked to participate that teach 6th graders; however, they were not the teachers of the participants. Besides the online vocabulary test scores and the results gathered from teachers, think-aloud protocol was implemented so that test solving strategies could also be revealed.

Concerning the self-report VLS questionnaire, triangulation of the data was also implemented. Besides the results gained on the questionnaire, teachers teaching 6th graders were also requested to make an approximation as to which strategies 6th graders use. In addition these two sources of data, interviews were conducted with students focusing on their strategy use.

1.3 Clarification of terminology

In this section I will disambiguate the relevant and recurring terms in the dissertation. I find it important to make the applied terminology clear. Underpinning the research by providing definitions is a crucial step in my dissertation.

1.3.1 Young learners

Even though the definition of 'young learners' (YLs) might have variations across the globe, this term is entirely clarified in this dissertation. An agreement exists among the European Union member states that children before their age of six are called 'very YLs'. From age seven they are termed

'YLs'. Nikolov and Mihaljevič Djigunovič (2006, p. 236) clearly state that learners can be considered young up to the age of fourteen. In certain contexts the definition of 'YLs' allows an age extension only to age twelve.

In the context of the current research, the sample comprises 6th graders at the age of twelve. The majority of 6th graders in Hungary start learning English as a foreign language (EFL) as a mandatory subject at the age of ten when they are 4th graders. Some parents motivate their YLs to begin their English language studies as early as kindergarten or the first years of primary school. However, the assertion can be made that most of the learners involved in the research have an experience of two years of English learning. They are termed young learners throughout the dissertation and the abbreviation 'YLs' will be used to indicate this age range.

1.3.2 Foreign vs. second language

In this dissertation the terms 'foreign' and 'second' language will be used in several places; thus it is significant to make a distinction between the two. According to the *Encyclopedic dictionary of applied linguistics* (Johnson & Johnson, 1999, p. 44) the basis for this distinction is the geographical context in which a language is spoken. A second language situation is one that requires users of English with a different mother tongue to use English in commerce, administration and education whereas foreign language plays no such role. Richards and Schmidt (2002, p. 472) assert that the learning of Dutch by Turkish immigrant children or the learning of German by a Czech guest-worker are instances of second language learning, whereas a Hungarian YL studying English in school is an instance of foreign language learning. It is also pointed out by Richards and Schmidt (2002, p. 472) that 'foreign language' is not the native language of large numbers of people in a particular country, and is not used as a medium of communication in media, government, official places and everyday talk.

The term 'second language' is the language other than one's mother-tongue used for a special purpose (Crystal, 2003). Stern (1983) makes the distinction between a non-NL learned and used within one country to which the term 'second language' has been used and a non-NL learned and used with regard to a language community outside national boundaries in the context of which the term 'foreign language' is commonly used. The term 'second language' will be used in this dissertation with reference to studies conducted with bilingual learners or learners of English whose mother-tongue is different from English.

1.3.3 Learning vs. acquisition

Prior to going into any discussion of FL vocabulary learning, it is necessary to examine the acquisition/learning distinction. The purpose of this section is to determine what is meant by the two concepts in this dissertation. Krashen (1985, p. 38) clearly distinguishes between learning and acquisition. One of Krashen's five hypotheses (1989, p. 23) is the Acquisition-Learning Hypothesis. According to him there are two independent concepts regarding FL performance: the acquired system and the learned system. The acquired system is the product of a subconscious process which is similar to the process YLs undergo when they acquire their NL whereas the learned system is the product of a conscious, planned process which the students go through while intentionally mastering the words.

Meaningful interaction is required in the target language for learning. The learned system or learning is the product of formal instruction and it constitutes a conscious process the result of which is a conscious knowledge about the language, for instance, knowledge of vocabulary and grammar

rules. In Krashen's view (1989, p. 26) learning is a different process from acquisition. In spite of the fact the distinction can be made between acquisition and learning no differentiation will be made between the two concepts in this dissertation. In order to eschew any misunderstanding I will exclusively use the term 'learning' when foreign language vocabulary is discussed and the term 'acquisition' will be used when NL is under scrutiny (section 2.2). However, NL vocabulary development involves not only incidental word acquisition, but in some stages intentional learning also occurs.

With regards to the processes of vocabulary acquisition, it is claimed that second language vocabulary acquisition involves three tightly intertwined and interrelated areas: the representation, acquisition and processing of vocabulary (Hulstijn, 2002; Laufer & Hulstijn, 2001; Hulstijn & Laufer, 2001; Lehmann, 2009; Schoonen, Verhallen, Kennis & van Woorden, 2003).

1.3.4 Vocabulary vs. word knowledge

In the literature no classification exists with regard to the distinction between word and vocabulary learning. A word can be strongly associated with learning vocabulary. In a linguistic sense, word is part of vocabulary and vocabulary is the set of words within a language whereas idioms are fixed chunks of language that tend to have a figurative meaning.

The terminologies 'vocabulary learning' and 'word learning' are most often used interchangeably for the sake of eschewing repetition. Even though section 1.3 will clarify what a word is, I find it crucial to state that I will also use 'vocabulary' and 'word' in the relation of hypernymy and hyponymy.. This decision has been made with respect to the nature of the current research: this dissertation is written in the field of educational science. However, such terms as 'word learning strategies' Pavičič (2008), 'vocabulary learning strategies' (Stoffer, 1995) and 'word study strategies' (Schmitt, 1997) are used synonymously in this dissertation.

A comprehensive definition of vocabulary knowledge was proposed by Chapelle (1994, p. 168). Three components constitute word knowledge: (1) the context of vocabulary use; (2) vocabulary knowledge and fundamental processes; and (3) metacognitive strategies for vocabulary use. Chappelle's (1994) definition is the development of Bachman's model (1990) that perceived vocabulary as part of grammatical knowledge. Grammatical knowledge, according to Bachman (1990, p. 68) is a sub-component of organizational knowledge. In Chapelle's model (1994, p. 164) context of vocabulary use is interpreted as a sociolinguistic component. The second component in Chapelle's construct (1994), vocabulary knowledge, refers to the processes of word learning. The third component, metacognitive strategies for vocabulary use is the ability to use words appropriately in communication. Metacognitive strategies in this sense is equal to Canale and Swain's (1980) strategic competence which is used as an attempt toto level out the gap in vocabulary.

1.4 Importance of the domain

This section is on the one hand dedicated to the history of vocabulary research and on the other hand to the emergence of numerous FL vocabulary studies. I describe the trajectory of the field from the beginning in the 1970s up to nowadays. The domain will be approached from a teaching perspective to assess FL vocabulary size so that classroom implications will be provided.

As Nation (2001, p. 9) states, it is an ambitious goal to learn all the words of a language. However, this is an impossible goal because even the most erudite native speakers do not know all the vocabulary. According to Nation (2001, p. 19), in the midst of planning a language learning course three kinds of information are necessary to be looked at: (1) the number of words in a language; (2) the number of words native speakers know; and (3) the number of words the student must learn by all means in order to be engaged in meaningful communication that can be made efficient by mastering lexical knowledge.

Nowadays, in the growing body of literature there is an agreement that lexical knowledge is the main predictor of fluency in any language no matter what skill is concerned (Laufer, 2009; Nation & Meara, 2010; Webb & Sassao, 2013). The recognition of the central role of vocabulary has inspired numerous studies tapping into learners' necessary vocabulary size. In one of the ground-breaking studies Laufer (1997, p. 152) found that 95% of the FL words must be understood by the learners so that comprehension of the text will not be obstructed and NL reading strategies will be automatized.

In a later study, Hu and Nation (2000, p. 426) uncovered that readers needed knowledge of 98% of the words in a text to achieve unassisted comprehension. In their study, the coverage of a fiction text was manipulated in a manner that words were replaced with nonwords. These lexical coverage figures provide scholars and teachers with relevant information in calculating the vocabulary size which speakers need in order to use language. For example, Nation (2006) calculated that a vocabulary size of 8,000 to 9,000 words is necessary to reach a 98% coverage level in written texts. Laufer and Ravenhorst-Kalovski (2010, p. 24) also estimated that it takes around 8,000 word families to allow a coverage of 98% in English. Even though the samples of these studies are learners older than 14 years of age, it might be assumed that the 98% rule is a valid figure as far as YLs are concerned. The results of the studies conducted by Laufer (1997) and Nation (2006) have exerted influence on teaching methodologies. Developing relevant lexical knowledge is perceived now as a vital factor in the process of a YL learning a FL similar to adult learners. Alderson and Huhta (2005) even suppose that there is a critical lexical threshold. This critical threshold is around 1,650 words below which the learners, especially YLs are posed with extreme difficulties in comprehending and even taking part in comprehensible interaction.

Even though vocabulary learning was always perceived as an essential factor in mastering a FL it was not until the 1990s that vocabulary teaching and research gained momentum (Nation, 2001, p. 8). Learning words was considered as a collateral occurrence in the language learning process. The mastery of grammar rules and syntactic structures was the end-goal of language teaching and learning (Thornbury, 2004, p. 28). With the dominance of the grammar-translation method in language teaching, successful uptake of vocabulary, especially in Hunagyr, did not play as an important a role as the learning of morphosyntax in the 20th century. Syllabi focused on grammar and teachers looked at words as supplementing elements and mere ingredients in the formation of syntactically correct sentences (Kidd, 1992, p. 50). It was not until the mid-70s when attention was called to the fact that vocabulary should be given more significance. Richards (1976, p. 2) asserted that the teaching and

learning of vocabulary had never aroused the same degree of interest within language teaching as had such issues as grammar, reading, or writing, which had received considerable attention from researchers and teachers.

Since Richard's (1976) ground-breaking study on the construct of word knowledge, vocabulary has gradually taken central stage in the teaching and learning of FLs, especially English. It is regrettable to note that the teaching of other languages in Eastern- and Central-Europe is still grammar-focused (Thornbury, 2004, p. 34); nevertheless, the English teaching profession has gone through serious methodological modifications and several teachers lay special emphasis on teaching vocabulary with a multitude of techniques, which are not always efficient but at least a growing trend can be observed (Harmer, 2012) that some teachers have taken a major shift from the grammar-translation method.

One thing that teachers, learners, scholars, material writers, language school operators recognize is that the teaching and learning of vocabulary cannot be neglected any more. However, as Schmitt (2008, p. 23) highlights, the best way of reaching good word knowledge is still unclear. The mastery of words is dependent upon a wide range of factors and background variables (de Groot, 2006; Kramer & Beglar, 2015; Laufer & Girsai, 2008; McLean, Kramer & Beglar, 2015). These factors are listed and analyzed in section 2.4.1 and 2.4.2. Numerous studies (Folse, 2008; Nagy, Anderson & Herman, 1987; Nation, 1993) highlight that a sufficient vocabulary size is a prerequisite to the comprehension and critical interpretation of FL texts whether they are written or spoken. This means that successful interaction is not possible without the knowledge of vocabulary. The question arises as to how large vocabularyneeds to be. Since this dissertation focuses its attention on young language learners, light will be cast on the necessary vocabulary size of this age group learning EFL.

The construct 'vocabulary' is put under scrutiny from several perspectives: how words must be taught in the classroom, how vocabulary develops in the language learning process, what strategies should be applied in order to learn vocabulary efficiently, how broad and deep word knowledge must be in order to comprehend FL texts and how vocabulary ought to be assessed. The next section will be dedicated to determining what vocabulary denotes.

1.5 What is vocabulary?

In order to define what vocabulary means, it is necessary to scrutinize what has been offered in the literature in this respect. At the beginning of the 20th century, Saussure (1974) pointed out that there was arbitrariness between a word and its referent and determining what a word was two paramount theoretical underpinnings must be discerned: signifier and signified. He asserted that a sign was composed of the signifier and the signified. In the case of a rabbit, the signifier is the word 'rabbit' or 'coniglio' or 'Hase' or whatever, and the signified is the speaker and listener's mental representations of the concept of a furry quadruped with a short tail and big incising teeth.

1.5.1 Receptive vs. productive vocabulary

The construct of vocabulary is generally determined as the entity of two major composing factors: receptive and productive vocabulary (Matsouka & Hirsh, 2010; Nation, 2011; Shaw, Halmström & Irvine, 2011; Schmitt & Schmitt, 2014; Tang & Nesi, 2003; Webb, 2012). Receptive vocabulary is the set of words a learner can recognize whilst reading and listening in contrast to productive vocabulary which entails the ability to use a word in speaking or writing (Harding, Alderson & Brunfaut, 2015; Schmitt & Schmitt, 2014; Zhou, 2010).

Within the construct of receptive vocabulary, listening and reading vocabulary are distinguished. Reading vocabulary is the learner's set of printed words they can recognize. It is estimated that reading vocabulary is greater than listening vocabulary (Matsouka & Hirsh, 2010, p. 60), an assertion which can only partly be related to YLs since some YLs might hardly ever read but comprehend what they hear. As for productive vocabulary, speaking and writing vocabulary, the latter is researched more profoundly since speaking vocabulary is hard and tedious to investigate on a large sample (Read, 2000). Writing vocabulary has mainly been studied on paper-and-pencil tests; nevertheless, creating an algorithm to evaluate writing online is being developed in numerous testing centers (Vista, Care and Griffin, 2015, p. 32). This development will also contribute to instruments assessing children. The term 'receptive' will be used in this dissertation with reference to assessment of reading and listening vocabulary and the term 'productive' will refer to speaking and writing assessment.

1.5.2 Vocabulary, word, compound words

The definition of 'word' is of interest to several entities in the field: linguists, teachers, educational researchers and even laypersons. As has been concluded by Nation (2001, p. 31), defining the lexicon and a single word is not simple. According to the *Merriam-Webster* (2015) online dictionary, vocabulary"the words used in a language or by a person or group of people" a word is"a sound or combination of sounds that has a meaning and is spoken or written" For their simple applicability the definitions determined by the Merriam-Webster dictionary serve as the basic interpretation of the concept 'word' and 'lexicon' in this dissertation; however different other definitions must also be analyzed.

It is claimed (Singleton, 1999, p. 28) that the level of abstraction determines what is meant by the construct 'word'. Numerous interrelated disciplines have a common concern of researching word knowledge. Semantics, sociolinguistics, pragmatics, psycholinguistics, morphology and language pedagogy all have an interest in this field. The construct 'lexicon' is defined by Singleton (1999, p. 15) as the composing part of a language which has to do with what is called local phenomena – the meanings of particular elements of a given language, the phonological and orthographic forms of these composing parts, and the specific ways in which they collocate.

Without complicating the concept, Carter (1998, p.5) simply states that the word is "the minimum meaningful unit of a language". However, Laufer (1997) goes deeper into circumscribing what 'word' denotes. According to her, words ought to be fragmented into two main categories: lexical and grammatical (Laufer, 1997, p. 146). Lexical words convey semantic meaning, whereas grammatical words specify some kind of grammatical relationship. By doing further elaboration, she claims that there are lexical words that carry semantic meaning and there grammatical words implying some grammatical relationship or function. Laufer (1997, p. 147) defines the six characteristics that are necessary for a learner to know a word: (1) form (spoken or written), (2) word structure (morpheme and inflections), (3) syntactic pattern of the word, (4) meaning (referential, affective, pragmatic), (5) lexical relations (synonyms, antonyms, hyponyms), and (6) common collocations.

Nation (2001, p.18), in his seminal book, poses the question: "What do we count as a word?", "Is it necessary to count 'fox' and 'foxes' as the same word?" He goes on to contend that "there are several ways of deciding what words will be counted." He differentiates three terms: tokens, types and lemmas. Tokens are running words. Every word in the text is counted as one. If one word occurs more than once, then every occurrence is counted. For instance, in the sentence 'I find it hard to believe that he did it', there are ten tokens. Types are different from tokens in that one word is counted

only once no matter how many times it occurs. So in the 'I find it hard to believe he did it' , there are nine types of words because 'it' is counted only once. Lemmas consist of a head word and some of its inflected or derived forms. As Kucera and Francis (1967, p.12) claimed, all the items under one lemma are the same part of speech. In the case of 'swim', 'swimming', 'swam', we are talking about a lemma.

It is worth noting that vocabulary does not just constitute single words but also compound words such as idioms, phrasal verbs, compound nouns. According to Read (2000, p. 22), these compound words consisting of more than one word must be recognized as one lexical item. These are called multi-word units, chunks, prefabricated lexis or formulaic sequences in the literature, mostly interchangeably (Wray, 2002).

1.6 The concept of word knowledge within language knowledge models

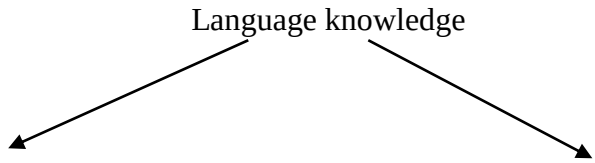
In this section the concept of word knowledge will be determined within the frame of several language competence models. Word knowledge will be positioned within these models and will be defined as a sub-component of the dimensions of the described models. Since vocabulary is necessary to communicate and to produce language, a special focus will be laid on the models of communicative competence.

The term 'communicative competence' was coined by Hymes (1972) who attempted to challenge Chomsky's (1965) concept of 'language competence' that means the knowledge of rules of a language system and the creation of syntactically correct sentences. According to the assertion made by Hymes (1972), the knowledge of certain rules concerning language use is vital for communication.

In an attempt to integrate the two concepts into one model Canale and Swain (1980) described the structure of communicative competence as multi-dimensional consisting of grammatical, sociolinguistic and strategic competence. Canale (1983) broadened this model by adding one more dimension: discourse competence. This model is a dynamic system and the competences are interrelated. Vocabulary is considered part of grammatical competence this model since Canale (1983) involves such features under this competence as vocabulary and word formation besides sentence formation and spelling.

Canale's (1983) model served the basis for a new model developed by Bachmann (1990). According to this model language competence comprises organizational and pragmatic competence. From the perspective of vocabulary, it is significant to survey organizational competence. It is further constructed into grammatical and textual competence. In this model vocabulary is part of grammatical competence along with morphology, syntax and phonetics.

Bachmann's model was further developed by Bachman and Palmer (1996) who created a more complex system than the ones developed by Canale and Swain (1980), Canale (1983) and Bachmann (1990). The term 'competence' is discarded and is called 'knowledge'. Figure 1 present Bachmann and Palmer's (1996, p. 68) model of language knowledge.



Organizational knowledge		Pragmatic knowledge	
Grammatical knowledge	Textual knowledge	Functional knowledge	Sociolinguistic knowledge
-vocabulary -syntax -phonology/graphology	-cohesion -conversational organization -imaginative functions	-ideational functions -manipluative functions -heuristic functions -cultural references	-dialects -registers -natural and idiomatic expressions

Figure 1. Areas of language knowledge (Bachman & Palmer, 1996, p. 68)

It is clear from this Figure 1 that vocabulary is part of grammatical knowledge similar to the previous Bachmann (1990) model. The model provides a more differentiated system than the previous models. It particularly analyzes functional knowledge which is less relevant from the point of view of vocabulary.

Parallel to Bachmann and Palmer's (1996) model Celce-Murcia, Dörnyei and Thurrell (1995) developed the functional-dynamic model of language knowledge. The model determined five interrelated competences that exert an influence dynamically on one another: discourse competence, strategic competence, socio-cultural competence, actional competence, and linguistic competence.

According to this model, vocabulary takes its place within linguistic competence similar to Bachmann and Palmer's (1996) model which is also the most widely used system test development (Eckerth & Tschirner, 2010); nevertheless, in their terminology linguistic competence corresponds to grammatical competence/knowledge; however vocabulary is not clearly determined where it is positioned. Among all these listed and described models, the most applicable is Bachmann and Palmer's model (1996) from the perspective of vocabulary since the position of vocabulary is clearly determined as opposed to Celce-Murcia et al. (1995). In this dissertation vocabulary is considered as part of grammatical knowledge that belongs to organizational knowledge in the framework of language knowledge.

Chapter 2 Development of YLs' vocabulary

2.1 Introduction

The term 'development of vocabulary' is used several times in the text so it is vital that its meaning is clarified. This term is used when referring to NL vocabulary growth and also to the students' foreign language vocabulary growth. The terms 'development' and 'growth' will be applied interchangeably.

It needs to be emphasized that the younger the learners are, the slower their development of foreign language proficiency is compared to older learners (Nikolov & Mihaljevic Djigunovic, 2006). This statement holds true for FL vocabulary as well. García Mayo and García Lecumberi (2003) and Munoz (2006) investigated YL in a European FL context. Their findings were congruent: YLs need long years to master a foreign language. This slow progress of FL proficiency can be subjected for FL vocabulary.

According to the social pragmatic view, the environment and, to a lesser extent, context disambiguate the meaning of words in the learning situation. The role of the caregiver is emphasized whose actions are the most important from the perspective of the child's focus (Bryant, 2009; Tomasello, 2000). Infants observe what is conventional and they convey meaning as they believe everyone in the community would expect them so. In opposition to the social pragmatic view, the emergentist coalition model suggests that children use numerous clues that they attempt to attach to new labels (Pienemann, 1998). According to the representatives of the emergentist theory (Clahsen, 1984; Pienemann, 1998), the number of cues students use grow as children get older. Those who support this model assert that this is a holistic approach and they seek to capture the stages children go through in developing into active speakers and users of vocabulary.

Besides FL and NL vocabulary growth another domain of research is bilingual speakers' vocabulary development. A most recent study with the participation of Dutch native and Turkish-Dutch bilingual speakers has asserted that bilingual children are not slower in vocabulary uptake and phonological overlap between the two languages positively empower training outcomes on account of linguistic transfer (Janssen, Segers, McQuenn & Ludo, 2015, p. 380). Even though bilingual children's vocabulary is plausibly an interesting focus of research, in this dissertation bilingualism and the investigation of bilingual children are not considered.

When analyzing students' EFL vocabulary growth, the term 'development' will entail the continuous process of the growth of vocabulary size and the deepening of word knowledge. This process is, however, not always linear as it has its cyclical ups-and-downs both in an EFL and NL (Hirsh-Pasek, Golinkoff & Hollich, 2000, p. 158). Aitchison (1994, p.36) sums up the process of learning an FL word in three phases: labeling (connecting a label to the word), packaging (grouping a number of objects), network-building (noticing connection between related words).Word knowledge and its development are interpreted along several dimensions (Nation, 2001; Schmitt, 1997). Two vital aspects of vocabulary development are discerned (Laufer & Nation, 2001; Read, 2000): breadth and depth of vocabulary. Breadth means the quantitative trait of vocabulary, i.e., how many words a student knows, whereas depth means the qualitative trait of vocabulary and is characterized by the words' syntagmatic relationships and the inner structure of words (Nation, 2001; Read, 1999). However, scholars agree that depth can be defined with difficulty. Schmitt (2010, p. 32) argues that depth may be the least definable and operationalizable construct in the entirety of cognitive science. The breadth and depth of individuals' vocabulary determines to a great extent how

much they are capable of comprehending a text (Nagy, 2004, p. 128). In Meara's view (2009) the interpretation of vocabulary breadth is the following: the number of words learners know. Depth, on the other hand, means how well learners know these words. Another essential aspect in this construct is the distinction between receptive and productive word knowledge (Nation, 2001, p. 102). Receptive word knowledge means that a student is able to comprehend written and heard words whereas productive knowledge is the ability to produce words in spoken or written discourse.

2.2 NL vocabulary acquisition, learning and development

Prior to going into any detail on how NL vocabulary influences FL vocabulary, it is of high importance that NL vocabulary acquisition is mapped. The importance of this mapping is underlined by the fact that the participants of my study are twelve-year old learners of EFL and their NL acquisition is close in time to their beginning of studies in English. As was pointed out in the introduction of this dissertation, the term 'acquisition' is used when NL is discussed. Acquisition is defined as a subconscious process (Krashen, 1989).

After review of the literature, eight important stipulations must be highlighted as far as the children's NL vocabulary acquisition and knowledge are concerned from both a product and a process point of view. These stipulations concern the vocabulary acquisition of all NLs. (1) Vocabulary contributes to reading fluency since it leads to more precise reading practice (Clark, 2009, p. 32), (2) children's vocabulary correlates with reading comprehension (Dickinson & Tabors, 2001, p. 102), (3) gap in word knowledge persists through the school years (White, Graves & Slater, 1990, p. 288), (4) the vocabulary gap between struggling readers and proficient readers grows each year (Cunningham & Stanovich, 1997), (5) children with restricted vocabulary have weak reading and listening comprehension abilities (Chall, Jacobs & Baldwin, 1990, p. 26), (6) vocabulary contributes to the development of phonemic awareness (Anthony & Lonigan, 2004, p. 48), (7) the relation between amount of parent speech and vocabulary growth reflects parent effects on the child, rather than hereditary factors (Huttenlocher, Haight, Bryk, Seltzer & Lyons, 1991, p. 242), and (8) the number of words known by the NL speaking children strongly exert an effect on successful speech production (Clark, 2009, p. 28). All of these claims point to an important principle that NL vocabulary is highly significant from the perspective of reading comprehension, speech production, school success and pragmatic, strategic communicative abilities.

Jalongo and Sobolak (2010, p. 426) argue that vocabulary development is a multi-faceted process that presents challenges to early childhood educators. All students, regardless of socio-economic status or background, need to make proficient gains in receptive and productive vocabulary at home and at school each year in order to support their growth in literacy. Students from low socioeconomic status are especially at risk of failing to make vocabulary gains (Jalongoi & Sobolak, 2010).

The development of vocabulary is an interesting field of psycholinguistics, which places vocabulary investigations into its focus. Preceding the utterance of the first word, a silent period takes place which has a significant role in language acquisition. The signifier and the signified are connected during this period (Pléh, 2006, p. 774). Based on Clark's (2009) assertion it can be contended that during the first years children acquire vocabulary instinctively. Words are imitated and after imitation, words are associated with objects and actions. At the age of around six months the stage of hearing vocabulary follows that of the speaking vocabulary as the child attempts to communicate with their environment. Babbling begins at this time and most words begin with consonants in English (Berk, 2009). This stipulation holds true in Hungarian in the case of Hungarian

students (Tóth, 2014). At the age of one, babbling is followed by the one-word stage. In this period concrete words, mainly nouns, are pronounced. Sentences are substituted by pointing and saying isolated words. In case a child needs a glass of water, they point and say 'water', when they mean: 'Can I have a glass of water?' At the age of 18 months children can recognize things belonging to people. They can say such lexical chunks as 'mommy's socks'. They can discern between possessor and possessed and actor and action (Berk, 2009). They usually vocalize subject-verb, verb-object and adjective-noun. At the age of three years a stage called overgeneralization follows. Children whose NL is English tend to overgeneralize past forms of verb and plural forms of nouns incorrectly. They say 'goed' instead of 'went' and 'foots' instead of 'feet.' Word order is often confused (Kennison, 2013, p. 32). In case of Hungarian children overgeneralization also occurs (Gósy, 2009, p. 66). This is the case especially with plurals. Children say 'kenyérek' rather than 'kenyerek' for example. At the above-mentioned age of 18 months the majority of the YLs start using two-word phrases as well (Bakk-Miklósi, 2010, p. 52). The period of first questions is characterized by vocabulary growth to great extent. Besides real words, incomprehensible lexical forms also appear. Pléh (2006, p. 132) identifies a productive vocabulary of ten to fifteen words, whereas Butzkamm (2003, p. 33) asserts that children possess as many as 50 productively and 200 receptively at the age of 18 months. At the age of two, following the so-called vocabulary boom, children discover the fact that everything has a name.

The development of vocabulary is a dynamic process (Pléh, 2006); the only thing that changes is its source. The mother later ceases to be the only source of vocabulary and reading plays a paramount role in school. During the period of verbal enjoyment at around age three the use of verbs dominates children's speech and compound sentences are not rare any more (Gósy, 2005). By the age of four children possess a large amount of vocabulary to communicate effectively (Cole, 2000, p. 480).

When YLs reach six years of age they will have learned 1,500 words on average in their NL productively whereas a six-year-old child has an average receptive vocabulary of around 14,000 words and learns ten new words a day in their NL (Butzkamm, 2003). This means that they encounter one word in every waking hour (Jackendoff, 1994, p. 28). Certain words may take a longer period to master; thus a child is likely to be working on learning several words at the same time. At the age of nine children are characterized by rapid and automatic processing with the use of a variety of vocabulary (Pléh, 2006). It can be concluded that every year a child learns around 1,500 new words in their NL (Pléh, 2006). On the basis of this calculation and Jackendoff's (1994) stipulations it can be asserted that 12-year-old children know around 6,000-7,000 words receptively. Since the trajectory of NL vocabulary growth slows down and reaches a plateau at around age 14 (Clark, 2009, p. 98), vocabulary size does not increase in a similar rhythm past this age.

As for the number of words a native speaker can use, numerous studies are available. NL vocabularies indicate broad variations within a language, and are dependent on the level of the speaker's education. In their state-of-the-art study, Zechmeister, Chronis, Cull, D'Anna and Healy (1995, p. 208) highlight that 17-18-year-old students would be able to recognize the meanings of about 10,000–12,000 words and college students have a knowledge of about 12,000–17,000 words and adults have an average vocabulary of around 17,000 words in English and these figures are similar to all languages.

After revealing the main findings of NL vocabulary research it is essential that the influence of NL vocabulary on FL vocabulary learning will be mapped. In the subsequent section the attention will be focused on the relationship between NL and FL vocabulary.

2.3 Factors influencing FL vocabulary learning

More than 40 years ago the question was raised by Gardner and Lambert (1972, p. 131) as to how it was possible that some learners learned easily and for some it was an impossible adventure to learn a FL under similar circumstances. Since then the question has been asked several times and now it appears obvious that every learner is able to learn a FL but with regard to pace and simplicity there are huge differences. The conclusion has been drawn that knowing a FL is not only the result of direct teaching but learners' achievements depend on many factors. Individual differences in the field of FL learning have been elaborated on by Dörnyei (2009), Larsen-Freeman and Long (1991), Ligthbown and Spada (2006), Skehan (1989). As regards vocabulary, factors influencing its learning is explored in the subsequent sections and an attempt is made to model vocabulary learning by using the most applicable second language acquisition (SLA) model for this construct (YLs' FL vocabulary learning).

First and foremost, cognitive factors influencing FL word learning are investigated. The developmental process of learning a FL word by means of the knowledge of an NL word is highlighted first. Following the presentation of NL influence on FL vocabulary learning, those cognitive factors are listed which exert an influence on FL word learning. Within the umbrella term of cognitive factors the following variables are in the focus: strategies, the role of memory, general language knowledge, inductive reasoning, and language aptitude. Another cognitive variable, intelligence, is not involved in our analysis because previous studies highlight that language aptitude is in a stronger relationship with language knowledge than intelligence (Ehrman & Oxford, 1995; Skehan, 1998). In Ehrman and Oxford's (1995) investigation it was revealed that language aptitude (the innate ability to learn language effectively) explained 25% of the variance of learners' achievement.

Affective factors influencing FL word learning are also discussed. Language anxiety and motivation are involved in our investigation with respect to vocabulary learning. A decision was made not to encompass other affective factors such as empathy, inhibition, aggression and different other component of social competence since they were irrelevant in our research.

Besides cognitive and affective factors, the type of vocabulary teaching techniques is also a vital factor in YLs' vocabulary growth. Nowadays there is a growing body of literature offering a variety of teaching techniques (Thornbury, 2002). Several EFL teachers publish their new teaching ideas and methodologies in journals aimed at teaching practitioners (e.g. *Modern English Teacher*, *IH Journal*, *ELT Professional*, etc.). The focus of the publications in the listed journals is vocabulary teaching (Thékes, 2012). It might be supposed that these ideas are incorporated into the sylabbi of ELT courses; however, it is dubious whether teachers in Hungary apply the techniques described in the periodicals and presented at conferences targeted at teachers.

Apart from cognitive and affective variables, teaching techniques, and different other background variables that plausibly affect FL word learning are discussed: frequency of words, context of the words, general language knowledge, and time spent with ICT devices.

2.3.1 The influence of NL

An issue that has been in focus concerning FL learning is the role played by NL. It has been stated that the adequate development of NL abilities determine the success of FL learning (Birdsong, 2006, p. 28; Dörnyei & Skehan, 2003, p.592). The similarities of FL learning to the shifts that children experience in the NL learning process has also been researched. The obvious is noted by Kersten (2010) that the FL lexicon is generally smaller than the NL lexicon, therefore, learners do not have

the same associations and connections between words. This definitely entails that NL words are learned differently from FL words and a more naturalistic setting contributes to this difference as was stipulated in section 2.2.

Singleton (1999, p. 518) describes four stages in the developmental process of learning NL words up to the age of 24 months: (1) cooing at the age of one-four months, (2) babbling that is a combination of vowel-like and consonant-like sounds from eight months, (3) one-word-utterance stage when meaningful one-word utterances are formed at the beginning of two years of age, (4) at the age of 18-24 months the child is capable of producing two-word utterances. FL vocabulary learning is considered as a slow process that stretches over a lifespan (Augustin Llach, 2011; Bordag, Kirschenbaum, Opitz & Tschirner, 2014; Clark, 2009; Meara, 1987). In this process of FL lexical learning new forms are learned in the midst of association with new meanings. According to Singleton (1999, p. 28) the FL learner learns new words to refer to old concepts notwithstanding the new concepts that lack in the NL also must be learned and already existing concepts need to be constantly modified.

Whereas Singleton (1999, p. 98) describes NL word learning processes, Levelt (1989, p. 28) determines how FL words are learned through the knowledge of NL words. Levelt (1989, p. 44) proposes a model that constitutes three stages in the process of FL word learning with the aid of NL words: (1) formal stage when the formal characteristics of the NL word is grounded, (2) NL lemma mediation stage when the NL lemma is copied onto the FL entry, and (3) FL integration stage when the FL semantic, syntactic and morphological characteristics are juxtaposed onto the FL lexical entry. An extensively detailed analysis of this briefly described process is given in Jiang (2000).

Four German YLs in a naturalistic setting were investigated (Wode, Rhode, Gassen, Weiss, Jekat, & Jung, 1992). Several differences were pointed out between NL and FL vocabulary learning. NL vocabulary growth is rather slow until the first 50 words then there is acceleration in the process contrary to FL vocabulary development which is considerably rapid initially but it loses speed and is usually slow after the first 2,000 words.

Another focus of research is the case of false cognates, i.e., lexical items that have overlapping orthographic/phonological traits but no semantic overlap. Janke and Kolokonte (2015, p. 146) came to the conclusion that the French participants learning English in their study had extreme difficulty in identifying correct meaning. This finding gives support to the assumption that the NL might negatively influence FL vocabulary learning. Nakai, Lindsay and Ota (2015, p. 48) had similar findings with Greek and Japanese speakers of English when they investigated homophone effects in FL spoken-word recognition.

If this fossilization of interlanguage is inevitable, the question arises as to whether the exclusive use of the target language dictated by the principles of communicative language teaching facilitate or hinder vocabulary learning. Intralingual methods involve explanation of target words in FL, exploiting linguistic context, giving synonyms and definitions whereas interlingual methods involve the use of translations and definitions given in NL. Notwithstanding the goal of communicative language teaching to use the target language, the NL is present in the learners' minds no matter whether teachers accept that or not (Liu, 2008, p. 65). It is also posited by Liu (2008, p.67) that "adult FL learners often do not have as much contextualized input as children do, which makes the extraction and integration of lexical meanings difficult."

He further claims that there is hardly any necessity to learn new meanings whilst learning FL words. He argues that the presence of an existing NL system renders adult vocabulary learning different from NL vocabulary learning. When children learn their NL they learn the concepts at the

same time. So meaning and concept are inseparable. NL word recall is spontaneous and effortless as opposed to FL word learning which little semantic or conceptual development accompanies. This is congruence with what Clark (2004, p. 472) sheds light on, namely ”when children learn a first language, they build on what they know – conceptual information that discriminates and helps conceive categories for the objects, relations and events they experience.” Thus when first conceptual information is established by children, then linguistic representations are added. This is likely to take place in the process of YLs' vocabulary learning. When learners encounter with a new FL word they set up conceptual information before they add linguistic representations.

Similar to the learning of grammar, the assertion might be made that lexical forms are also fossilized. Jiang contends (2000, p. 58) vocabulary learning constitutes three stages: (1) the formal stage; (2) the NL lemma mediation stage; and (3) the FL integration stage. In the first stage, the formal stage, only a lexical entry is established. In the second stage, the NL lemma mediation stage, both the lemma information the word's NL counterpart and the FL lexeme information are taken on by the FL word. In the final stage, the FL integration stage, the integration of FL information (i.e., semantic, syntactic, morphological specifications) into the lexical entry takes place.

2.3.2 The role of language aptitude in FL vocabulary learning

Language aptitude is an umbrella term that includes memory and inductive reasoning. In this section, these two sub-factors of language aptitude will be elaborated on. Memory is an essential cognitive factor with respect to vocabulary learning. Masoura and Gathercole (1999) examined the relationship between short-term memory skills and YLs' FL and NL abilities to learning the vocabulary of EFL. It was discovered that both FL and NL vocabulary were in a close relationship with the phonological short-term memory measures. Wen and Skehan (2011, p. 21) state that working memory is an essential component of language aptitude. They highlight four important assertions: (1) concerning the capacity of working memory there are special differences among learners, (2) these differences can be assessed in a reliable and valid way, (3) working memory plays a constant and significant role in the process of foreign language learning, (4) the different components of working memory indicate a significant correlation with foreign language knowledge and its different aspects (most importantly, vocabulary).

The construct language aptitude, from the perspective of vocabulary recognition ability, was investigated by Dahlen and Caldwell-Harris (2013). English speakers (n=88) heard a Turkish noun uttered three times while they had to look at a picture of that noun. They then rehearsed twenty Turkish nouns. Subsequently, participants were asked to recall the Turkish word for each picture and recognize the words when used in a sentence. They found that foreign language aptitude, as measured by the Modern Language Aptitude Test (Carroll & Sapon, 2002) is a good predictor of the level of success in initial learning of foreign vocabulary. Another finding reported was that that learners with high FL aptitude recalled and recognized more target words than learners with low FL aptitude.

In a Hungarian study language aptitude was assessed amongst 6th graders (n= 419) with the FL aptitude test for YLs (Kiss & Nikolov, 2005). It was revealed that aptitude explained 25% of the total variance. An interesting finding is highlighted by the researcher that inductive reasoning ability explained a large part of the total variance among 6th graders (Kiss & Nikolov, 2005, p. 146). Although Nikolov and Csapó's (2009) study assessed general proficiency with vocabulary not being assessed as a construct, some information may be inferred with respect to word knowledge as well since word knowledge is a good predictor of general language proficiency, especially reading comprehension (Comer, 2012; Jeon & Yamashita, 2014; Shen, 2005).

Inductive reasoning, a cognitive ability, part of language aptitude, assessed with the instrument developed and validated by Csapó (1994), was investigated with respect to the extent of its correlation with YLs' EFL proficiency. It was revealed that inductive reasoning explained a considerable (over 20%) amount of the variance. Albeit the study conducted by Csapó (1994) focused its attention on general language proficiency rather than vocabulary, it can be concluded that inductive reasoning ability is a predictor of foreign language word knowledge (Nikolov & Csapó, 2009).

The comprehension of the cognitive processes of language learning is of great assistance to comprehend how successful uptake of words takes place. This section has attempted to explore these cognitive mechanisms whereas in the next section affective variables will be discussed that play a role in vocabulary learning.

2.3.3 FL anxiety

Besides cognitive factors, listed in the previous section, other factors such as affective factors, might also exert an influence on YLs' vocabulary learning. Anxiety, for example, is a widely researched construct which is hypothesized to correlate negatively with lexical pickup rate.

Horwitz, Horwitz and Cope (1986, p. 128) assert that FL anxiety is a special type of anxiety. According to MacIntyre (1999, p. 24) FL anxiety is a negative emotional reaction during the learning of an FL. FL anxiety is experienced when the non-native speakers face the need of using an FL. FL anxiety is not a general anxiety coming from the personality, but it is related to FL learning and FL use contexts. Two types of FL learning anxiety are discerned that are labelled as anxiety-transfer and special anxiety in the literature (MacIntyre, 1999). FL anxiety-transfer means the transfer of the perceivable anxieties into the FL learning context (Spilberger, 1983) whereas the special FL anxiety MacIntyre and Gardner (1994) can only be in conjunction with the context of FL learning.

In spite of the fact that FL learning anxiety is a broadly researched domain of SLA research, a considerably small number of studies have been published as regards YLs (Bacsa, 2014). The relationship between language aptitude and FL learning anxiety was investigated by Robinson (2001) and the main finding of the study was that a lower language aptitude resulted in higher FL learning anxiety.

Csizér and Dörnyei (2005) assert that a higher FL language anxiety might have a negative influence on language learning in the long run. This means that higher anxiety is likely to negatively affect FL vocabulary learning.

Khan (2010, p. 202) investigated the negative effects of language anxiety on vocabulary learning. In a control group experiment where the groups were exposed to different amount of anxiety it was discovered that the treatment groups that were under a great deal of anxiety (being recorded by a camera) suffered huge deficits in vocabulary learning compared to the control group that did not experience any type of anxiety.

Weak but significant negative correlation was found by Mihaljevic Djigunovic (2010) with Croatian YLs' English proficiency and anxiety. Three age groups, 7-10-year-olds, 11-14-year-olds and 15-18-year-olds were involved in the study. Ensuing an in-depth analysis of the results, the researcher revealed that the youngest group had a fear from making mistakes and saying words incorrectly during class. The teachers were also named as a source of anxiety due to the fact that they were too strict or ironic. It could be concluded that the teacher's strictness definitely does not positively contribute to word learning. These findings are in line with those of Nikolov (2003) who highlighted that teachers would have a major role in neutralizing the processes eliciting anxiety.

To sum up this section, it can be stated that FL learning anxiety is a special type of anxiety. It is related to the special fields of FL learning. FL vocabulary learning. FL learning anxiety can only be interpreted with respect to the interactions of the different variables; thus its effect is worth examining with careful consideration.

2.3.4 Motivation and FL vocabulary learning

FL learning motivation is a driving force to learn a new language which is in conjunction with the desire for the knowledge of the new language, a positive attitude towards the new language, and an effort (Gardner, 1985). Even though motivation has cognitive component such as goal setting, I consider motivation in the context of my research an affective variable. Motivational orientation can be defined as the combination of reasons that contribute to learning a language (Noels, Pelletier, Clément, & Vallerand, 2000). Several conditions are necessary for the successful learning of a new language: a learning opportunity, language aptitude, a good teacher, and learning strategies. As vocabulary is part of the communicative competence, all these listed factors relate to vocabulary.

The research of FL learning motivation is an autonomous research field; nevertheless it has developed in the past 30 years by ensuing and integrating the main line of motivational psychology Four main stages of FL learning motivation were identified (Ushioda & Dörnyei, 2012): (1) the socio-psychological period (1959-1990) that is hallmarked by Gardner who posited that FL learning motivation had social and psychological dimensions. By the 1990s new perspectives into FL motivation opened up and new light was shed on further research (Skehan, 1989), (2) the cognitive-situative period (1990s) which can be described through two main trends. On the one hand cognitive theories served as the underpinnings of FL motivation studies, on the other hand a new research direction was taken from the macro-perspective of learners' general language learning towards specific situation-dependent language learning contexts (Williams & Burden, 1997), (3) the process-oriented period (at the turn of the millennium) whose studies differ from the period prior to this in that a new emphasis was laid on the time-perspective, the shifting of motivation. Dörnyei and Ottó's (1998) process-model is classified into three stages: pre-actional, actional, and post-actional stage, (4) the present, ongoing period, the socio-dynamic period that emphasizes the cyclical and dynamic trait of FL learning motivation.

The fourth, current, period is predominantly characterized by research conducted based on the socio-dynamic period. By integrating two significant theoretical approaches outlined in research focusing on the self, Dörnyei (2005) tries to conceptualize a new model of FL learning motivation: the possible selves theory of Markus and Nurius (1986) and self-concept (ideal and ought-to self) model of Higgins (1987). This theory can be totally related to FL vocabulary learning as vocabulary is part of general language knowledge. According Dörnyei's (2005) theory, three factors enhance the motivation of FL learning: (1) the ideal L2 self of the learners that concerns how the learner sees themselves as a language learner in the future, (2) the ought-to L2 self that is in conjunction with what the learner thinks of the expectations of their environment, and (3) L2 learning experiences.

As for FL vocabulary learning motivation, Tseng and Schmitt (2008) made an attempt to outline a model of motivated vocabulary learning. They drew on work undertaken by Dörnyei (2005) on the stages of motivation. Tseng and Schmitt (2008) involved six components into the model: (1) initial appraisal of vocabulary learning experience, (2) self-regulating capacity in vocabulary learning, (3) strategic vocabulary learning involvement, (4) mastery of vocabulary learning tactics; (5) vocabulary knowledge, and (6) post-appraisal of vocabulary learning tactics. Without elaborating on how these factors are defined, I wish to emphasize that Dörnyei and Ottó's (1998) model is

efficiently applicable for the conceptualization of the construct of FL learning motivation from the perspective of YLs. YLs' vocabulary learning motivation goes through the stages Dörnyei and Ottó (1998) sectioned motivational processes into: pre-actional, actional, and post-actional. In an ideal case, EFL YLs first set goals and enact the intention of learning a word then they appraise their own progress with the learning of the words and in the final stage they look for feedback and elaborate on strategies and standards to retain the word.

As for empirical studies on the correlation between motivation and FL word learning, two instances can be cited. Wood and Attfield (2005, p. 22) assert that games and play can positively empower vocabulary enhancement. They highlight the principle that playful activities in the language classroom influence attitudes of children towards learning. Motivation and its correlations with vocabulary learning amongst YLs was also explored by Chou (2014) in Taiwan. A query was made as to what degree motivating teaching techniques (use of songs, games and stories) fostered the uptake of EFL vocabulary of primary school participants (n=72) of ages ten and twelve years old. According to the findings of the study, games, songs and stories motivate vocabulary learning of YLs.

Fontecha (2014) investigated the correlation between YLs' receptive EFL word knowledge and motivation. The participants were a group of 183 Spanish-speaking learners in their 2nd grade of Spanish secondary education (aged around 13-14 years old) and a group of 55 Spanish-speaking EFL learners in their 5th grade of primary education (aged around 10-11 years old). The main objective of this research is to determine whether there exists any kind of relationship between the number of words learners know receptively and their motivation towards English as a Foreign Language (EFL). The VLT (see section 3.3.1) was used to assess receptive vocabulary size. Learners' motivation towards EFL was assessed by means of a semantic differential technique of 7-point bipolar rating scale using the seven pairs of bipolar adjectives: 'necessary/unnecessary', 'ugly'/'nice', 'attractive'/'unattractive', 'pleasant'/'unpleasant', 'important'/'unimportant', 'useful'/'useless', and 'interesting'/'boring'. The pair 'difficult' / 'easy' was also included as a distractor as it did not measure motivation. General motivation was tested through the seven pairs of adjectives. Most students in both groups were highly motivated; however no relationship was identified between the receptive vocabulary knowledge and the general motivation for 2nd graders but a positive significant relationship was revealed for the 5th graders.

Having pointed out that language anxiety and motivation are significant factors as far as EFL vocabulary is concerned, I also find it important to present other background variables that might influence vocabulary learning. In the next section attention will be focused on these variables.

2.3.5 Other background variables influencing FL word knowledge

Another background variable that significantly influences word knowledge is the frequency of words (for corpus-based word selection see Chapter 3). The findings of previous studies are congruent in the sense that Laufer and Ravenhorst-Kalovski (2010), Meara (1992), and Orosz (2009) all concluded the following: high frequency words were learned much more easily by the learners than low frequency ones. The sample size was 88 Hungarian 6th graders and the finding of the research was that on a vocabulary test students performed better on items containing high frequency words than on those containing low frequency ones. This finding was confirmed by Vígh (2014, p. 125) who assessed Hungarian 6th graders and it was found that learners achieved much better on the receptive vocabulary test when they had to recall the meaning attached to high frequency words.

Another factor that is supposed to influence vocabulary learning is the type of context in which the target words appear. Webb (2008) studied the effect of type of context on vocabulary learning. His participants were 50 Japanese students who had studied English as a FL for several years. The

learners were randomly assigned to a control and a treatment group. The control group had to learn the target words in short texts whereas the treatment group encountered the same lexical items embedded in a story. The knowledge of the ten target words was assessed in a vocabulary quiz. It was concluded that the treatment group significantly outperformed the control group. Thus, it might be obvious that the type of context is a robust factor in vocabulary learning. I believe that type of context is even more important for YLs learning vocabulary. If Webb's study was replicated with YLs, I would hypothesize that the treatment group would also significantly outperform the control group at the age of ten.

At the turn of the millennium a large-sample study was conducted in Hungary assessing the general English and German proficiency of the students at grade 6, 8 and 10 (Csapó, 2001). The assessment was completed in all regions of Hungary in all types of schools so large-scale data were gathered in conjunction with the linguistic abilities of YLs. Besides gaining general data on the English as a FL proficiency information on several background variables was also obtained. Proficiency was assessed with a test containing a reading test, a listening comprehension test and a writing test. Even though no sub-test was a previously validated vocabulary test one can draw relevant conclusions with reference to variables predicting and explaining word knowledge.

In a recent study Józsa and Imre (2013, p. 50) investigated out-of-school activities of Hungarian YLs and secondary school learners. They discovered that students in Hungary encounter English language while listening to music and watching films. Posting on Facebook and searching for information on Google followed the first two activities in ratio and occurrence. Thus it can be induced that Hungarian students' exposure to music and films in English and using social media contribute to their FL vocabulary learning.

To sum it up, a multitude of factors play a role in the enhancement of FL vocabulary. Such cognitive variables as language aptitude, inductive reasoning ability, general language proficiency (vocabulary being part of it) and NL vocabulary affect the success of uptake of words. Affective variables have also been highlighted as factors influencing FL word learning: motivation and anxiety. In my summary, different types of background variables have also been pointed at that affect FL word knowledge: socio-economic status, parents' education, type of school, place of living, NL word knowledge number of lessons per week, and time spent with ICT devices. Having looked at the different variables affecting FL word knowledge, a different domain will be elaborated on, namely the process of vocabulary learning.

2.4 Conceptualizing an FL vocabulary learning model

In sections 2.3.1 through 2.3.6 factors were listed that I assume influence FL vocabulary learning to a great extent. In this section an applicable model FL vocabulary learning is presented as far as these factors are concerned.

As far as FL learning is concerned, several models have been conceptualized in the past more than 40 years **(**Gardner, 1985; Gardner & MacIntyre, 1993; Krashen, 1985; Naiman, Frohlich, Todesco & Stern, 1978; Spolsky, 1989). These models have in common that all of these lay emphasis on the factors of individual differences. Apart from listing the factors playing a role in FL learning, these models outline the relationships among them. There is consensus that learners' FL knowledge is the result of the interaction among cognitive, affective and other variables; nevertheless their amount differs according to studies investigating FL listening skills (Bacsa, 2014, p. 99); Bacsa & Csíkos,2016, p. 264).

Regarding the aim of finding a model most applicable for FL vocabulary learning, the model of Gardner and MacIntyre (1993), the modified version of Gardner (1985) is considered when determining theoretical frame of my dissertation.

The model is a socio-cultural model which highlights its four aspects in close interaction with one another: (1) antecedent factors prior to learning (e.g., age, convictions, learning experiences, etc.), (2) the cognitive and affective variables of individual differences (e.g., intelligence, language aptitude, strategies, attitudes, motivation and anxiety, (3) the context of language learning: formal and informal learning environment, and (4) the outcomes of learning: linguistic and nonlinguistic. When deciding on this model, I also considered Dörnyei's (2010, p. 267) criticism: the variables of individual differences are in constant interaction with one another; however, the Gardner and McIntyre (1993) model does not leave it out of consideration that the variables constantly change and give rise to change; thus they create a complex development pattern. Based on Gardner and McIntyre (1993), I created a simplified model of FL vocabulary learning. In Figure 2, the synthetized vocabulary learning model is presented. I wish to point it out that this model was conceptualized following the pilot research described in Part II. It must also be added that language aptitude was unveiled to be the best predictor of FL knowledge (Bacsa, 2014; Kiss & Nikolov, 2006); a finding that can be also related to FL word knowledge.

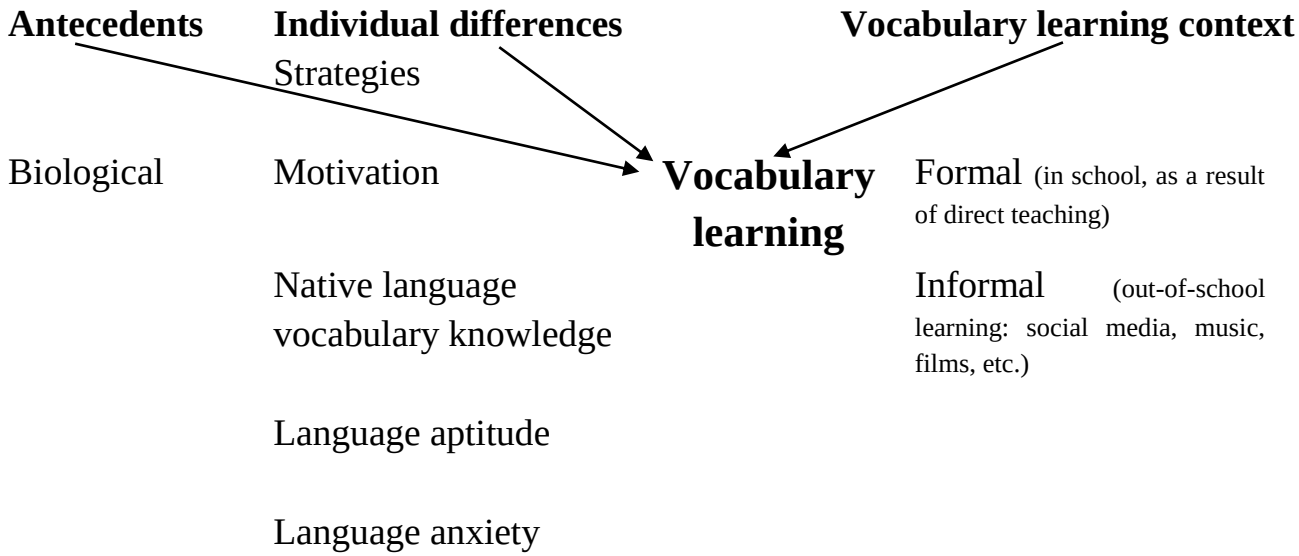


Figure 2. The synthesized vocabulary learning model

As for the antecedents, the components of the original model were kept since I believe especially biological factors play a significant role in FL vocabulary learning. In Gardner and MacIntyre (1993) the umbrella term 'individual differences' comprises six components. Out of these six components, strategies, language aptitude, language anxiety and motivation were kept since they are vital factors (Nation, 2001). Nevertheless, language attitudes and intelligence were omitted because language attitude and motivation can be considered a single construct in the majority of studies investigating YLs (Kiss & Nikolov, 2005). A decision was made based on Pimsleur (1966) that it was not necessary to involve intelligence as a wide construct into the frame of vocabulary learning. One new variable, NL vocabulary knowledge, was added to the model since it was asserted in section 2.3.1.1 that NL vocabulary is in a close relationship with FL vocabulary. As for the learning context, vocabulary learning occurs in both formal and informal contexts so the inclusion of both variables is well grounded. It must also be noted that language learning anxiety and NL vocabulary are not assessed

in this study, so in this dissertation no data are reported concerning these factors. FL anxiety is generally assessed with the instrument called Foreign Language Classroom Anxiety Scale (Horwitz, Horwitz & Cope, 1986); however this instrument has not been validated for YLs so far. Since the focus of the current research was FL vocabulary and VLS used by YLs, a decision was made not to involve NL vocabulary in my investigation.

2.5 How vocabulary is learned in a foreign language

Several studies have attested that learners need to learn a large number of lexis for them to operate in English as a FL. Nation (2001) lists four main stages that learners must go through on the road of mastering words: (1) meaning-focused input belongs to what is discussed in section 4.1, (2) meaning-focused output entails vocabulary development in communicative tasks when learners are expected to communicate, (3) language-focused input implies explicit attention to vocabulary, and (4) fluency development emphasizes the necessity for automaticity to be increased.

In the subsequent sections, the notion of vocabulary development will be investigated from different perspectives. One paramount perspective is the distinction between incidental and instructed vocabulary learning. The focus of attention will be incidental word learning in this section. First a definition will be given, then it will be argued that intentional and incidental word learning are good accessories of one another. It is emphasized by most researchers (Daskalovska, 2014; Gass, 1997; Horst, Cobb & Meara; Huckin & Coady, 1999; Hulstijn, 1992; Laufer, 2005; Nassaji, 2003; Zahar, Cobb & Spada, 2001) that there are two existing processes involved in vocabulary learning: intentional and incidental. It is a broadly accepted concept that in order for the students to master a foreign language, learning a good size of vocabulary is inevitable. It is also recognized that learning vocabulary is dependent on a great deal of factors as outlined in section 2.3 (de Groot, 2006). The two main concepts of vocabulary learning will be discussed in section 2.5.1 and 2.5.2.

2.5.1 Incidental vocabulary learning

It is well-grounded in the literature that children learn words mostly incidentally in their NL. Nagy, Anderson and Herman (1987, p. 253) go as far as to claim that children learn vocabulary at a rapid rate of 3,000 words per year. Research into NL vocabulary uptake is ample and the major findings support Nagy et al.'s claim (1987, p. 255). Krashen (1989) extends this claim to FL learning and stipulates that most of the words that YLs learn is not the result of direct instruction but that of incidental learning.

Incidental learning is often seen as a by-product of an activity (Horiba & Fukaya, 2015; Hulstijn, 2001). This concept of incidental learning is defined in diverse ways. One study (Hulstijn, Hollander & Greidanus, 1996) defines this type of learning as learning without an intention to learn, whereas Huckin and Coady (1999, p. 191) consider incidental learning as the by-product of the main cognitive activity which takes place in the learner's mind as they try to comprehend the FL. What several studies have posited is that incidental vocabulary learning entails a low pick-up rate (Horiba & Fukaya, 2015). This view is supported by both Paribakht and Wechse (1999) and Laufer (1997) who claim that incidental vocabulary uptake is incremental but students have a slow increase in vocabulary size.

Hulstijn (2001, p. 271) defines incidental vocabulary learning as the "learning of vocabulary not explicitly geared to vocabulary learning", whereas intentional vocabulary learning is viewed as

"any activity geared at committing lexical information to memory." Albeit there is likely to be evidence that intentional learning of words is more effective than incidental learning, Schmitt (2008, p. 228) posits that intentional learning might take a great deal of time and for most of the students it is very time-consuming and tedious to learn vocabulary of a good size.

There is an agreement among scholars (Nation, 2001, Schmitt & Schmitt, 2014; Webb & Chang, 2012) that both intentional and incidental learning are necessary in the process of foreign language vocabulary learning. Schmitt (2008, p. 229) further argues that one efficient way to accelerate incidental learning is to increase the amount of exposure, since it is the lack of exposure that learners are likely to face as a challenge.

Another important aspect of researching incidental vocabulary learning is the number of encounters with a word. Nation and Wang Ming-Tzu (1999, p. 370) and Webb (2007, p. 52) underline that the success of vocabulary comprehension and successful uptake of words depends on how many times learners encounter the particular word. Besides the number of encounters, the speed of processing of these words also matters, as Hulstijn (2001) and Laufer and Hulstijn (2001) claim. One important issue of incidental vocabulary learning is the conscious/unconscious dichotomy.

On the other hand, Ellis (1994, p. 102) claims that learners learn meanings rather unconsciously. Whether learning is conscious or unconscious Schmitt's claim (2008, p. 32) is likely to be acceptable that the maximization of meaning-focused exposure is needed so that explicit vocabulary teaching will have a complementary and equal part.

Vocabulary retention from input through listening has been ascertained to be more efficient than from reading (Goh & Foong, 1997; Vidal, 2011). Barcroft and Sommers (2005, p. 408) found that learners picked up more words if there were an array of speakers, voice types and texts. These above statements hold truth especially for YLs who are exposed to numerous instances of hearing EFL words.

In one study it was queried by d'Ydewalle and van de Poel (1999, p. 240) how watching videos and listening to authentic texts foster the foreign language vocabulary uptake of 12-year-old primary school students. According to their finding, captioned videos and films relevant to the interest of this age group significantly contribute to the progress of vocabulary pickup in a lapse of a few months.

Similarly to d'Ydewalle and van de Poel (1999), Kuppens (2010, p. 78) uncovered nearly identical empirical data while examining the captioned media effect exerted on the foreign language lexical pickup of the YLs. He involved primary school children as his participants in his study and significant vocabulary gains were registered amongst the children when the videos they were watching was captioned and of relevant interest for them.

With the extension of vocabulary, listening, speaking, reading and writing skills develop simultaneously. It has been revealed that listening skills improve exponentially as the size of lexis is growing (van Zeland & Schmitt, 2013, p. 462). In this particular study, van Zeland and Schmitt (2013) assessed two separate participant groups: one of native speakers of English and one of Thai as NL non-native speakers. They made an attempt to reveal the relationship between vocabulary and listening comprehension among both native and non-native speakers of English and to stipulate whether the degree of lexical coverage is necessary for FL listening comprehension. They found that lexical knowledge highly contributes to listening comprehension both in the NL and in the FL. The comprehension of the spoken passage with 100% coverage was significantly better than that of the passages with lower coverage levels. They pointed out that listening comprehension required lower

lexical coverage than reading comprehension. Albeit their participants were adult learners, the findings might be good reference to YLs as well.

Most of the studies reporting on lexical gain as a result of reading without an explicit purpose similarly claim that learners are better at recognizing rather than recalling the words (Carter & Nunan, 2001; Pigada & Schmitt, 2006; Waring & Takaki, 2003). I assume that vocabulary gains from pleasure reading can contribute to successful language learning and can complement a well-designed explicit vocabulary teaching syllabus. Giving YLs succinct graded readers of their interest might lead to considerable amount of word knowledge in a long period of time.

Several researchers (Schmitt, Jiang & Grabe, 2011; Nation, 2001; Schmitt, 2008; Thornbury, 2004) advocate that an extensive reading component ought to be integrated into a language program for a considerable amount of vocabulary to be learned. In my view, graded readers are an excellent tool for YLs to perform the task of extensive reading. Graded readers are nowadays very good quality versions and vocabulary is fine-tuned to the learners' needs, especially YLs (Uden, Schmitt & Schmitt, 2014, p. 8). However, constant feedback and vocabulary gain assessment is necessary among YLs in a language program so that YLs' motivation is upheld. However, assessment is likely to induce anxiety.

Coady (1997, p. 232) inquired into the amount of input learners receive when they read in a second language and was curious to find how extensive reading ought to be best applied. Coady's (1997) emphasis was the beginner's paradox. This theoretical underpinning originates in two concurring ideas. Meanwhile the input hypothesis (Krashen, 1985; Laufer & Hulstijn, 2001) claims that a foreign language learner learns vocabulary mainly from extensive reading, the bottom-up processing research has evidenced that the vocabulary threshold for reading hinders learners from successful uptake of words. Bottom-up processing encapsulates starting with the smaller, more fine details of a text and then building upward until the learner reaches full comprehension of this text. This threshold is indicated to fall between 5,000 and 8,000 words. Coady (1997) claims that until the vocabulary threshold is reached, special attention must be dedicated to successful uptake of vocabulary. He even suggests a top-down approach for reading in order for the students to overcome the effects of limited vocabulary. In a top-down approach an overview of the text is outlined, specifying but not detailing every component of the text. Each component is later refined in greater detail.

Pigada and Schmitt (2006, p. 20) reports a case study in which a learner of French as a foreign language was assessed in a lapse of one month. A relatively large number of words (133) were assessed and it was observed how much extensive reading enhanced knowledge of these target words. A significant pickup rate was unearthed.

Pazhakh and Soltani (2010) conducted a control group experiment with 15-year-old Iranian EFL learners (n= 40) as a foreign language to explore the effect of extensive reading on vocabulary learning. They uncovered that those students that learned vocabulary through extensive reading performed significantly better than the control group.

Wang (2013) investigated lower-level proficiency EFL learners. The participants (n= 45) had to read 30 texts in English in a 15-week period. Both the post-test and a delayed post-test specified significant vocabulary gains in a word recognition test; nevertheless, students demonstrated no significant gains when they were tested in a productive format. This entails the fact that receptive vocabulary expands through extensive reading but there is uncertainty concerning the gain in productive vocabulary.

It is also inevitable to highlight that incidental lexical learning occurs in a web 2.0 environment to a great extent. This domain is under-researched; however, there are a few studies that have investigated the effect of the web 2.0 environment on language learning and vocabulary learning. YLs are increasingly exposed to input in a social network environment (Alexander, 2009; Oblinger & Oblinger, 2005). Such social network platforms as Facebook, Twitter, and Instagram are constantly used by YLs where they post, download, upload messages, music, blogs, etc. The language of these platforms is predominantly English, thus YLs of English inevitably encounter new words. Since the environment is motivating and engaging for them there is a bigger likelihood that incidental word learning occurs. According to Dörnyei and Kubanyiova (2014, p. 44), a motivating environment contributes to a great extent to more rapid learning.

In this section the focus of attention has been incidental word learning. A definition has been provided then the concepts 'exposure' and 'by-product' have been defined, finally incidental vocabulary learning has been examined from two different perspectives: (1) incidental learning from listening, (2) incidental learning from reading.

2.5.2 Intentional vocabulary learning in a foreign language

Whilst incidental way of learning languages might be efficient in grammar teaching, I surmise a different approach is necessary when it comes to vocabulary teaching. It has been corroborated in research that intentional teaching of words lead to more rapid learning than incidental learning (Hulstijn, 2001; Nation, 2001; Robb & Kano, 2013). Schmitt (2008) asserts that obtaining an adequate vocabulary size is a reasonable goal to start with. The predominant language teaching methods nowadays prescribe a meaning-based language pedagogy where the productive use of language is vital and the explicit teaching of vocabulary and grammar is not emphasized (Belchamber, 2007; Thornbury, 2013). Incidental learning involves among others inferencing from context, extensive reading, etc. Laufer (2005, p. 318) posits four reasons: (1) learners who understand the overall message do not always pay attention to the precise meanings of individual words, (2) guessing from context is often unreliable, (3) words which are easily understood from context may not generate enough engagement to be learned and remembered, and (4) new words which learners have met in discourse need to be met again relatively quickly to avoid the words being forgotten.

It is concluded by Schmitt (2008, p. 333) that the best reason for learning vocabulary intentionally is that it produces more rapid gains of words and it contributes to better retention and productive use. In a meta-analysis it was discovered that involved some kind of explicit vocabulary learning task a relatively large gain of word retention of 33%-86% was recorded whereas those studies in which tasks were meaning-based and tested vocabulary development reported 13%-99% vocabulary gain (Laufer, 2005, p. 316).

Some suggestions concerning vocabulary teaching are put forward by Schmitt (2008, p. 224) that can be applied to teaching YLs as well: (1) teachers should maximize engagement with vocabulary since a learner learns a word more rapidly if they are exposed to it a lot of times, (2) maximize the involvement load of tasks to target lexical items, (3) consider which aspects of lexical knowledge to focus upon.

From a YLs' point of view, the necessities that must be focused on were summed up by Schmitt and Schmitt (2014, p. 492): (1) increased frequency of exposure, (2) increased attention focused on the lexical item, (3) increased noticing of the lexical item, (4) increased intention to learn the lexical item, (5) a requirement to learn the lexical item, (6) a need to learn/use the lexical item (for task or for a personal goal), (7) increased manipulation of the lexical item and its properties, (8)

increased amount of time spent engaging with the lexical item, and (9) amount of interaction spent on the lexical item. It is clear from this summary that vocabulary learning takes place more effectively when the learners, especially YLs, are exposed to repeated encounters of lexis to a large extent.

It is firmly declared by Schmitt (2008, p. 82) that it is not sufficient for language learners to be simply exposed to vocabulary learning tasks. This assertion can be subjected to YLs. A more proactive approach needs to be taken on the part of teachers as they advocate vocabulary learning. Research on pedagogical tasks also intends to inform language teaching as to how tasks can contribute to more rapid FL development (Brown, 1991; Bygate, 1999; Bygate, 2001; Skehan, 2009). A lot of important information can be received with reference to YLs by using the research on these tasks.

In his synthesis Schmitt (2008) sums up the findings of studies as far as effectiveness of tasks is concerned. Since I believe this summary of tasks has implications for YLs' research, three instances of comparisons of these tasks will be highlighted: (1) Husltijn (1992, p. 62) found that it was more effective to select meaning from options than meaning clarified by synonym, (2) Newton (2005, p. 172) claimed that negotiated meaning resulted in better gains than non-negotiated meaning, (3) Paribakht and Wechse (1999, p. 212) unearthed that reading followed by vocabulary exercises was more effective than reading only. I conclude from results of these studies that a task requiring more engagement with vocabulary results in more rapid development of lexis.

Based on this review of the literature of intentional vocabulary learning and Schmitt's recommendations (2008) it can be concluded that the following four activities are beneficial from the perspective of efficient vocabulary teaching: (1) activities that maximize learner engagement with target lexical items, (2) activities that repeatedly expose learners to target lexical items since it is known from memory research (Baddeley, 1997) that forgetting occurs soon after learning, (3) activities that encapsulate meaning-focused output since Nation (2001) suggests that productive use of target words in context must be focused on so that words will be retained, and (4) activities that recycle target vocabulary items

To sum it up, intentional vocabulary teaching is important due to the fact that bigger involvement, more increased focus and larger amount of engagement in learning words lead to high vocabulary gains as opposed to incidental, less focused word learning among YLs. The focus in this section was on intentional vocabulary learning.

2.6 Young learners' EFL vocabulary growth

In this section of the dissertation, I will highlight the principle that frequency is an important factor whether a learner knows the word or not. Two models will be presented in terms of the organization of FL word knowledge among YLs. The testing of these models will also be discussed. It is necessary to investigate how NL lexis is related to the growth of FL vocabulary. Having surveyed the literature as far as this relationship between NL and FL is concerned, this issue will be discussed from a teaching perspective.

As for the most essential characteristic feature of YLs' learning FL words, it can be asserted that they tend to learn words in chunks as opposed to adults who are more analytical in their FL word learning. YLs go through a clear path in FL vocabulary development. As has been mentioned, the first step on this path is the learning FL words with either clear referents or in chunks. A clear pattern can be noticed in the process of YLs' development of FL vocabulary. One important step in this process is the learning of prefabricated lexis (Wray, 2002, p. 144). Prefabricated lexis refers to memorized chunks and unanalyzed wholes that students learn without further breaking them into individual words. These chunks are learned as "one single lexical item in their own right" (Webb & Kagimoto, 2012, p. 70). A clear stage in NL learning is that children learn most of the lexical items in chunks. The process of FL development comprises the significant step of learning of chunks (for definition, see Wray, 2002). Lewis (1993, p. 21) also argues for the integration of unanalyzed wholes into the language teaching paradigm.

There are two main directions that are represented in the literature concerning growth of FL vocabulary (Verhallen & Schoonen, 1998): (1) the concurrent process of learning NL and FL words, (2) learning FL words after NL learning is nearly completed. Studies on concurrent learning of two languages focus on individual bilingual learners (Kennison, 2013), and community bilingualism (Cote & Bornstein, 2014; Verhallen & Schoonen, 1998). These concepts were discussed in section 2.1. Studies investigating the learning of FL words after the NL has been learned are longitudinal that follow the vocabulary development of students in their process of learning a new language (Moya Guijarro, 2003). It is an unfortunate case that studies addressing YLs' learning of FL words are very rare (Augustin Llach, 2011; Jimenez Catalan & Terrazas Gallego, 2008). Due to the lacuna of research on FL vocabulary learning in a formal context, attention needs to be cast on NL lexical learning, vocabulary development of bilingual students and FL word learning in context when the target language is the medium of interaction (Cameron, 2004). Mainly words association tests and translation tasks have been used to explore the NL and FL vocabulary development of YLs (Li, Shu, McBride-Chang, Liu & Peng, 2012; Qing & Ching, 2015).

It has been widely claimed the younger the learners are, the more comparable their learning of an FL tends to be to the development of their NL. There is also an agreement in the literature that the younger the learners are, the less likely they are to use language rules with consciousness. This concept was previously elaborated on in section 2.2.

Two processes may be discerned in terms of vocabulary learning (Skehan, 1998; Ullman, 2001): (1) implicit learning of words is based on the memorization of chunks and unanalyzed wholes, whilst (2) explicit learning is grounded on rules and it empowers learners to create new utterances and express their thoughts in new ways. The reliance on explicit learning emerges later and it is adolescence when it commences to play a major role in the learning processes. There is a dynamic interaction between the two processes of learning FL words. It is worth emphasizing as well that the younger the learner is, the more vital a role implicit learning of words plays.

Errors are typical of YLs during the FL learning process. In case sufficient learning opportunities are provided with the YLs, errors have a tendency of disappearing after their emergence. The characteristic traits of interlanguage entail the developmental stages of FL word learning. Following the early silent period, typical developmental stages may be observed. First, one-word or two-word utterances are used. Omission of certain words may also be noticed. The NL pronunciation of cognates (e.g., 'hamburger', 'television', 'laptop') are applied by YLs, and other characteristic errors can be noted at the early stage of FL word learning such as the transfer of intonation of cognates as well. Nevertheless, these errors tend to vanish over time. The disappearance of these errors can be sped up by empowering children to notice gaps (Schmidt, 1990).

It has been asserted (Meara, 1992; Nation, 2001) that the more frequent a word is the bigger likelihood there is that a learner has encountered it and mastered it. This is a very significant claim in FL vocabulary research because most of the vocabulary breadth tests are developed on the basis of this principle. This principle is not a recent one, in fact it goes back to the beginning of the 20th century when Palmer (1917, p. 123 cited in Mackey, 1965, p. 62 and McCarthy, 1990, p. 12) highlighted that the more frequently used words would be the more easily learned ones.

However the idea of the more frequent words being learned earlier remained an assumption until Meara (1992) made an attempt to model the organization of word knowledge of learners which could later be tested empirically. Word knowledge was modelled via the representation of each 1,000 frequency band with a column. According to Meara's assumption (1992, p. 6) a learner's word knowledge is high in the frequent columns of his model and low in the less frequent ones. Thus, in his model there is downward left-to-right slope from the knowledge of the frequent words to the less frequent ones. In the learning process, according to Meara (1992, p. 22), a learner first hits the ceiling in the first 1,000 column by means of the knowledge of all the words.

Henrikssen (1999) investigated three dimensions of vocabulary development which adequately modelled the vocabulary learning process of YLs. Three dimensions in lexical competence were discerned: (1) partial to precise knowledge, (2) depth of knowledge, (3) receptive to productive ability. All of these dimensions have a spectrum starting from superficial to in-depth knowledge. These dimensions reflect the incremental growth of lexical knowledge of YLs. In the first factor, words are known only partially at the outset then they are learned precisely over the passing of time. As for the second factor, profoundness of lexical competence is achieved only after a long process of learning a FL as YLs' word knowledge is rather shallow at the beginning of their learning. Finally, YLs, similarly to all age-groups, have better receptive than productive lexical knowledge.

Milton (2009) tested this model by using a Yes/No test including 20 words from each of the first five 1000 frequency bands. The particular data-collecting instrument was a test called the X_Lex test (Meara & Milton, 2003) described in section 3.3.6. In this test a word list is given to the learners that contain existent and nonexistent words. The researcher sought to find empirical evidence to Meara's (1992) model by calculating mean values for each frequency band. He found that the learners' word knowledge was high in the first 1000 frequency band and it decreased in the subsequent frequency band confirming Meara's assumption (1992). An ANOVA corroborated the assumption that there is a significant correlation between vocabulary test scores and ratio of occurrence.

Richards and Malvern (2007) concluded that learning names of animals is a common feature of the outset of YLs' language learning process. There are three reasons for this: (1) course-books designed for YLs are thematically organized and YLs learn, (2) adult corpora are different from YLs' corpora as different words belong to the world picture of YLs, (3) frequency does not correlate with

difficulty; frequent words such as propositions pose difficulty and are tedious for YLs to learn since they very often idiosyncratically combine with other words.

According to Yunjung (2011, p. 223) the process of word knowledge modelled by Aitchison (1994) is a valid description of how YLs learn vocabulary in a FL. Aitchison (1994) describes a process of labelling, packaging and network building. The labelling-packaging-network building steps are the stages of YLs' foreign vocabulary development. Labelling means the mapping of meaning onto forms whereas packaging refers to the categorizing of new words by the YL. The final step, network building, is the grasping of relationships and connections between words.

In the process of tracking down the word connections made by YLs, scholars and teachers are capable of revealing how different words are learned with relation to previously known lexical items. The most important discovery in the past thirty years of research has been the prototype effect which means a way of categorization. Some parts of a category are more central than others. For instance, when asked to give an example of the concept 'sport', 'football' and 'tennis are more often cited than, say, 'curling'. It was uncovered in several studies (Cameron, 2004; Chenu & Jisa, 2009; Erdmenger, 1985) that YLs learn new FL lexical items by drawing from NL categorization and by relating to NL lexis.

Learning FL vocabulary at the outset of language learning involves concrete and abstract (e.g., 'interest', 'hunger', 'life') nouns which the children can easily connect their everyday immediate context to. Lexical items whose physical reality is close to YLs' context are learned much earlier than words that have no concrete referents to their everyday life.

Chapter 3 Assessing vocabulary

3.1 Introduction

The focus of this section is the versatile nature of foreign language vocabulary assessment. Even though vocabulary assessment might be versatile, the same criteria apply to testing vocabulary as to other domains of language. It is posited by Nation (2001, p. 36) that reliability, validity, practicality and washback need to be considered when designing vocabulary tests. Washback is defined by Schifko (2001, p. 832) as a positive or negative effect that derives from the classroom material judgment of students whether this material will appear on a subsequent test or not.

It is asserted (Read, 2000, p. 32) that there are two contrasting perspectives of vocabulary assessment. One viewpoint is that vocabulary items can be tested as a semantic field independent of context. The other view is that lexis must always be measured in context. Having pointed out these two mutually debunking points of view concerning vocabulary assessment, Read outlines the three dimensions of vocabulary testing. The dimensions elaborated on by Read are presented (Table 1).

Table 1. Dichotomies of vocabulary assessment (Read, 2000, p. 9)

Discrete	**Embedded**
A measure of vocabulary knowledge as an independent construct	A measure of vocabulary which forms part of the assessment of some other, larger construct
Selective	**Comprehensive**
A measure in which specific vocabulary items are the focus of the assessment	A measure which takes account of the whole vocabulary content of the input material
Context-independent	**Context-dependent**
A vocabulary measure in which the test-taker can produce the expected response without referring to any context	A vocabulary measure which assesses the test takers ability to take account of contextual information in order to produce the expected response

The first dimension, the discrete – embedded one, is elaborated on by Read (2000, p. 10) in the following way: discrete test items mean that they are separated from other components of language knowledge. Embedded vocabulary measure is one that has a contribution to assessment of a larger construct. An instance of this is reading comprehension questions following a text. Vocabulary items are not evaluated separately but simply form part of the measure of the learners' reading ability skills.

The second dimension, the selective – comprehensive one refers the range of vocabulary involved in the assessment. An instance of selective vocabulary measure is a test in which the target words are selected individually and then incorporated into the text. As opposed to the selective vocabulary measure, the comprehensive measure takes account of all the vocabulary content in the text.

The third dimension, the context-independent – context-dependent one is an old issue in vocabulary testing. The major distinction between context-dependency and independency is determined whether the test-taker has to rely on the text to induce the meaning of the vocabulary item or if they can just take the vocabulary test as if the different items were separate and in isolation.

It is very clear from the above dimensions outlined by Read that major distinctions must be made between kinds of approach towards assessing vocabulary. These issues should be the concern of testgivers. The issues emerging from language testing research need to be looked at from four different angles (Lehmann, 2009; Milton & Fitzpatrick, 2014; Nation, 2013). Four major questions are proposed by Nation (2013) that need to be addressed: (1) why to test vocabulary? (2) what words to test? (3) what aspects of word knowledge to test? (4) how to test the various aspects of word knowledge?

The following questions are posed by Nation (2013, p. 171) when approaching the concept of vocabulary measurement: (1) what kind of vocabulary test is the best? (2) is it enough to ask learners if they know the word?, (3) should choices be given?, (4) should translations be used?, (5) should words be tested in context?, (6) how can we measure words that students do not know well?, (7) how can we measure the total vocabulary size? These questions are centered around the main issues of vocabulary testing by researchers: vocabulary in context, the way vocabulary is tested, the aspects of vocabulary knowledge and the selection of words that need to be tested. Different concepts of vocabulary assessment (aspects of knowing a word, word form, word meaning) will be in our focal point. After the explicit definition of these concepts, the major validated tests assessing vocabulary will be presented.

3.2 Aspects of knowing a word in a foreign language

Knowing a word is complex and multidimensional in nature. Various aspects of knowing a word must be considered. As it was laid down in the previous section, breadth of vocabulary knowledge means how many words a person knows while depth refers to the knowledge of dimensions, e.g. synonyms, antonyms, contextual use, etc. The complexity of the concept of knowing a word is emphasized by Mukarto (2005, p. 153) who declares that "learning even one FL word or a lexical item is a complex task. Naturally, learners' knowledge of a word is not binary in nature, nor is it an all or nothing phenomenon."

Several dimensions have been identified that inform researchers and teachers how complex it is to determine what it means to know a word. When considering YLs, three facts are worth keeping in mind: (1) word knowledge is incremental, which implies multiple oral and written inputs (Nagy, Anderson & Herman, 1987, p. 238); (2) word knowledge is also multidimensional since a lot of words have different meanings, and (3) word knowledge is interrelated in that the knowledge of one lexical item is connected to another (Scott & de la Fuente 2008, p. 108).

According to Richards (1976, p. 77), knowing a word means (1) knowing its frequency and collocation, (2) knowing limitations of the use of that word, (3) knowing the syntax of this word; (4) knowing its basic forms and derivations, (5) knowing its associations with other words, (6) knowing its semantic value, (7) knowing many of the different meanings associated with the word.

Nagy and Scott (2000, p. 278) identified several new dimensions that describe the complexity of what it means to know a word. First, word knowledge is incremental, which involves many encounters with both spoken and written words in varying contexts (Nagy et al., 1987). Second, word knowledge is multidimensional because many words have multiple meanings and serve different functions in different contexts. Third, word knowledge is interrelated in that knowledge of one word connects to knowledge of other words.

These assumptions of word knowledge by Richards (1976) were later adopted (Nation, 2001). Form, position, function and meaning are the categories used by the scholar. Moreover, eight types

of word knowledge are proposed to be considered: spoken form, written form, grammatical position, collocation, frequency, appropriateness, concept, and association. The components are presented in Table 2.

Table 2. Components of word knowledge (Nation, 2001, p. 16)

Component	Receptive knowledge	Productive knowledge
Spoken form	What does the word sound like?	How is the word pronounced?
Written form	What does the word look like?	How is the word written or spelt?
Grammatical position	In what patterns does the word occur?	In what patterns must we use the word?
Collocation	What words or types of words must we use with this word?	What words and types of words can we express before and after the word?
Frequency	How common is the word?	How often should the word be used?
Appropriateness	Where would we expect to find this word?	Where can this word be used?
Concept	What does the word mean?	What word should be used to express this meaning?
Association	What other words does this word make us think of?	What other words could we use instead of this one?

Bogaards (2000, p. 146) further claims that FL learners may learn the subsequent dimensions: form (spoken and written), meaning, morphology, syntax, collocates and discourse. As it is a clarified system of categories I will use Bogaards' categorization to elaborate on word form and meaning in the next section.

3.2 Word form and meaning

Even though meaning has been considered the most important aspect of knowing a word, the notion of word form is gaining significance since evidence has proved that in the process of foreign language word processing. The knowing of the word form used to be considered a lower-level type of knowledge (Laufer et al., 2004); however, it has become an important feature in vocabulary learning. In the following two sections I will examine the written and the spoken form of the word.

Reading research has made advantageous contributions to indicating the importance of the orthographical word form. One study (Huckin & Bloch, 1993) entailed that orthographical similarity can mislead students in their guess of the meaning of the words. Readers mistook unknown (spooky) words for known (spoon) words that resembled one another. Notwithstanding the fact that the shape of the word and the visual features of the word can have a supporting effect, applying them in the recognition process has not proved to be the most effective way of learning foreign language vocabulary. In English as a FL research the bathtub effect is oft-cited. The bathtub is a visual metaphor indicating that the most remembered word parts are the beginnings and the endings of a

word. This concept is a strong effect in English language; nevertheless it might not hold for other languages.

It is suggested by Goldstein (2004, p. 98) that being phonologically aware is important from the point of view of general vocabulary learning. It means that lower-level FL speakers need to rely more heavily on acoustic rules than native speakers. For instance, a native speaker would never mistake the word 'cub' for 'hub' since they can infer the word from context unlike non-natives who is likely to have a difficulty in interpreting the context.

Laypersons tend to believe that meaning of words equals definitions in dictionaries; nevertheless, the issue of meaning is more complex than that. Schmitt (2008, p. 82) argues that at the most basic level, meaning is the relationship between a word and its referent. Drawing on Bloomfield (1933), Drum and Konopak (1987, p. 77) emphasize that the relationship between the word and the referent is arbitrary.

The big white bear that lives in China and eats bamboo could be named 'napkin', a 'winner', or a 'melmel'. It is only common consensus that the label for this animal is 'panda' and it is this label that yields meaningful sense to this word. Words are usually labels for concepts which themselves involve our limited personal experience of the actual world reality. From the point of view of knowing the word, the notion of meaning has a significant role. Most teachers and researchers consider a word learned if the form and the meaning are known. The first step towards foreign language vocabulary learning is the form-meaning link. This linkage has been studied in previous research from a number of aspects. Grainger and Dijkstra (1992) studied lexical neighbors. This notion 'lexical neighbor' is defined as words looking very similar in form but having a totally different meaning (e.g., pot, dot, cot, lot). They uncovered that learners are confused to distinguish among their meanings.

Having surveyed the aspects of knowing a word, I need to discuss one of the most researched areas of foreign language vocabulary: the form and meaning of vocabulary. In the next section, it will be looked at how it is possible to measure how deep and how bread learners' vocabularies are.

3.3 Foreign language vocabulary tests

Ever since vocabulary came into the focus of foreign language learning studies, assessment of word knowledge has been perceived as a fundamental issue in the research of this domain. This chapter provides an insight into how vocabulary is assessed and what types of validated and reliable instruments exist in the literature. Apart from presenting these instruments, special attention will be drawn to (1) the computerized versions of these instruments as in the 21st century diagnostic assessment is predominantly executed in an online environment (Laufer et al., 2004) and (2) whether the data collection instruments to be discussed have versions designed for YLs. It must also be highlighted that there is a consensus among scholars in foreign language vocabulary assessment that various modalities (see more in Laufer et al., 2004) of item assessment exist. Laufer et al. (2004, p. 218) claim that words may be measured from two perspectives: (1) the form-focused perspective that implies that the test-taker is able to retrieve the form of the word evidencing productive knowledge, (2) the meaning-focused perspective that entails the test-taker can retrieve the meaning of the word evidencing receptive knowledge. Laufer et al. (2004) refer to the productive-receptive dichotomy as active-passive knowledge. Four degrees of knowledge of meaning are discerned, on the basis of two dichotomous distinctions: providing the form for a given concept vs. providing the meaning for a given form; and recall vs. recognition (of form or meaning). These distinctions entail the following four modalities constituting a hierarchy of difficulty: (1) passive recognition that encapsulates

recognizing an item in e.g. a multiple choice test, (2) active recognition that encompasses a given definition and four items; in this modality the definition must be matched with the pertaining item, (3) passive recall that incorporates a sentence and the synonym of one item in the sentence must be given by the test-takers, and (4) active recall that comprises a description of items and the initial letters of the items are provided; test-takers are expected to produce the word. In a review article Schmitt (2014, p. 921) uses different terms for the same concepts. Passive recognition is termed meaning recognition; active recognition is named form recognition whereas passive recall is termed meaning recall and active recall is called form recall. In an attempt to provide instances, sample tasks will be given subsequently. In this dissertation Schmitt's (2014) terminology will be utilized since the passive-active dichotomy is rather obsolete in the current literature (Webb, 2008, p. 82). Table 3 presents sample tasks of each of the four modalities.

Table 3. Sample tasks of the four modalities

	Recognition	Recall
Meaning	large a) small b) tiny c) huge d) weak *Instruction: circle the equivalent of 'large'*	When something is large, it is _____ *Instruction: finish the sentence with adequate words*
Form	something that is very big in size a) large b) angry c) hungry d) strong *Instruction: circle the word that suits the definition*	Something very big in size l_____ *Instruction: finish the sentence with a word that starts with the given letter*

3.3.1 The Receptive Vocabulary Levels Test

The Receptive Vocabulary Levels Test is simply referred in the literature to as Vocabulary Levels Test (VLT). It operates with a discrete point measure. It requires meaning recognition. The test was developed by Nation (1990) and it was validated by Schmitt, Schmitt and Clapham (2001). Words are selected from such corpora as British National Corpus (Kilgarriff, 1997) and the CANCODE (Cambridge and Nottingham Corpus of Discourse in English) up to five levels: the first 2,000, 3,000, 5,000 and 10,000 most frequent words. These levels bear importance from a research-based perspective. The 2,000-3,000 levels contain high-frequency words whose knowledge is necessary for everyday communication. The 5,000 level is the minimal size which learners can conceive authentic texts. The 10,000 level, contains the most common low-frequency words (Webb, 2010). The fifth level is not grounded on any corpus but includes items from the University Word List (Xue & Nation, 1984).

The test-taker sees six words on the left-hand side and three definitions or synonyms on the right-hand side. They are expected to match the right-hand side items with three of the six words on the left-hand side. This means that the task contains three distractors. In the entire test each level comprises six clusters of six words. Table 4 presents one sample task of the VLT.

Table 4. Sample task of the VLT (Schmitt, Schmitt & Clapham, 2001)
Instruction: match three of the words from 1) to 6) with three definitions A) - C)

1 bitter		
2 independent	A) very small	
3 lovely	B) beautiful	
4 merry	C) liked by many people	
5 popular		
6 slight		

Since the test gives estimates of vocabulary size at 5 levels, it can be applied for placement purposes and for diagnosis of vocabulary gaps. Four parallel test versions were developed. The criterion of the development of the test was that the definitions are succinct; the test could be completed in the fastest possible time and with the appropriate arrangement of the possibility of blind guesses could be diminished. In the online version of the VLT the test-taker is expected to write the listed six words next to the three definitions. The evaluation of the test is automatically completed. With the modified version of the online test, Vocabulary Online Recognition Speed Test (VORST) the speed of word recognition can also be examined (Laufer & Nation, 2001, p.21).

A version of the VLT designed for YLs has also been developed. Jimenez Catalan and Terrazas Gallego (2008) used the YL version of the instrument with young Spanish YLs of English. They modified the word selection process by involving such low-frequency words as names of animals (e.g., 'lion', 'ostrich', 'tiger') that YLs might know better than high-frequency words used by adults (e.g., 'beer', 'office', 'wine'). The researchers reported that the YLs' version of the VLT proved to be a valid measure of vocabulary assessment. More details about this study are reported in section 3.4.

3.3.2 Productive Vocabulary Levels Test

With regard to productive knowledge of vocabulary, Laufer and Nation (1995) developed an instrument that measures productive word knowledge. The test took its name after the VLT and the adjective 'productive' was added so that the type of test would be clearly discerned. The test requires form recall on part of the participants. Similarly to the Vocabulary Levels Test, the tasks are divided into frequency clusters: 2,000, 3,000, 5,000, 10,000. In this test sentences are seen by students. In each sentence only the first two or three initial letters of one word are provided. Students must write the missing part of the word. This test is originally named the Test of Controlled Productive Ability (TCPA), nowadays it is referred to as Productive Vocabulary Levels Test (PVLT). A part of the instrument is presented in Table 5.

Table 5. Productive Vocabulary Levels Test (Laufer & Nation, 1999)
Instruction: Complete the words by filling in the gaps with the proper letters

He likes walking in the fo…… because the trees are beautiful there.
He takes cr.....and sugar in his coffee
The actor took the st…… to perform in the long-awaited play.

It is obvious from Table 4, that the sentences following one another are unrelated. The test format resembles a C-test to some extent. In the pilot study of the instrument it was reported by the researchers that the selection of the target words was determined with the aim of avoiding any ambiguity of the meaning of the words. Similar to Schmitt et al. (2001) four test versions were developed. It is worth noting that the test has been criticized from a construct validity point of view. It was pointed out by Read (2000, p. 66) that the instrument is unlikely to assess productive word knowledge. He argues that some of the items demand only recognition and some of them need more contextual clues than others, thus he is dubious whether the test assesses what it is meant to assess.

Abduallah, Puteh, Azizan, Hamdan & Saude (2013) used the PVLT to assess the productive vocabulary of 480 ESL learners in Malaysia. The participants were 15 years old. Albeit they do not count as YLSs, this study is the only one reporting on using the PVLT as data gathering instrument with not adult learners. In section 3.4, the findings of this research will be presented. The online version of the PVLT is found on Tom Cobb's website: www.lextutor.ca.

3.3.3 Vocabulary Knowledge Scale

A vocabulary measure which can serve the purpose of assessing depth of vocabulary is the Vocabulary Knowledge Scale (VKS) (Paribakht & Wechse, 1999). On the one hand, Schmitt (2008, p. 45) asserts this type of vocabulary measurement sheds light on what students know, rather than on what they do not know, by allowing them to indicate their partial knowledge of a lexical item. It may be more motivating than other types of tests. On the other hand, Schmitt (2010, p. 32) criticizes the instrument by claiming that defining depth can be executed with extreme difficulty as has been cited earlier in the dissertation in section 2.1. The format of this test is presented in Table 6. The scoring of the original test used by Paribakht and Wesche (1999) is presented in Table 7.

Table 6. Vocabulary Knowledge Scale (Paribakht and Wechse, 1999)
Instruction: Indicate the level you know the word.
procrastinate

1. I don't remember having seen this word before.
2. I have seen this word before, but I don't know what it means.
3. I have seen this word before and I think it means…….
4. I know this word. It means…….
5. I can use this word in a sentence:……..

Table 7. The original scoring system of the VKS (Paribakht and Wechse, 1999, p. 81)

Self-report categories	Possible scores	Meaning of scores
I	1	The word is not familiar at all.
II	2	The word is familiar but its meaning is not known.
III	3	A correct synonym or translation is given.
IV	4	The word is used with semantic appropriateness in a sentence.
V	5	The word is used with semantic appropriateness and grammatical accuracy in a sentence.

Lehmann (2009) modified the scoring system as it is reported in her doctoral dissertation based on the test developed by Goulden, Nation and Read (1990) which was originally developed for self-assessment. Instead of the highest possible score being 5, Lehmann (2009) assessed a word either as known or not known. Table 8 presents the scoring system modified by Lehmann (2009, p. 88).

Table 8. The scoring system of the VKS modified by Lehmann (2009, p. 88)

Self-report categories	Possible scores	Meaning of scores
I	0	The word is not familiar at all.
II	0	The word is familiar but its meaning is not known.
III	1	A correct synonym or translation is given.
IV	1	The word is used with semantic appropriateness in a sentence.
V	1	The word is used with semantic appropriateness and grammatical accuracy in a sentence.

If a student reports the word is familiar but the meaning is not known, then it is worth no points. This instrument was applied by Lehmann (2009) for the assessment of university students as Paribakht and Wechse (2006) calibrated the VKS for this age group The VKS has also been designed for YLs recently. The was used by Atay and Kurt (2006), Paribakht and Wechse (2006), and Jóhannsdóttir (2010) to assess YLs. Their research findings will be presented in section 3.4.

The online version of the test is also available on Tom Cobb's website. I have no knowledge of any study that has ever used the online VKS, however it is an empirical question whether applying the online measure would change either the validity or the reliability of the test.

3.3.4 Vocabulary Size Test

The Vocabulary Size Test (VST) was developed and validated by Nation and Beglar (2007). It assesses the knowledge of the 14,000 most frequent English words. It implies the modality of meaning recognition similar to the VLT. One sentence is given in each task and one word is underlined in the sentence. Under the sentence four possible options are provided in a multiple choice format and the test-takers must settle upon which word is interchangeable with the underlined word. The test is available in online version and it renders the assessment of receptive vocabulary rapid and effective. It is a very similar test format to the one applied on the TOEFL test which is also taken in a computerized environment. Table 9 presents a sample task of the VST.

Table 9. Sample task of the VST (Nation & Beglar, 2007)

Instruction: Choose one proper word from items a) - d) that best fits the word in bold

DRIVE: He **drives** fast
a. swims
b. learns
c. throws a ball
d. uses a car

3.3.5 The X_Lex Test

The X_Lex Test is both a traditional and an online receptive vocabulary assessment tool whose origins stem from the 1980s. Meara and Buxton (1987) experimented with a Yes-No test that was named X_Lex a few years later (Meara, 1992). The X_Lex test includes a list of 50 words. Out of the 50 words 35 of the words are existing English words and 15 are non-existing items. The test-takers have to indicate whether they know the word or not by clicking on the right button. In case a non-existing word is indicated as unknown, the learner is penalized with minus points at the final evaluation. The test is available at www.testyourvocab.com and as the final step anybody taking the test online can provide background data (number of years spent learning English, age, gender, etc.) as well; therefore the instrument looks into correlations between the final score and the given background variables.

3.3.6 Diagnostic online English and German receptive vocabulary size test for YLs

Most recently a FL vocabulary test has been developed and validated by the researchers of the University of Szeged (Vidákovich et al., 2013). The instrument is designed and calibrated to measure diagnostically the vocabulary size of 5^{th} and 6^{th} graders learning English and German as a FL. The selection of the target items was done on the basis of frequency lists and corpora and the test is unique in the sense that the words incorporated in the test are similar in the two languages. The instrument has a multiple choice test format in that the students see one picture and four words on the screen and they have to decide which word is described by the picture. Unlike the Peabody Picture Vocabulary Test (Dunn & Dunn, 2007) where only one word matches one picture in one task, in this test there is a likelihood that all four words match the picture or only one word can be matched with the picture; thus test-takers do not automatically exclude any correct item after solving one. The test-takers must click on the buttons next to each word and settle upon whether there is a match or not. The pictures are either simple or complex pictures and students must use identification or implication to figure out the correct answer. The test demands meaning recognition. The instrument has three versions in both languages. The instrument has been applied in an online environment on the eDia platform developed by the ICT specialists of the Institute of Educational Science at the University of Szeged (Molnár, 2013). The test-taking period is short as it takes around ten minutes and apart from the test scores, background data can be processed immediately after the completion of the data collection instrument. Table 10 presents one task of the test.

Table 10. Example of an item containing a simple picture (Vidákovich, Vígh, S. Hrebik, & Thékes, 2013)
Instruction: Choose from words a) – d) that best fit the picture on the left.

a) chair
b) plant
c) table
d) theatre

3.4 Foreign language vocabulary tests for YLs

3.4.1 Principles of designing FL vocabulary tests for YLs

Although most of the above-mentioned diagnostic data collection instruments have been originally designed to assess university students or adults, except for the test presented in section 3.3.5, there have been studies reporting on the testing of YLs' word knowledge as well. Diagnostic assessment of YLs' FL proficiency and word knowledge empowers teachers with a lot of classroom implications (McKay, 2006, p. 38).

It is typical of YLs that they use memorized chunks as described in section 1.5. Their knowledge is implicit in this sense; explicit learning ability that enables them to comprehend rules emerge around adolescence (Nikolov & Szabó, 2011, p. 32). Most of the YLs learn words rapidly (Orosz, 2009); nevertheless, after they are capable of recognizing words, the ability to use connotations, shades of meaning, synonyms and antonyms is only learned as a result of a long process of learning (Cameron, 2004, p. 32). Three fundamental facts have also been emphasized in the literature: (1) until the age of twelve students know only a limited (not more than 600-700) amount of words in an FL (Laufer, 1997, p. 143), (2) students hardly ever know the connotations (Schmitt, 2008, p. 352), and (3) YLs have limited awareness of the derivative forms of a word (Schmitt & Zimmerman, 2002, p. 160).

Before presenting the findings of studies assessing the word knowledge of YLs, I will elaborate on the characteristic traits and principles of diagnostic testing of FL in the context of YLs. Nikolov and Szabó outlined the principles of diagnostic testing of YLs (2011). These principles are based on the study by Alderson (2005). I will make an attempt to synthesize these principles which, I believe, are the most relevant from the perspective of vocabulary assessment of YLs.

(1) the purpose of diagnostic tests is to identify the strengths and weaknesses of learners,
(2) diagnostic tests must result in the treatment of difficulties arising during the learning process,
(3) diagnostic tests must make it possible to analyze the score of each item in detail and to report the results; thus they provide feedback in detail and further steps can be taken,
(4) diagnostic tests are low-stakes tests or bear no consequences so optimal achievement is not hindered by anxiety or any other affective factor,
(5) diagnostic tests must take into consideration research on FL learning and in a wider sense the results of applied linguistics research,

(6) diagnostic tests are more likely to be discreet-point tests than integrative, i.e., they focus on certain linguistic elements rather than on global abilities,
(7) diagnostic tests are more likely to be less authentic than any other level-testing instruments;
(8) diagnostic tests are more likely to focus on 'lower-level' linguistic abilities than on 'higher-level' abilities,
(9) diagnostic tests assessing linguistic skills (listening, speaking, reading, writing) are more simple to develop than ones assessing grammar skills,
(10) diagnostic testing is probably made more efficient by using a computerized platform.

Jang (2014), whose claims can also be subjected to FL vocabulary assessment, goes further by making the subsequent claims concerning the diagnostic assessment foreign language: assessment should (1) be cognitively rich enough to elicit knowledge and skills, (2) measure essential core skills, (3) promote positive learning and assessment experiences, (4) provide consistent and reliable information on proficiency, (5) promote students' ability to self-assess, (6) provide the support needed.

The two sets of principles laid out by Nikolov and Szabó (2011) and Jiang (2014) overlap in several points. It can be concluded that diagnostic vocabulary assessment of YLs ought to (1) give constant feedback, (2) provide information constantly to promote the learning process, and (3) remain low-stakes so that it can provide positive learning experiences.

When designing the diagnostic test Harding et al.'s (2015, p. 322) five recommendations were also taken into consideration: (1) it is not the test which diagnoses, it is the user of the test, (2) instruments, themselves should be designed to be user-friendly, targeted, and discrete in order to assist the teacher in making a diagnosis, (3) the diagnostic assessment process should take diverse stakeholder views into consideration, including learners' self-assessments, (4) diagnostic assessment ideally involves the diagnostic stages of listening/observation, initial assessment, use of tools, tests, expert help and decision-making, (5) diagnostic assessment should relate to some future treatment.

3.4.3 Results of diagnostic tests assessing YLs' vocabulary

Few studies have sought to explore the vocabulary size of YLs so far. In a study, the receptive vocabulary of Spanish 4th graders (n=270) was diagnostically explored by Jiménez Catalan and Terrazas Gallego (2008). Students had learned English for three years in 3 lessons a week at the time of data collection. The VLT was utilized as the test up to the 2,000 most frequent words. The study discovered that the less frequent a word is the less chance students have of knowing it.

Atay and Kurt (2006) applied the VKS in a control-group treatment for the assessment of Turkish 6th graders (n=62) in order to map their English word knowledge. The YLs' vocabulary development, elicited by post-reading activities, was measured. The researchers gave account of a well-functioning, reliable VKS test designed for YLs in this study. Schmitt (1998, p. 291) also confirmed the value of the instrument from the point of view of assessing YLs by stating that the VKS taps into the early stages of vocabulary learning.

Jóhannsdóttir (2010) also used the VKS to assess the vocabulary of 42 4th-graders in Iceland to map the vocabulary of the learners. Jóhannsdóttir (2010) had the learners take a Yes-No test on EFL words as well and was seeking to learn how reliable the vocabulary tests were and to find correlations among the two measures and motivation. The test proved to be of decent reliability (Cronbach's Alpha = .80) and indicated significant correlations with the results scored on the Yes-No test and motivation. One of the major findings of the study was that students scored significantly higher points on the receptive test (Yes-No) than on the productive test measuring depth of word knowledge (VKS).

In Hungary receptive word knowledge was investigated by Orosz (2009, p. 184) using the paper-and-pencil X_Lex test. Hungarian 3rd-6th graders (n=253) took part in her study. The instrument contained 120 items with 100 real words selected from the 5,000 most frequent English words based on the BNC and with the addition of 20 non-existent words (e.g. 'bable', 'lall', 'pentil', 'remlile', etc.). By transforming the scores, the estimation was made that students knew 348 words in 3rd grade, 696 words in 4th grade, 1,177 in 5th grade and 1,457 in 6th grade.

Vidákovich et al. (2013) used the test described in section 3.3.5. In the pilot study 352 participants took the English test version (Vidákovich et al., 2013). The instrument proved to be robustly reliable (Cronbach's Alpha = .91) and the test versions drew attention to strong relationships and significant correlations with one another. The instrument proved to distinguish well among the test takers. Relevant data were gained concerning the type of words high and low-achieving students know. High achievers know adjectives and verbs significantly better than low achievers whereas low achievers know significantly more nouns than any other word type. Table 11 presents all the relevant studies that have investigated YLs' English as a FL word knowledge.

Table 11. Studies investigating YLs' EFL word knowledge

Study	Participants	Instrument
Atay & Kurt (2006)	62 Turkish 6th graders	Vocabulary Knowledge Scale
Jiménez Catalán & Terrazas Gallego (2008)	270 Spanish 4th graders	Vocabulary Levels Test
Orosz (2009)	253 Hungarian 3rd-6th graders	X_Lex Test
Jóhannsdóttir (2010)	42 Icelandic 4th graders	Vocabulary Knowledge Scale
Vidákovich et al. (2013)	127 Hungarian 6th graders	Diagnostic Online English and German receptive vocabulary size test

Having given an overview of the domain of FL vocabulary assessment I discussed what it means to know a word form and what aspects of word knowledge must be tested. One of the fundamental tasks was not only to identify the main vocabulary tests but to choose the most applicable ones as numerous instruments exist. However, I have decided to select six of these tests as I have found them relevant from the point of view of our diagnostic vocabulary test development. The criteria of choosing these tests were the following: (1) they are validated and were proved to be reliable, (2) they preferably have a version adapted for YLs, (3) they are preferably computerized. Even though these tests are valid measure of word knowledge they have something in common: they lack the characteristic of measuring the interconnected aspects of word knowledge. They test only one construct: either receptive or productive word knowledge. I reckon a test that integrates all elements of word knowledge is necessary to map the vocabulary of learners. The notion of a multiple tests approach is supported by several scholars (Ishii & Schmitt, 2009; Laufer & Nation, 1999). It is argued that a more comprehensive picture of vocabulary knowledge ought to be provided.

3.5 The use of corpora in vocabulary research

3.5.1 Introduction

Corpus linguistics is a rapidly developing field of applied linguistics. A large amount of corpora are being developed all over the world for a lot of languages and for a lot of jargons also. For instance, one can see corpora of car mechanics jargon, spoken Scottish English jargon, etc. (Poplack, 1989). The application of corpora is a major empowerment not only for vocabulary learning and teaching researchers but for language teaching practitioners as well. Schmitt (2008, p. 42) underlines that it is unimaginable that any domain of research into vocabulary teaching, assessment or vocabulary syllabus design would do without the valuable information provided by corpus linguistics. While the compilation of different corpora had been a gigantic and imprecise effort before computers, nowadays exact data can be gathered with relative efficiency. This efficiency is really relative since the common endeavor of Cambridge University and the University of Nottingham, the CANCODE spoken corpus of British English took eight years to finalize by transcribing and coding five million words. Besides numerous English corpora, an attempt have been made to assemble corpora in most languages. With regard to Hungarian, Lengyelné (2006) sheds sufficient light on the status of Hungarian and other national corpora.

3.5.2 Corpora and their development

The earliest corpora began appearing in the 1920s. It is hard to imagine how tedious it was to manually count the lexical items. Corpora comprising one million words were an extremely large number. From the 1960s on computers were utilized to assimilate corpora. The Brown University Corpus (Kucera & Francis, 1967) and Lancaster-Oslo/Bergen (LOB) Corpus (Hofland & Johansson, 1982) were two adequate instances of an attempt for collected corpora. From the 1990s on, the third-generation, as Schmitt (2008) calls them, of corpora has brought a large amount of development in quality and quantity.

Quantity in corpora is, nevertheless, not the only indicator of a good corpus. What goes into the corpus is also an important issue. It is claimed by Nation and Waring (1997, p. 12) that not all the words are equally worth knowing. To measure the usefulness of a word, its ratio of occurrence also needs to be taken into consideration. Frequency is the simplest piece of information that can be retrieved from different corpora. How frequently a word occurs can determine the way textbook writers put together the syllabus if we approach the field from a teaching point of view.

Frequency is the most underlying concept that is examined in corpus linguistics. The most elementary thing that can be deduced from studying the language in a corpus is how many times a particular word occurs. The earliest corpora in research gave the frequency of a word as the first piece of information to researchers.

The General Service List (West, 1953) and University Word List (Xue & Nation, 1984) were outlined with the aim of measuring lexical richness in a new manner. This profile was then called the Lexical Frequency Profile (LFP) and was developed by Laufer and Nation (1995). The authors claimed they had the intention to exclude subjective judgments in the assessment of writing quality and it was efficient in the measurement of how vocabulary size was reflected in use. Laufer (2001, p. 248) also claims that the profile has no topic dependency and is a reliable measure as long as the topic is general and the writers are not required to apply any jargon. Jargon, in its nature, implies that a large amount of low-frequency words are used. The profile validated by these two researchers is not

suited for assessment of any specific jargon. Nation also developed a software for Windows-based computers and it is named RANGE.

3.5.3 Widely used corpora

In this section several corpora is presented from various perspectives such as an insight into their original purpose, their contents, and their area of usage. Five different corpora will be listed: (1) British National Corpus (BNC), (2) Contemporary Corpus of American English (COCA), (3) American National Corpus (ANC), (4) Cambridge and Nottingham Corpus of Discourse in English (CANCODE), and (5) the Child Language Data Exchange System (CHILDES).

Since the BNC and the COCA were considered for use in the selection of words during test development, I elaborate on these corpora. The BNC is available at http://www.natcorp.ox.ac.uk/. The development process of the BNC was published by Kilgarriff (1997). This corpus was launched in the early 1990s and was applied as a basis of vocabulary assessment to a large extent. Work began in 1991 and the first version was available for public use in 1994. It is the most cited corpus in word knowledge assessment and it is generally the basis of word selection in the development of diagnostic vocabulary texts. The BNC is considered as a main source for anybody involved in language teaching. It contains more than 100 million words and has a large part of spoken corpus.

The COCA is available at http://corpus.byu.edu/coca/. It is claimed to be the largest freely-available corpus of English on its website. This corpus was developed and is under constant construction by Mark Davies of Brigham Young University. It described as the first large, genre-balanced corpus of any language (Davies, 2010). The latest update was made in 2012. It contains 400 million words and is used broadly by researchers, linguists, teachers and translators. On the COCA website the user has to simply type in the word and the site generates all the necessary information (frequency, frequency rank) in less than a second.

3.5.4 Applications of corpora in FL vocabulary research

As was noted in this chapter, no vocabulary test development can do without the use of some kind of corpus. The items for all the major vocabulary tests listed in this chapter are selected from corpora. The selection of vocabulary for the Vocabulary Levels Test took place with the application of the BNC. The different frequency levels are determined by the BNC. The Productive Vocabulary Levels Test was also implemented on the basis of the BNC, whereas the selection of the words for the Vocabulary Knowledge Scale is based on the COCA.

In the YLs' vocabulary test development by a Hungarian research group (Vidákovich et al., 2013) both the British National Corpus and the Contemporary Corpus of American English were used. The researchers reported that the application of the COCA was a reasonable choice due to its larger size. Upon determining the list of words encompassed in the test the two corpora, the BNC and the COCA were compared. Two word lists were conceived and it was disambigous that only minor difference existed between them.

Poole (2011) used the Vocabulary Knowledge Scale to assess the depth of word knowledge of university students and he gave an account of using the COCA for the selection of words. As cited in this chapter previously, Jimenez Catalan and Terrazas Gallego (2008) used the Vocabulary Levels Test to assess the vocabulary of Spanish YLs. They selected the lexical items from the BNC. Nation (2012) used both the BNC and the COCA for his Vocabulary Size Test. When examining the methods

of determining what corpus to opt for the item selection for testing instruments, it appears that the BNC and the COCA are the two corpora that researchers preferably apply for their work.

In this chapter I have emphasized the importance of the findings of corpus linguistics. I reasoned that no diagnostic FL vocabulary test can be developed without using corpora. It was pointed out that the item selection for the major validated vocabulary tests is corpus-based. The most important corpora have been listed and described in details. Important information can be gained from corpus linguistics with regard to frequencies. The service corpus linguistics can offer to foreign language vocabulary teaching and learning is enormous.

Chapter 4 Vocabulary learning strategies

4.1 Introduction

It has been argued in this dissertation that research in the domain of vocabulary gained impetus in the 1980s.The popularity of word knowledge assessment has increased in the past 30 years. Even though the construct of learning strategies is another significant and well-researched domain in educational science, the intersecting construct, VLS are rather under-researched (Schmitt, 2000, p. 44). In this dissertation an attempt is made to fill in this gap. Vocabulary learning strategy research is important for two reasons: (1) the processes of language learning can be identified (Cohen 2003, p. 279); and (2) awareness of the strategies learners apply has enormous classroom implications since with strategy training the learning process can be made more efficient (Schouten-Van Parreren, 1992, p. 98). In this chapter I will give an outline of the various findings in the literature on VLS and present the empirical data that are relevant in terms of YLs' strategy use and training. First I will review the literature of the domain of language learning strategies (LLS), then I will seek to find a definition to VLS, finally I will synthesize previous research of YLs' VLS.

4.2 Defining language learning strategies

The past more than three decades have seen an enormous number of research into FL learning strategies. It must also be emphasized that at the outset of strategy research, strategies were thought of as conscious processes whereas nowadays they are considered semi-conscious operations (Cohen, 1990, p. 30). Semi-conscious operation means that the learners is not fully aware of their strategy use. Data on LLS can be gathered through self-reporting methods that might include interviews, written diaries and think-aloud protocols. Cohen also focuses on the conscious procedures by asserting that LLS are "the conscious or semi-conscious thoughts and behaviors used by learners with the explicit goal of improving their knowledge and comprehension of a target language" (Cohen 2003, p. 280). According to him, conscious thought is the intentional utilization of techniques whereas semi-conscious thinking encapsulates automatized, routine actions on the part of the learners.

As for the most amenable strategy to vocabulary learning, it is unanimously claimed in the literature that the most successful language learners do not use a great deal of strategies but they use only few of them, which might be only two or three in number (Chamot, 2005; Cohen, 2003; Doró & Habók, 2013; Oxford, 1991; Thékes, 2016). Cohen (2003, p. 282) argues from a perspective focusing on tasks that no single strategy will be amenable for all students or for all tasks, and students will apply the very same strategies in different ways.

During the past three decades in research drawing attention to FL learning and discussions on SLA theory, the emphasis has shifted from universal processes to the role of individual differences including cognitive and affective features. That is why light has been shed on the research of LLS (Chamot, 2005). In spite of the enhanced interest in LLS, defining strategies is still dubious (Doró & Habók, 2013; McDonough, 1999;) since several, sometimes contradictory, perspectives must be taken into consideration.

As for the theoretical background to strategy research, two major models have been used: (1) the information processing model of cognitive psychology (Bialystok, 1990); and (2) the communicative knowledge model of language knowledge whose executing components make it

possible for learners to achieve their goals (Bachmann, 1990). Strategic knowledge is composed of metacognitive strategies whose executing functions enable the language learner to set goals, to evaluate and to plan (Bachmann, 1996).

Weinstein and Mayer (1986, p. 320) define strategies from a behavioral perspective by stipulating that "learning strategies can be defined as the behaviors and thoughts that a learner engages in during learning and that are intended to foster the learners' encoding process." O'Malley and Chamot (1990, p. 1) define LLS as "special thoughts or behaviors that individuals use to assist them comprehend, learn, or retain new information". They discern three main types of strategies: metacognitive, cognitive and socio-affective. Their focus of attention is mostly on metacognitive strategies. LLS are defined by Ellis (1994, p. 226) who states that a strategy as a behavioral or mental activity in conjunction with some specific stages in language learning and to the process of language use. According to Ridley (1997, p. 231) strategies denote procedures which operate consciously or unconsciously in order to reach some kind of goal. Taking all the definitions of LLS into consideration, I regard Ellis' concise definition the most applicable one; he says that strategy is a behavioral or mental activity related to some specific stages in language learning and to the process of language use. There are two reasons for this: (1) strategy must be looked at as a behavioral activity on the one hand; (2) on the other hand, it is also a cognitive activity during which learners want to learn new information.

A composite construct was developed by Oxford (1991) who classified strategies in a most comprehensive way. The dimensions of her Strategy Inventory of Language Learning (SILL) are as follows: memory, cognitive, compensatory, metacognitive, affective and social. She defined LLS as "operations employed by the learner to aid the learning, storage, retrieval, and use of information…; specific actions taken by the learners to make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferable to new situations" (Oxford, 1991, p. 8). Three direct strategies and three indirect strategies were identified: the direct ones were memory, cognitive and compensation; the indirect ones were metacognitive, affective and social. It must be remarked that this type of classification is not supported by research.

According to Oxford (1991, p. 43), cognitive strategies involve the function of "manipulation of the target language by the learner". Metacognitive strategies are related to a conscious overview of the learning process: planning, monitoring or evaluating. Memory strategies comprise the linking of new material to already existing knowledge. Social strategies involve interaction with peers and the teacher to track down the meaning of unknown vocabulary items. Compensation strategies comprise the use of synonyms, circumlocution, NL equivalents and guessing meaning. Finally affective strategies mean the reduction of anxiety and applying self-encouragement.

Nisbet, Tindall and Arroyo (2005, p. 105) imply that the SILL measures self-report behavior but it fails to measure autonomy. Their assertion was meant to include both adult and YLs. It is worth noting at this point that any questionnaire focusing on learning strategies suffers from this difficulty, namely what the students say they use as a strategy might not be in line with what strategy they actually use.

The large number of definitions in the literature are summed up in five points by Cohen and Macaro (2007, p. 27) who seek to determine a common intersection of the previously made claims:

(1) the strategies that learners use can be documented;

(2) a strategy is a construct that can be defined, and what it is and what it does can be described in practical terms;

(3) strategies are important because they are associated with successful learning;

(4) some learner types are more likely to use strategies or use them more successfully than other learner types;

(5) strategies can be taught and learners, as a result, can develop more effective strategic behavior. As a consequence consciousness plays a major role in effective strategy use.

4.3 Defining vocabulary learning strategies

The taxonomies of LLS differ in several domains but their most important features align to a great extent. The past 20 years have seen a considerable increase in studies on vocabulary learning and strategic thinking in FL learning. Yet, their intersection, strategies in vocabulary learning, has not attracted sufficient attention. Schmitt (2008) synthesized the literature on the topic. Several researchers had established categories and dimensions with regard to learning strategies. He also pointed out that there were several overlaps among the different strategies. In order to gain a clear insight into what different scholars consider the components of VLS, I have gathered all the relevant taxonomies. Table 12 presents six vocabulary learning taxonomies.

Table 12. Taxonomies of VLS

Author	Taxonomies of VLS
Nation (1990)	1) planning /choosing words, choosing the aspects of word knowledge, choosing strategies, planning repetitions/ 2) sources /analyzing the word, using context, consulting a reference source in NL and FL, using parallels in NL and FL/ 3) processes /noticing, retrieving, generating/
Stoffer (1995)	1) strategies involving authentic language use (e.g. speaking with native speakers 2) strategies involving creative activities 3) strategies used for self-motivation 4) strategies used to create mental linkages 5) memory strategies 6) visual and auditory strategies 7) strategies involving physical action 8) strategies used to overcome anxiety 9) strategies used to organize words
Gu & Johnson (1996)	1) metacognitive regulation 2) guessing strategies 3) dictionary strategies 4) note-taking strategies 5) memory strategies (rehearsal) 6) memory strategies (encoding) 7) activation strategies
Schmitt (1997)	1) discovery-determination 2) discovery-social 3) consolidation-social 4) consolidation-memory 5) consolidation-cognitive 6) consolidation-metacognitive
Lin (2001)	1) cognitive 2) metacognitive 3) affective-social strategies
Tseng, Dörnyei & Schmitt (2006)	1) self-regulatory commitment control 2) self-regulatory metacognitive control 3) self-regulatory satiation control 4) self-regulatory emotion control 5) self-regulatory environment control
Pavičič (2008)	1) strategies of formal vocabulary learning and practicing 2) self-initiated independent vocabulary learning 3) spontaneous (incidental) vocabulary learning
Schmitt (2008)	1) determination 2) social 3) memory 4) cognitive 5) metacognitive

Several scholars (Cohen, 1990; Nation, 1990; Oxford, 1991) gave a definition of VLS and determined their components. However, Nation (1990, p. 217) postulated that defining vocabulary learning strategy poses difficulty but a strategy is one that needs to encapsulate choice, be complex, require knowledge and benefit from training and increase the efficiency of vocabulary learning.

Nation's (1990) attempt was the first one in the field of vocabulary learning that had tapped into learning strategies. The subsequent general classification of strategies was established by Nation (1990): (1) planning, (2) sources: finding information about word, and (3) processes: establishing knowledge. Within these general classes of strategies he determined sub-types of strategies. According to Nation (1990), planning involves choosing words, choosing the aspects of word knowledge, choosing strategies and planning repetition. His second general class of strategies comprises analyzing the word, using context, consulting a reference source in NL and FL and using parallels in NL and FL, whereas his third general class consists of noticing, retrieving and generating words. It is worth noting, nevertheless, that Nation's classification has never been validated with empirical data to the best of our knowledge.

A questionnaire was validated by Stoffer (1995) that bore the name: the vocabulary learning strategy inventory (VOLSI). Its item pool took vocabulary strategies into consideration based on nine dimensions. Stoffer (1995, p. 23) used his instrument with university students learning FLs and the VOLSI proved to be a reliable questionnaire (Cronbach's Alpha=.86). The most frequent strategy in Stoffer's study (1995) was linking to NL words similar in spelling and all in all, the fourth group of strategies (strategies for creating mental linkages) was indicated by the students as the most often used one. It was also revealed that learners who had previously received some kind of vocabulary learning strategy instruction used these strategies more frequently than those with no instructions whatsoever. The age of the language learners appeared to be significant on seven of the nine factors in that YLs tended to use fewer strategies than their older counterparts did. Gender differences, however, were not significant only by a small margin.

In the taxonomy outlined by Schmitt (1997) a new type of strategy was defined: determination strategies. Nine determination strategies were discerned in this taxonomy, a new variable compared to other instruments. According to this taxonomy, determination strategies facilitate the discovery of the meaning of new words through guessing from an NL cognate and from context, applying any kind of reference material and asking somebody. Cognates are words in two languages that take their origins in the same word family (*Merriam-Webster*, 2015). For instance, the word 'Vater' in German is a cognate of the English word 'father' or the word 'hamburger' has the same meaning in English as in Hungarian. Thus, it is quite simple for a German or a Hungarian learner of English to learn these items. Guessing from context has been a highly promoted method of learning words in the communicative era of language learning and instruction (Thornbury, 2004, p. 46). Guessing from context is likely to occur in different learning environments; nonetheless, it most commonly means inferring the meaning of an unknown word from its surrounding context. Bossers (1992, p. 251) claims that a substantial amount of the words that students learn occur through inferencing meaning from context; hence it can be asserted that contextual guessing is a major component of determination strategies. Out of the eight social strategies encompassed in Schmitt's taxonomy, five belong to the discovery-social and three to the consolidation-social dimension. The five discovery-social questionnaire items all inquire about students' asking their teachers or mates for help. Of the items, the 'Ask teacher for a synonym or paraphrase' is a common strategy amongst students in a classroom environment (Schmitt, 1997, p. 202). Discovery-social strategies encapsulate requests for help whereas the consolidation-social strategies dimension involve interactions after the lexical item has

been learned. As for consolidation-memory strategies, Schmitt (1997, p. 96) claims that these types of strategies traditionally known as mnemonics comprise the relating of already learned knowledge to the newly-learned words. Such strategies include imagery, an activity during which learners match words to pictures, relating words, normally synonyms to the new items (e.g., amazed-fascinated), grouping words in semantically related clusters and using physical action to memorize the lexical items.

The consolidation-cognitive strategies dimension consists of nine questionnaire items in Schmitt's instrument and they focus their attention on mechanical repetition and involve such traditional strategies as keeping a written vocabulary, writing word lists and using flash cards for the retention of words. The final dimension in the taxonomy is metacognitive strategies. When using metacognitive strategies, students evaluate their own learning process. Metacognitive and self-regulatory learning, two different kinds of strategies, are complex and interactive processes in which both motivation and self-regulatory activities play a role (Boakerts & Simon, 1995). Students learn some facts and some processes during the years that assist them remember something when it is necessary. Schmitt (1997, p. 224) was led to postulate that the most common metacognitive strategy is continuous studying of the same word over time.

In Schmitt's (1998) qualitative research with Japanese students of 14-40 years of age, he examined these categories thoroughly and came to the conclusion that the most frequently used ones were discovery strategies: using a bilingual dictionary, verbal repetition and guessing from textual context. Besides Schmitt's data gathering instrument, the vocabulary learning questionnaire (VLQ) compiled by Gu and Johnson (1996) is an instrument that examines different learner strategies in this sub-field of SLA. They distinguished three factors: (1) beliefs, (2) metacognitive strategies, and (3) cognitive strategies. Beliefs were not further fragmented into any other categories; however metacognitive strategies were split into self-initiation and selective attention. Cognitive strategies comprised initial handling, reinforcement and activation. The focus of their investigation was advanced learners of English. They ran a correlation study based on the data received from the questionnaire and students' scores on tests of vocabulary size. They intended to reveal what strategies went hand in hand with previous learning and they also aimed at finding out which clusters learners used. They found that self-initiation strategies and activation strategies correlated significantly with vocabulary size. Self-initiation strategies were defined as ones involving the learner's autonomous decision to use any technique to learn a new word whereas activation was regarded as the intention to activate a strategy to learn a new word. Then, they distinguished five types of learners: (1) readers who dealt with words in context, (2) active strategy users who were hard working and motivated, (3) non-encoders who used no intentional memorization strategies, (4) encoders who used intentional memorization strategies, and (5) passive strategy users who hardly ever used any strategy.

Tseng, Dörnyei and Schmitt (2006) drew on work completed in educational psychology and focused on proposing a new psychometrically-based approach toward FL VLS. This construct of this new approach is grounded on the learners' self-regulatory capacity. It is a conceptual framework that highlights the learners' innate capacity which energizes their effort to personalize strategies efficient for them. Tseng et al. (2006, p. 98) claim that the underlying problem in strategy research is the diverse conceptualization of the notion. Determining the specific dimensions suited for specific age groups poses difficulty.

In his synthesis Schmitt (2008, p. 88) compiled a taxonomy of VLS by distinguishing five dimensions: (1) determination, (2) social, (3) memory, (4) cognitive, and (5) metacognitive. Schmitt (2008, p. 340) conceived two major factors when setting up his new taxonomy of VLS by creating

two major factors: discovery and consolidation. Two sub-factors were added to the discovery factor: determination and social. The consolidation factor was widened with four sub-factors: social, memory, cognitive and metacognitive. It is worth noting that in spite of the fact that the labels of the dimensions in Nation's (1990) taxonomy differ from Schmitt's (2008), there is a considerable amount of overlap among the two researchers' dimensions. Nation's planning dimension aligns with Schmitt's determination and cognitive dimensions. Nation's dimension called 'sources' has an overlap with Schmitt's social factor to a great extent and the third dimension in the Nation taxonomy, processes, strongly aligns with Schmitt's memory and metacognitive dimensions.

Lin (2001, p.145) ran a case study with the participation of seven 15-year-old Taiwanese learners to investigate their VLS. Data gathering methods involved classroom observation, interviews and think-aloud protocols. More than 70 strategies were identified. These items were then identified as one of the three main types of strategies: cognitive, metacognitive and social-affective strategies. These types of strategies are identical in most of the instruments assessing VLS; nevertheless memory strategy and discovery strategy are not included in Lin's (2001) data collection instrument, which might question the validity of the instrument.

Jimenez Catalan (2003, p. 44) came to the conclusion that males and females differed in the use of strategies. She stipulated from her empirical data on a sample of 581 YLs (age=11 years) of Basque (NL) and English as a FL that males and females both used similar strategies: using a bilingual dictionary, guessing from textual context, asking the teacher and saying the word out loud when studying. This finding corroborates Schmitt's (2008) results: discovery strategies are used more often than any other strategies.

In this section it has been discussed how vocabulary learning can be defined and the major components of the different instruments assessing strategy use have also been presented. The postulation has been made that there is an agreement among researchers in the literature that cognitive, metacognitive, social, affective and memory strategies are the main dimensions. Having revealed the construct of VLS in general, a YLs' perspective will be taken in the subsequent section.

4.4 Research on language learning strategies used by YLs

In this section the results of several studies will be presented with regard to YLs' LLS. Both international and Hungarian results stemming from data gathered with different instruments developed for YLs will be presented.

A key question of strategy research is the extent to which strategies contribute to the success of language learning. Firstly, it must be determined whether successful language learners use more strategies than less successful ones. Secondly, it must also be investigated whether a successful language learner uses more or fewer strategies. Another focus of language learning strategy research is related to the emergence of strategies. Chesterfield and Chesterfield (1985, p. 56) asserted that strategies emerge in a natural way. This finding is confirmed by Nikolov in her study involving young Hungarian EFL learners (Nikolov, 1999b, p. 228).

Gunning (1997) developed the SILL adapted for children (Children's SILL). The instrument comprises 30 items. The main classifications: memory, cognitive, compensation, metacognitive, affective and social strategies remained unchanged but the wording of the questionnaire items was altered, so YLs could easily comprehend it. In a study conducted with the application of the Children's SILL instrument it was concluded that YLs had a tendency of relying on compensation strategies to a great extent.

In a study involving adult and young language learners, the similarities and differences between the strategy uses of the two age groups were investigated by Pinter (2006). Students had to interact in pairs doing a 'Spot the difference' task. Pinter (2006, p. 624) was led to assert that adults controlled the task more effectively than YLs by using more cognitive and metacognitive strategies. Thus, it can be concluded that adult learners are likely to use strategies that are more empowering in the actual context. In another study (Nikolov, 2006) investigating YLs' strategy use whilst solving English as a FL tasks Hungarian 12 year-old children (n=53) were examined with the method of think-aloud protocols in non-mediated verbalization (Gass & Mackay, 2000). In this research Nikolov (2006, p. 38) uncovered that students used cognitive strategies in the majority of the cases, more specifically, translation. Besides translation, skimming and scanning the texts were also frequently used. The researcher also identified a lot of individual differences in the data received from think-aloud protocols. The assertion was also made that good performers did not necessarily use more strategies. In fact it was concluded that some of the high achievers in the high achievers did not report any strategy use. It was also noted, nevertheless, that some good performers used various types of strategies. It was claimed as a conclusion that high achievers might benefit more from strategy use and this finding confirmed previous research (see Purpura, 1991).

Nikolov (2003, p. 6) states that studies which investigate YLs have a broad variety of types of approach, an assumption that is confirmed by Szpotowicz & Szulc-Kurpaska (2012) and Mihaljevic Djigunovic (2010); nevertheless, it is also declared by Nikolov (2003, p. 6) that no significant correlation exists between ratio of occurrence in the use of strategies and language learning achievement.

The major factors of successful language learning by YLs have been examined in several studies. Apart from early exposure, attitude and motivation, one of the most important variable, was strategy use (Szpotowicz & Lidgren, 2011, p. 140). It was also pointed out that young language learners use similar communicative and cognitive strategies to adults. As part of a large-scale project called ELLiE (Enever, 2011) in which substantial data were collected on language use, classroom context, teaching style, the pace of learning and strategy use, Szpotowicz and Lindgren (2011) found that virtually all the students used transfer of words from their NL, which can be considered a cognitive strategy. In a study published by Szulc-Kurpaska (2000), eleven-year-old YLs' strategy use was examined in a communicative language game. When children faced dilemmas as far as language was regarded, they used formulaic chunks, formulated new, non-existing words, drew on their NL and turned to the teacher. The first three are cognitive strategies and the latter one is a social strategy.

In a study done with the participation of 61 5^{th-} and 6^{th} graders in Mexico as part of a large-scale English as a FL instruction program called National English Program for Basic Education (PNIEB), focus-group interviews were executed in order that conclusions could be drawn partly of YLs' strategy use. The researchers were seeking to find data concerning language learning outside the classroom (Sayer & Ban, 2014, p. 324). They revealed that children used numerous functions, sources and strategies to learn English. It was asserted that in the uses of English outside the classroom, sixteen distinct strategies were identified. Listening to popular songs, watching movies in English, playing video games, using the Internet and using Google Translate were among the most frequently used functions. Numerous students specifically reported that playing computer games, listening to present day celebrities are great empowerment for them in the process of language learning. As this study proved, the classroom is not the only learning environment for learning languages and using strategies as it has been previously hypothesized. The members of the Z generation are increasingly involved in out-of-school learning (Fűz, 2014).

Playing online English games is another strategy that has recently been examined empirically. Butler, Someya and Fukuhara (2014, p. 265) investigated the effect online games exert on language learning. The use of an online English game called 'Jido-Eiken' developed by Japanese programmers in 1994 was scrutinized. This game is designed to teach learners words and common expressions. The complete game comprises nine elements. One is a car-racing game with multiple competitors. It is essential that language learning games be interesting for the students. The researchers identified features that are attractive for the learners. They must be motivated by challenge, curiosity and by control. In this game learners are awarded extra fuel once they answer an English language question. A total of 3,945 children took part in the study, aged 4 to 12. The main finding of the study was that the online game contributed to receptive word knowledge to a great extent and to productive word knowledge to a lesser extent. The YLs were divided into four age groups so that researchers could observe variations dependent on age: 4-5 year-olds, 6-7 year-olds, 8-9 year-olds and 10-12 year-olds. They uncovered that vocabulary learning through online games drastically increased in the 10-12-year-old group. Vocabulary was tested with the use of the VKS presented in Chapter 3. A conclusion can be drawn from this study: playing online games and playing games is an efficient technique for both general language learning and vocabulary learning.

Another investigation on YLs' LLS was conducted by Doró and Habók (2013). The study used the SILL (Oxford, 1991) with 5th and 6th graders in Hungarian schools (n=275). It must also be mentioned that the SILL was not originally developed to assess YLs but Doró and Habók (2013) adapted this instrument to the assessment of YLs by rewording a few statements in the questionnaire. Six strategies were examined: metacognitive, compensation, memory, affective, social and cognitive. Although the main focus of the study was general language learning strategy use, the SILL questionnaire encapsulates a great number of items looking into the use of vocabulary learning. It was revealed that metacognitive strategies were the most frequently used ones by YLs, while compensation strategies were the least often used ones. By refining their findings with respect to gender, they found that girls used new English words in sentences more often and they told rhymes and repeated words to recall the meaning attached to them. They also frequently acted out situations or used mental images in order to memorize words more efficiently according to the self-report questionnaire. From these studies a definite conclusion can be drawn: YLs tend to use cognitive and metacognitive strategies more often than any other strategy in order to memorize new FL words. It has also been argued in this section that LLS are independent of the learning environment.

4.5 Research on vocabulary learning strategies used by YLs

This section is dedicated to the literature on YLs' VLS. The strengths and weaknesses of the relevant studies with a focus on the construct will be presented and the applied data gathering instruments will also be described. Hungarian studies will also be discussed.

Plenty of empirical research has been conducted on VLS; however, few involve YLs (Cameron, 2004). Cameron (2004, p. 92) was led to assert that effective strategies of vocabulary learning at the disposal of YLs are the subsequent: guessing meanings by using all information available in a picture or text, noticing grammatical information about words, noticing linkages to similar words in the NL and remembering where a word has been encountered. Cameron (2004, p. 93) also emphasizes that strategy use changes with age and there is a large variance in terms of what strategies they use and how they use them. I suppose YLs' word knowledge develops and their vocabulary increases when they are exposed to plenty of encounters with the words in speaking,

listening, reading, and writing. Research has also indicated that learning words by young children occurs as a result of exposure most of the time (Baumann, Kame'enui, & Ash, 2003) so in many cases word learning is not related to strategies. It has been pointed out that such strategies as extensive reading, intentional engagement in oral language and listening to adults, all for the purpose of learning a language, are efficient ways of YLs (Ellis, 1994).

Schouten-van Parreren (1992) examined 12-15-year-old Dutch learners of French as a FL. The VLS of reading from context for new lexis were studied. It was found that weak learners were unsystematic in their strategy use compared to efficient learners who used numerous resources to pick up meaning from context: illustrations, linguistic context, the topic, etc.

Nikolov (2003, p. 22) points out that learners use a wide range of strategies; nevertheless, it is also posited that conscious use of strategies were not typical of YLs. Albeit YLs' VLS have been theorized by several researchers, very few studies can be discovered with respect to this domain.

An instrument was developed by Pavičič (2008) to assess the construct as it was pointed out in Table 12: Vocabulary Learning Strategy Questionnaire for Elementary Schools (VOLSQUES). Three main dimensions were identified by Pavičič (2008). (1) strategies of formal vocabulary learning and practicing, (2) self-initiated independent vocabulary learning, and (3) spontaneous (incidental) vocabulary learning. The questionnaire comprised 27 items; every dimension contained nine items. The instrument was validated with item-analysis and factor-analysis with the participation of 300 Croatian children. She unveiled that strategies of formal vocabulary learning and practicing are used most often by YLs, especially, within this classification, ones that involve repetition.

Another study focusing on YLs' vocabulary learning strategy use was conducted by Griva, Kamaroudis and Geladari (2009). Greek-speaking 6th graders (n=238) participated in the study. The researchers used both qualitative and quantitative measures. Besides a self-report questionnaire, think-aloud protocols were applied so that a deeper insight could be gained as far as word learning strategy use was concerned. In the self-report process, the participants were requested to write down the strategies they used frequently to learn words. Translating into the mother tongue, repeating orally and looking up words in a dictionary were reported as the most frequently used strategies. During the think-aloud protocols, the researchers also revealed that a metacognitive strategies were also a frequent instance of the attempt to learn new words. This finding is in line with the results of Doró and Habók (2013).

Coyle and Gomez Gracia (2014) sought to find whether the strategy 'listening to songs to learn new words' used by YLs would prove to be an efficient one. Spanish children of 5-6 years of age (n=25) participated in the study. Vocabulary was taught by means of songs in three sessions. Children were told to listen to the songs then to watch the teacher perform gestures related to the unknown words in the songs, and then to identify and link words to pictures. It was revealed that receptive vocabulary was enhanced and in the delayed pre-test a major finding was that some of the children performed better than on the post-test five weeks earlier. It was concluded that listening to songs is an amenable strategy that young language learners can use in the vocabulary learning process.

Hardi (2014) investigated Hungarian YLs' vocabulary learning strategy use within the framework of self-regulation. Her research in three phases. In the first phase she applied semi-structured interviews and classroom observations with a small number of students. In the second phase, she did a focus group interview and structured interviews. Following the interviews the researcher did a pilot study of her data-collection questionnaire that she developed. In phase 3, her validated questionnaire was used with the participation of 3rd-8th graders (n=331). Looking up words in the dictionary, oral repetition, translating word to NL were strategies the participants reported

applying in order to learn words. One of the main findings of her research was that there is a certain shift in YLs' VLS as they grow older. With the passing of time, FL learners tend to experiment with and apply new strategies. She documented that strategic vocabulary learning changes over time. Metacognitive strategies, even in the case of YLs (8-10-year olds), were discovered to be frequent in self-reports. Self-regulated strategy use was found as early as 3rd grade and this indicates that self-regulation develops at an early age. This refutes the findings of Schmitt (1997) and Jimenez Catalan (2003) who had found that discovery strategies were more frequent strategies used by YLs to learn words.

In this chapter I have elaborated on VLS that were reported to be used by YLs. I have summed up the relevant findings of previous research concerning the strategy use of YLs. I started out by defining constructs of LLS, an overarching topic; then, I have narrowed my focus to VLS with a special focus on YLs' word learning strategies. It has been argued that YLs' word learning strategies are generally assessed with numerous instruments such as questionnaires, self-reports, think-aloud protocols and interviews. It has been asserted that strategy use changes with age especially among YLs and since word knowledge is a multidimensional construct learning strategies are also multi-faceted. From several studies a conclusion can be drawn that cognitive and metacognitive strategies tend to be the most often used ones by YLs. Cognitive strategies that involve translation, formal word learning are used for the discovery of meaning and metacognitive strategies such as repetition for the purpose of learning the new word are made use of in order to consolidate word meaning.

Part II Pilot studies

Chapter 5 A pilot study of young EFL learners' vocabulary knowledge

5.1 Introduction

In Chapter 5 my intention is to present the pilot study of the diagnostic EFL vocabulary test for YLs. The instrument development process will be described including the selection process of the items, the creating of the tasks, the results, item-analysis and the discussion.

Both adults' and YLs' English as a FL vocabulary have mainly been assessed as part of a test addressing general language knowledge. Hence we have only few data at our disposal concerning YLs' vocabulary except for studies indicated in Section 3.4 (Atay & Kurt, 2006; Jimenez Catalan & Terrazas Gallego, 2008; Johansdottir, 2011; Orosz, 2009; Vidákovich et al., 2013). The purpose of the pilot study was three-fold:

(1) to develop a complex diagnostic vocabulary test for YLs of English as a FL
(2) to find out how the different items work by means of item-analysis; thus to validate it
(3) to implement a test that will be used online ultimately

A complex test comprises the assessment of more than one language ability (Bachmann & Palmer, 2014) and some of its tasks demand productive word knowledge. Mapping the English as a FL word knowledge of YLs would be an important step further in terms of classroom implications. Diagnostic tests are developed for the purpose of exploring knowledge during the learning process so they have major classroom implications (Vidákovich, 1990). Item-analysis is necessary in FL assessment since replication studies can only be performed with the use of validated and reliable instrumentation. Derrick (2016, p.135) highlights the importance of valid instruments in FL research since for the purpose of interpretation of study results it is significant to have information on instrument origins and also on the development process that is inclusive of piloting and revision.

5.2 Pilot study of a test assessing productive and receptive vocabulary

5.2.1 Context of the research

Hungarian 6th graders are 12-year-old learners, most of whom, have three or four 45-minute lessons in English in primary schools. The majority of the public schools do not provide more than four English lessons for students per week (Fazekas, 2009, p. 4). However, most of the students in Hungary have more exposure to English than the three or four occasions determined in the school curriculum. They attend private language lessons or courses organized by local language schools in the afternoons and they are exposed to a large amount of English by using the Internet.

Besides being exposed to vocabulary learning in school and private lessons, students are also believed to learn vocabulary by listening to songs on Youtube and reading posts on social media sites. In the schools where I conducted the pilot study I interviewed the teachers to make sure I am aware of what course-books were used. Information was provided that they used course-books published by either of the three major publishers: Cambridge University Press, Oxford University Press and Pearson. It is characteristic of these course-books and workbooks that they have well-designed chapters and contain a great deal of visual material. As for course-books, the investigation of how

teachers apply the course-books in practice and what methods they use to teach English is also an important aspect. In an empirical study conducted by Nikolov (2008), it was pointed out that the observed teachers in the research tended to use the grammar-translation method (Harmer, 2012), and their native Hungarian to explain grammar and vocabulary meaning. It was asserted that English words were generally taught with their Hungarian equivalents and very few motivating techniques are applied to help learners learn vocabulary

To the best of my knowledge there had been two studies (Orosz, 2009; Vidákovich et al., 2013) that measured Hungarian YLs' vocabulary preceding my study. In the above-mentioned studies receptive word knowledge was assessed. I found it important to add tasks requiring productive word knowledge for two reasons: (1) only few studies had measured productive FL word knowledge of YLs previously, (2) in the communicative era of the 21st century the ability to use words productively to formulate comprehensible sentences is an unavoidable necessity.

Gaining information on learners' receptive word knowledge is likely to be expedient, however adding productive tasks and listening tasks to an instrument can provide us with more relevant data. After making inroads into the size of English vocabulary of young Hungarian learners, suggestions might be put forward to teachers as to how they should assess vocabulary. The author of this dissertation observed English classes of the participants that would be involved in the assessment. It was concluded that traditional methods of vocabulary teaching were used by teachers such as writing the FL word on the board along with the NL equivalent and having students write words in their vocabulary lists.

5.2.2 The Hungarian context of the pilot studies

Until the beginning of the 1990s Russian used to be the mandatory language to be learned in schools in legal terms. However, there was a major civil disobedience concerning the learning of Russian (determining the reasons for which goes beyond this dissertation). All students in primary school started learning it in 4th grade and normally they attended three Russian lessons a week until 12th grade, the final grade in public education. Because of the difficult orthography and lack of willingness on the part of the Hungarian learners to identify themselves with the language, Russian was not a popular subject and most of the learners left public education without being able to communicate in this language (Nikolov, 2007). Since Hungary became a democratic country (the first democratic elections were held in 1990) Russian teachers have been retrained into English teachers. Learning English and German has become popular, especially English as lingua franca, since the turn of the millennium (Dörnyei, Csizér & Németh, 2006, p.28). Nowadays, an increasing number of children start their FL studies prior to the mandatory age of ten. Due to parental pressure more and more YLs begin to study English before grade 4 (Nikolov & Szabó, 2011, p. 16).The most popular FL is English but German, French, Italian, Spanish and Chienese are also offered in some schools.

Hungarian YLs gain access to English words from three main sources: (1) public school classroom, (2) private lessons, and (3) incidental instances of hearing or reading words. As for the classroom, vocabulary input can be received by the student from teacher talk. One study puts English education in Hungary into focus (Nikolov, 1999a). A lot of useful observations can be made based on this study. One is that teachers in Hungary use NL in the majority of the classroom time and tend not to use pictures, videos or songs to teach language and vocabulary, a method that learners would prefer according to their report. On the basis of Nikolov's (1999a) data originating from a series of classroom observations in Hungary, I reckon that English words are predominantly taught with the use of NL. I observed lessons prior to the pilot study of the vocabulary test and saw the techniques of

grammar-translation method used in the classrooms. Words were basically taught with one technique: an unknown word arose from context and the teacher gave the Hungarian meaning. There is a likelihood that the lack of variety in teaching techniques limits the chances of the learners to learn words rapidly and efficiently in the classroom (see section 2.3).

In a large-scale study conducted in Hungary with the participation of YLs, general EFL knowledge was assessed by Józsa and Nikolov (2003) with a test that contained eight tasks. YLs' listening, reading and writing skills were assessed. It was found in their research that in case of Hungarian 6th graders the number of years spent on learning EFL correlated significantly with reading skills (r=.24), writing skills (r=.23), and with listening skills (r=.25). Another finding of their research was that those students that took extra EFL lessons after school had a better achievement (M=61%) on a general EFL test than those who did not (M=57%). One other reported finding was that the mother's level of education was a strong predictor of the achievement on the general EFL test: those 6th graders whose mothers had a university degree scored 75.7 %. Those students whose mothers finished only eight years of primary school scored 40.6% on average on the test.

Csapó and Nikolov (2009) ran a longitudinal large-scale study in Hungary. Data were gathered at two measurement points: in 2000 and in 2002. In the first stage, over 29,000 participants were involved from 300 schools in Hungary and at the second, over 41,000 participants took part in the assessment. Different cognitive and affective variables were also examined: 4,958 6th graders were tested two years later as 8th graders. The instrument comprised eight tasks: five reading tasks, two listening tasks and one writing task. In reading task five authentic advertisements had to be matched with missing words. This task appeared to be an embedded vocabulary test. (Several vocabulary tests were presented in Chapter 3.) It was found that the different tasks were strongly interrelated.

Following these above-listed instances of large-scale assessment, Nikolov (2009, p. 6) unambiguously summarizes the trends that have been followed in the past 25 years. It is highlighted in her summary that a large variety characterizes FL programs: the quality of teaching entails differences in various parts of the country. Before grade 4 there is no standard frequency of lessons: students study English in one to five lessons a week. The fact that classes are divided into ability groups corroborates the assumption that the more competent students study in more intensive groups, whereas less competent students are classified into less intensive groups. The best predictor for proficiency is not the number of years spent studying, but as in the case of other school subjects in Hungary, the parents' socio-economic status exerts a strong influence on FL proficiency (Csapó, 2001). A lacuna of adequate methodology suited for the age-group characterizes the teaching of YLs albeit most of the teachers are aware how YLs learn languages (Nikolov, 2011). It must also be mentioned that language teaching in Hungary is still characterized by traditional methodologies applied in the classroom, especially in the case of languages other than English However, a positive trend can be observed among teachers of English as regards the use of more innovative methodologies (Thornbury, 2004). As regards assessment practices, they are often problematic since they do not reflect what YLs are normally capable of doing and are expected to be able to do (Alderson & Huhta, 2005; Cameron, 2004; Nikolov, 2009).

According to the National Core Curriculum in Hungary (2012, p. 10043), students are required to enter formal classroom education of EFL in grade 4 when most of the students are ten years old. Even though learners are offered an early start in a FL (mostly English and German) in school, a push on the part of the parents aims at having the children start earlier than the age of ten (Nikolov & Mihaljevic Djigunovic, 2006, p. 238). Due to this push, a great number of students start English education in grade 1 when children are six or seven years old (Orosz, 2009, p. 184). By the age of

twelve when Hungarian students are in grade 6, most of them will have learned English for four years. Even the most proficient and talented Hungarian 6th grader is unable to reach the knowledge of more than 3,700 words. With a corpus-based receptive vocabulary test, Vígh and Thékes (2014, p. 125) estimated that Hungarian 6th graders are expected to know around 600 head words. The Hungarian National Core Curriculum (HNCC) (2012) determines the expected number of known words by the 6th graders. According to the document (2012, p. 10,022) 6th graders are supposed to use 600 words in production and to comprehend an additional 250 words, totaling the number of known words to 850.With further reference to the HNCC 6th graders reach A1 level based on the Common European Framework of Reference for Languages (CEFR) (2001) but some research upholds that a significant number of students can outperform this level (Nikolov, 2001, p. 9).

Orosz (2009, p. 185) did a survey during the 2006 spring semester with teacher trainees at the University of Szeged. She provided an observation instruction to the trainees that they had to use when they observed classes during their teaching practice. Data were received from the observations and these data processed concerning the number of words taught in a lesson. Teacher taught 10 words on average per class to the students. One important finding of this instance of qualitative data gathering done with a convenience sample was that teachers in Hungary believe in testing the knowledge of words taught in the previous lesson. The majority of teachers (n=30) gave a quick bilingual test at the beginning of the lessons. Albeit words were taught in different ways, assessment was fundamentally done in a bilingual format where learners were expected to give the meaning of the Hungarian word.

5.3 Methods

5.3.1 Research questions

With regard to the pilot study, the intention was to gain insight into the problem of the way items function, the validity of the items within the test battery and the correlations of the tasks. As the main purpose of the pilot study was to develop a valid instrument, the focus of the analysis of the results was the functioning of the items. I derived the definition of validity from Messick (1995) who regards validity as a single construct and asserts that it validity refers to the degree to which evidence support the interpretations of test scores entailed by proposed uses of tests. Three research questions (RQs) were phrased with regard to these problems:

(1) How do the items and the test work?
(2) Which items are inappropriate in the test battery?
(3) How do the different task types correlate?

5.3.2 Participants

The students taking the test were 6th graders (n=103) in four Hungarian primary schools in a convenience sample in Szeged and Mezőtúr. Careful selection took place in terms of number of English lessons per week. Only students in classes of general curriculum were selected. This means that learners had three English lessons a week in the school-year when data collection was carried out and they had been learning English since 4th grade.

5.3.3 Instrument

A diagnostic vocabulary test was designed to assess learners' word knowledge. Most of the diagnostic vocabulary tests measure one dimension of vocabulary (Nation, 1990). They either tap into receptive or productive word knowledge. The diagnostic instrument consisted of seven different tasks (Table 13). Task 3 and Task 4 were both receptive tests in meaning recognition modality requiring reading skills; however these two tasks could be distinguished. Task 3 resembled the VLT with the difference that as opposed to the VLT it contained pictures rather than definitions the words had to be matched with. Task 4 was the reading counterpart of the listening Task 1. Thus, in case of Task 3 and Task 4, I was seeking to spot empirically the extent to which they can be discerned.

Table 13. Tasks in the diagnostic vocabulary test battery

	Task	Receptive/ Productive	Language skill(s) and modality required Schmitt (2014)
1	Listen to words and match them with pictures.	Receptive	Listening / Meaning recognition
2	Listen to definitions and match them with words	Receptive	Listening / Form recognition
3	Match 6 written words with 3 pictures	Receptive	Reading / Meaning recognition
4	Match written words with picture	Receptive	Reading / Meaning recognition
5	Match written definitions with words	Receptive	Reading / Form recognition
6	Write word next to picture	Productive	Writing / Form recall
7	Translate or write sentence with word	Productive	Writing / Form recognition

Up to this point vocabulary had been assessed with tests comprising tasks identical in format. Tests had either assessed receptive or productive word knowledge in one modality. In section 3.3 diagnostic vocabulary tests were described. The validity of none of the tests was called into question. However, questions may arise in case an instrument consists of several different tasks. There might be some skepticism whether an item assessed in listening mode would produce similar results as in reading mode. In my view, in an item pool containing 108 words, the overall result achieved in the complex test does not differ from that achieved, say, in a receptive vocabulary test comprising tasks of identical format. According to Melka Teichroew (1982, p. 244) the receptive-productive distinction is rather a continuum than two types of knowledge. It is also asserted that it is not clear where the threshold is found between receptive and productive knowledge (Laufer & Goldstein, 2004). The impossibility of determining the place of this threshold proves the fact that assessing a number of items in different modalities would not exert an influence on the results.

In Schmitt's view (2010, p.36) receptive and productive word knowledge ought to be measured together in one test. Pignot-Shahov (2012, p. 40) also argues that both types of knowledge must be measured and a test using a large number of items provides valid results no matter where one item is placed in the instrument.

This diagnostic test is intended to determine the breadth of English as a FL vocabulary of 6th graders and to map the lexical knowledge of these students at a certain point in time. The outcome of the test will be an indicator of the size and limitations of the students' vocabulary at this stage of their learning process. The difficulty of the different tasks was also estimated. On the basis of literature, I concluded that the easiest task would be the one that involved listening and visual input and the most challenging would be the two tasks that require production.

Besides taking corpus-based data into account, recommendations in the Hungarian National Core Curriculum (HNCC) (2012) and Nikolov (2011) were also considered in terms of grouping words based on topics and involving them in the list. The topics suggested were (1) food and eating, (2) home and furniture, (3) shops and shopping, (4) travelling and transport, (5) jobs and professions, and (6) sports. Nikolov (2011, p. 28) suggests 14 broader topics that should be considered by elementary school teachers for classroom practice and she also presumes that the lexis that is embedded in these topics is the area of interest for the young language learners. Consequently, I added the most relevant vocabulary of these topics to the list of 2,000 words irrespective of word frequency rank. Magyar and Molnár (2015, p. 48) also support the view of teaching those words to students that they are interested in learning. As a result, my list of words to be assessed was completed by the addition of another 2,000 word families summing it up to 4,000 words. This decision is supported by the evidence found by Nation and Waring (1995) that the knowledge of the 4,000 most frequent words is the most critical aspect of communicating in a language for both YLs and adult learners.

For the measurement tool six of the main topics specified above were selected. There are two reasons for this decision: (1) not all of the 14 topics could be included in the test, and (2) after thorough supervision these six topics included the most frequent vocabulary of all the fourteen. I came to this conclusion after scrutinizing the word lists of these topics and compared them with the frequency lists.

Six tasks (Task 1-Task 6) of this complex vocabulary test were intended to assess breadth of vocabulary since most vocabulary tests (Meara, 2009; Nation, 1990; Read, 2000) assess this domain. One task (Task 7) was intended to assess depth of vocabulary. The required word knowledge for solving task was receptive in the first five tasks and in Task 6 and 7 productive word knowledge was required. The VKS (see section 3.3.3) was implemented in Task 7. Moreover, I reckoned that it would have carried a heavy cognitive load for 6th graders if I had tested depth in more than one task.

First of all, words up to the first 2,000 frequency rank were selected from the British National Corpus (BNC). The reason for this decision was that researchers (Laufer et al., 2004; Nation, 1999; Schmitt, 2003) imply that the most important thing for a language learner is to learn the first 2,000 words in English and this numerical estimation holds truth for all languages. However, concerning YLs, there is a likelihood that they know some infrequent words better than frequent ones. This can occur as a result of learning age-appropriate topics in school and incidental learning as a result of out-of-school exposure. The words students might be interested in knowing stem from television programs, watching videos online and books written in English. Sixth graders are also likely to encounter less frequent vocabulary and in some cases they might be more interested in learning less frequent vocabulary than more frequent.

When creating the seven tasks for the diagnostic test battery, I needed to consider two factors: 1) there are very frequent words that students do not know, simply because those words belong to lexis used by adults, 2) there are infrequent words, for instance, words denoting animals and jobs that are rather infrequent but YLs know (Thornbury, 2004, p. 32). To take 'lion' it is rather an infrequent

word as it is outside the 3K list but most of the students know it. The reason for this is partly that the recommended topics for this age group contain infrequent words.

Three word categories were established on the basis of the BNC list and the amount of occurrence of a particular word in the course-books. The necessity of creating categories is underlined by the fact that major vocabulary tests (Nation, 2001, Laufer & Nation, 1995; Paribakht & Wechse, 1993) include items selected on the basis of layered word list. Three perspectives served as the basis of classifying words into categories: 1) word frequency based on the BNC, 2) occurrence of the words in course-books used by 6th graders, 3) personal judgement on the assumed difficulty of the word. Some of the words that would have been in Category 3 were yielded the gradation as Category 2 or even Category 1; the process of determining word categories is presented below.

Every word in the test was given a difficulty index calculated from the sum of the three perspectives. Points were given on a scale of one to three based on the perspectives of classifying the words. In terms of each perspective a minimum of one point and a maximum of three points were given to the words. One point was the indication of easiness and three points were that of difficulty. Personal judgement was done prior to consulting the BNC and course-book occurrence so that prejudice would be avoided. In case I assumed a word easy, I gave it one point; I gave two points to a word I assumed of average difficulty and three points were given to the words that were supposed to be the most difficult. I conducted my judgement on the basis of fifteen years of experience of teaching EFL. As regards the word frequency perspective, the word was give one point if it was among the 2,000 most frequent words in the BNC, it was given two points f it was between the 2,000 and the 4,000 most frequent words. In case it was outside the 4,000 most frequent words, it was given three points. As concerns course-book occurrence, I consulted the course-books used by the students and investigated my word pool with a focus on how frequently the words appear in the books. I wrote ticks next to the words on my list. Afterwards I counted the ticks and gave points to the words in the following way: one point to more than ten ticks, two points for a number of ticks between five and ten, and finally three points for ticks fewer than five.

From the process described above it is clear that each word could be given the minimum of three points and the maximum of nine points. The summed points were considered the difficulty indices of the words. Based on these difficulty indices, the categories of the words were determined. Table 14 presents the determination of the categories.

Table 14. Table 14. The categories of the words based on index points

Index points	3-5	6-8	7-9
Category of the word	1	2	3

The test comprised 88 task components. Out of these 63 were correct items, 13 distractor task components and 12 task components. Selection of the lexical items for the tasks was completed by choosing words from all three frequency categories. In all tasks the majority four or five words belonged to Category 1 and at least one word represented Category 3, which means that Category 2 included three or four items. With this system, it was guaranteed that words form all the possible categories were assessed. To present an instance, the items from Task 2 are illustrated with their representative categories in Table 15.

Table 15. Words and their categories in Task 2

Item	Word	Category

1	arrive	2
2	bake	3
3	cinema	1
4	eat	1
5	grocery	2
6	hospital	2
7	learn	2
8	play	1
9	sell	1

As far as the scoring of the test is concerned, all tasks were scored on a 1 to 9 point scale. In each task there were eleven items. One instance was always given and at least one distractor (an item which did not match any of the pictures or definitions) was also used in the tasks except for Tasks 6 and 7 that required productive word knowledge, so no distractor item was needed. In Task 3 as many as 24 items were implemented since in the three sub-tasks plus the example task students had to match three pictures to three words out of six options. All in all in each task there were nine correct items. In Task 7 one point was given when the student proved that they could use the word in sentence. Zero point was given in case the student either did not know the meaning of the word or was not able to use it in sentence. Table 16 presents the number of items, the maximum possible points and the number of distractors.

Table 16. The scoring of the tasks

	Number of task components	Number of items	Number of distractors	Items in example
Task 1	11	9	1	1
Task 2	11	9	1	1
Task 3	24	9	9	6
Task 4	11	9	1	1
Task 5	11	9	1	1
Task 6	10	9	0	1
Task 7	10	9	0	1
Total	88	63	13	12

5.3.4 Procedure

The vocabulary test battery was administered in four schools in seven classes in November 2013. Language classes in Hungary are usually divided into two groups with two teachers working with the separate groups simultaneously. However, test taking took place in whole classes in order to save time. Prior to giving the paper-based test booklet to the learners, I contacted the school management and the teachers and I discussed the goals of the research with them. The entire 45-minute class time was used in all classes. Students were given the tasks one by one so that no confusion would be induced. Besides seeing the instructions written on the test pages, students were also told in their NL what they were supposed to do. Since it was a paper-based test I, the researcher, read the words to the students in Task 1 and 2 that demanded listening comprehension. Once students completed all the seven tasks, the test papers were collected and evaluated on the very day of the administration of the

tests. Data were uploaded onto the SPSS database and analysis was done with aid provided by a professional statistician from the Educational Science Institute of the University of Szeged.

5.3.4 Results

The reliability of the test battery proved to be acceptable (Cronbach's Alpha= .82). In Table 17 reliabilities, means and SDs are given on all tasks. The most reliable task proved to be a listening task, Task 2 (Alpha=.87) followed by a reading task, Task 4 (Alpha=.82). The least reliable task was Task 7 (Alpha=.48), the one assessing vocabulary depth. As will be seen, Task 7 included malfunctioning items with low item-total correlation, thus this reliability value is not unexpected.

Table 17. Descriptive statistics of seven tasks

	Cronbach's Alpha	Mean	SD
Task 1	.66	5.78 (64.22%)	1.56 (17.33%)
Task 2	.87	5.31 (59.00%)	2.05 (22.77%)
Task 3	.77	5.86 (65.11%)	2.05 (22.77%)
Task 4	.82	4.76 (52.88%)	2.12 (23.55%)
Task 5	.78	4.56 (50.66%)	1.96 (21.77%)
Task 6	.77	5.66 (62.88%)	1.75 (19.44%)
Task 7	.48	2.63 (29.22%)	1.42 (15.77%)
Altogether	.82	4.93 (54.85%)	1.43 (15.75%)

In Table 18, descriptive statics in terms of each correct item is presented. The means and SDs provide information concerning students' achievements on each item.

Table 18. Descriptive statistics of the correct 63 items in seven tasks

Item	Task	Mean	SD
camel	1	.80	.32
helicopter	1	.63	.48
monkey	1	.62	.48
lion	1	.70	.45
ship	1	.72	.44
skating	1	.40	.49
swimming	1	.75	.43
train	1	.94	.23
tram	1	.18	.38
arrive	2	.19	.39
study	2	.43	.49
bake	2	.78	.41
grocery	2	.20	.40
sell	2	.75	.43
cinema	2	.79	.40
hospital	2	.61	.48
play	2	.74	.43
eat	2	.76	.42

Item	Task	Mean	SD
cleaning	3	.70	.45
drinking	3	.80	.39
driving	3	.71	.45
heavy	3	.63	.48
quick	3	.59	.49
tiny	3	.76	.42
boat	3	.20	.40
legs	3	.80	.39
pocket	3	.63	.48
cook	4	.58	.49
dentist	4	.88	.32
firefighter	4	.78	.38
hairdresser	4	.54	.50
mechanic	4	.37	.48
pilot	4	.62	.48
plumber	4	.58	.49
tailor	4	.17	.38
waiter	4	.82	.38
cook	5	.70	.45
carpet	5	.19	.39
wash	5	.62	.48
dining room	5	.79	.40
talk	5	.62	.48
cupboard	5	.20	.40
shelf	5	.17	.38
bedroom	5	.62	.48
open	5	.68	.32
mushroom	6	.00	.00
cheese	6	.79	.40
hamburger	6	1.00	.00
fish	6	.82	.38
chicken	6	.79	.40
sausage	6	.20	.40
icecream	6	.62	.48
cake	6	.79	.40
coffee	6	.62	.52
frozen	7	.37	.48
fruit	7	.79	.40
foreign	7	.00	.00
whole	7	.17	.38
lightning	7	.37	.48
through	7	.20	.40
accuse	7	.27	.44
probably	7	.13	.34

Item	Task	Mean	SD
handsome	7	.29	.45

On the basis of the itemwise descriptive statistics the least differentiating items can be seen. Items 'skating', 'hospital', 'heavy', 'mechanic', 'sausage', 'frozen', 'lightning' and 'through' are the ones that indicate the lowest correlations with the rest of the items. If these words were taken out of the test, the reliability (Alpha) of the whole test battery would be .912. These correlations mean that there is no difference in the knowledge of above listed lexical items between high-achieving and low-achieving students. It is the matter of incidence which sub-sample of the participants know these items better. Examining correlations is one aspect of item analysis; it also needs to be surveyed which items have the highest and lowest standard deviations. In the test, as was expected, some of the items had high mean value; some had very low mean value. It is a salient fact on the basis of Table 19 that 'hamburger' was the easiest item and 'mushroom' and 'foreign' were the two most difficult items which no students knew in Task 6 and Task 7.

Table 19. Items with low mean value, low standard deviation

Item	Task number/ Item number	Mean	Std. Deviation
tram	1/9	.18	.38
arrive	2/1	.20	.39
grocery	2/4	.20	.40
tailor	4/8	.17	.38
carpet	5/2	.19	.39
cupboard	5/6	.20	.40
shelf	5/7	.17	.38
mushroom	6/1	.00	.00
hamburger	6/3	1.00	.00
sausage	6/6	.20	.40
foreign	7/3	.00	.00
whole	7/4	.17	.38
through	7/6	.27	.40
probably	7/8	.13	.35

Following the investigation of descriptive statistical data and the frequencies of the different items, item-analysis was carried out by means of examining corrected item-total correlations. This value indicates how each item correlates with the rest of task. It is a regularly applied statistical method in pilot studies. On a sample of 103 students, the reliability and the validity of the items with values under .20 are problematic (Field, 2005). In Table 20 items with low item-total correlation are listed. These items were considered for removal from further assessment.

Table 20. Items with low item-total correlation

Item	Task number/ Item number	Item-total correlation
train	1/8	.12
pocket	3/9	.19
dentist	4/2	.03

pilot	4/6	.19
shelf	5/7	.15
mushroom	6/1	.00
foreign	7/3	.00
whole	7/4	.17
lightning	7/5	-.55
through	7/6	-.32
accuse	7/7	-.17
probably	7/8	.02
handsome	7/9	.02

There is an indication in Table 22 that most of the items with a low total-correlation value are those of Task 7. Another item under the value of .20 was 'mushroom' and this item was omitted from the test for further use so that validity of the online test would not be risked. The items whose values fell near the critical value were further examined and a decision was made to keep them in the test.

As for the correlations among the seven different tasks indicated in Table 21, high and significant correlations were revealed. The two listening tasks (Task 1 and 2) gave an indication of a robust statistical relationship with each other, whereas the two reading tasks (Task 4, and 5) had a much weaker, but still significant, correlation. These significant correlations prove that tasks addressing similar language skills are very similar to each other; consequently they measure the same construct. If the items were shifted from Task 2 to Task 1 and conversely, approximately identical results would be achieved by the students.

It is also necessary to study the functioning of the depth of vocabulary test (Task 7) since it indicated significantly negative correlations with all the other task types except Task 4 in which students were expected to match written words with pictures. Negative correlations mean that the items in Task 7 do not function adequately and their responses do not vary in line with those for the other tasks. Table 21 presents the correlations among seven tasks.

Table 21. Correlations across tasks

	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6
Task 2	.94**					
Task 3	.80**	.77**		.33**	.86**	.82**
Task 4	.50**	.55**	.33**		.23*	.01
Task 5	.82**	.79**	.86**	.23*		.93**
Task 6	.64**	.58**	.82**	.01 (n.s.)	.93**	
Task 7	-.33**	-.24*	-.61**	.19 (n.s.)	-.68**	-.82**

**.Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

5.3.5 Discussion and response to research questions

In response to RQ 1, the reliability of the whole test is acceptable. It also needs examining what the reliability values were for each task. Task 7, the depth of vocabulary task in active recall modality, proved to be the least reliable (Cronbach's Alpha= .48). If Task 7 was omitted from the test battery, the reliability of the entire test would be even higher (Cronbach's Alpha= .92). Task 1, the listening task in meaning recognition modality did not prove to be very reliable either. The reliability issue of

Task 7 might be the result of the fact that this task was too difficult for the test-takers; nevertheless it is fairly hard to find any credible explanation for the low reliability value of the task that involved matching pictures with words that learners heard. Item-analysis was conducted by investigating item-total correlations and the malfunctioning items were omitted from the instrument for further use.

As far as the difficulty and means of the tasks are concerned, it can be concluded that Task 3 proved to be the easiest task. In meaning recognition modality students had to match six words with three pictures and decide on which three words did not match any of the pictures. Matching pictures with words was the instrument used in the study conducted by Vidákovich el al. (2013) and it was uncovered that recognizing words through identification of written items was easier than through implication. In Task 3 students had to identify the words only based on pictures and Vidákovich et al.'s (2013) finding was confirmed meaning recognition of written items were the easiest for the learners. Students scored the second highest points on Task 1 in which they had to recognize words that they heard. This would prove that reading words is easier than hearing them; however, it must also be pointed out that in Task 4, when students had to read words and match them with pictures, their achievement was weaker than in the listening task. Hence no conclusion can be drawn as to whether meaning recognition through listening might be more difficult than meaning recognition through reading. Nevertheless, it is inevitable to remark that having observed a few EFL lessons of the participants, I noticed that listening tasks were in the focus in all schools whose students were involved in the research. Another reason is likely to be that YLs are exposed to a lot of listening input out of school. Task 1 and Task 4 where similar in the sense that the participants were expected to match words with pictures. Thus, Task 2 and Task 5 were also similar: the participants were expected to match definitions with words. In Task 2 they heard the definitions whereas in Task 5 they read them. According to the results, the listening task proved to be easier (students scored 59% overall) than the reading task (students scored a total of 50.66%). Accordingly, it might be asserted that listening to words is simpler for the students than reading them. The reason for this might be that 12-year-old Hungarian children, who belong to the z-generation, are exposed to audio input more often than written input out of school. Listening to songs in English might enormously improve their vocabulary and they are more comfortable with listening than reading. Listening is also easier because there is no extra code as in reading where the written code must be deciphered.

According to Schmitt (2014), meaning recognition is an easier task solving activity than form recall. In my study this hypothesis was tested and surprisingly in the productive vocabulary task requiring form recall (Task 6), students were found to score higher than in three tasks (Task 2, Task 4 and Task 5) that required meaning recognition. It must be added that Task 6 required the learners to write names of food next to pictures. Recognizing food and writing them might easier for YLs than matching definitions with words and matching words of jobs with pictures (Task 2 and Task 5). It is also a fact that words of food as topic are acquired earlier than words related to jobs. The recognition and writing of the cognate 'hamburger' by all the students increased the total points scored in this task.

In order to answer RQ 2 as to which items are inappropriate in the test batter, I examined the descriptive statistics of provided a lot of expedient information as regards each item in the test. All of the items were carefully investigated as to whether they fit well into the final test or not. Items with low standard deviations, producing ceiling effect (all the participants knew them) and extremely low mean value (below 25%) were considered being excluded from further test development from the perspective of a piloted test battery. These items were then analyzed from the perspective of task type

and other variables (cognate, frequency rank, etc.) and their item-total correlation values (Table 20) were calculated.

In Task 1, a listening task in meaning recognition modality one item 'tram' was found to be recognized by the participants below 19%. A reason for this can be that half of the participants lived in a settlement where no such vehicle could be seen so it was irrelevant in their lives or they had not encountered this vehicle during their EFL studies. In Task 2 two items ('arrive', 'grocery') posed difficulty for the majority of the students since fewer than two-fifth of the students recognized the definition of these two words. In Task 3 no items had low mean values. In Task 4, 'tailor' proved to be a low-scoring item. 'Tailor' is not a popular and known job, in consequence in its case the low mean value can be explained by the low frequency of the word. Hardly any student could match the picture with the word. In Task 5, 'carpet', 'cupboard' and 'shelf' appeared to be challenging for the learners. All of them belong to Rank 2, so these items are not on the list of the most frequent words. These words ought to have been matched with their corresponding definitions and it turned out that students were posed with a large extent of difficulty to recognize the definitions. The question arises whether students would have scored higher on these items if they had had to match them with pictures. Task 6, the productive task in form recall modality, targets the skill of writing words next to pictures. The pictures were those of food. Not even the quarter of the students could write the word right albeit the picture was perfectly recognizable. The mistakes were due to erroneous writing or wrong food name given. The cognate 'hamburger' was known by all the students whereas 'mushroom' was written correctly by none of the students. A simple explanation for this is that students are unlikely to have ever been taught this word, let alone made to write it down. The cognate 'hamburger' was known by all the students whereas 'mushroom' was written correctly by none of the students. A simple explanation for this is that students might never have been taught this word, let alone made to write it down. In Task 7 'whole', 'through', probably were used in less than one-fourth of the participant in this part of the test. Students had a problem to recognize these words.

As far as RQ 3 is concerned, correlations amongst the seven tasks are concerned, high correlations can be pointed out between some task types. The highest correlation (.94) was uncovered to exist between Task 1 and Task 2, the two listening tasks. Results indicate that other high correlations (.85) were noticed between Task 3 and Task 5, two reading tasks and between Task 1 and Task 4, a listening task in meaning recognition modality and a reading task in meaning recognition modality. The strong relationship between the two listening tasks can be explained by the similar nature of the two tasks. Task 3 and Task 5 were also similar in the sense that meaning recognition was expected from the students through reading. The strong relationship between Task 1 and Task 4 proves the fact that the two task types were nearly identical with the difference that in Task 1 students heard the items whereas in Task 4 they saw them written down. It is a remarkable fact that significant correlations exist among task types with the exception of Task 4, a picture-based reading task in meaning recognition modality with Task 6, a picture-based writing task in active recall modality.

It ought not to be considered unexpected that a receptive word knowledge task does not correlate with a productive word knowledge task. When examining correlations, it must be remarked that negative correlations were revealed to exist between Task 7 and the rest of the tasks except for a non-significant positive relationship with Task 4. Task 7 a depth of vocabulary task indicated negative and significant correlations with the majority of the other tasks, which means that careful consideration has to be taken when the final version of the test is determined. In case such a task functions in such discord with the rest of the test, the validity of the entire test is called into question.

Apart from the fact that the task does not distinguish amongst students with good word knowledge and those with weak knowledge, the task endangers the reliability of the whole test.

5.3.6 Further instrument development

After examining the descriptive statistics of the test, especially the item-analysis, a decision was made to replace some of the items in the test. Since the goal of the test development, pilot study and the item-analysis was to create an instrument adapted for online use, items were carefully analyzed. Items with low standard deviations and low item-total correlation (under .20) were omitted from the test and these items were then replaced with new words. It was ascertained that no cognates would be used again since the cognate 'hamburger' elicited a ceiling effect and the new items had the same category (see Table 16.) as the item it was replaced for. It was also an obvious outcome of the pilot study that Task 7 did not function as acceptably. Its reliability was low and the negative correlations of this task with the rest of the other six tasks led me to the conclusion that leaving Task 7 in the online instrument would risk the validity of the test. Hence Task 7 was omitted from the online version. This also meant that the instrument lost nine items; however, the remaining six tasks still comprised 68 components and I judged this amount would be sufficient in the online test. Apart from getting rid of one task, the format of the instrument was not modified and the same six tasks were applied for further data collection.

In this chapter I have presented the results of a pilot study that involved the application of a new complex vocabulary test developed for YLs. The ultimate goal of this pilot study was to finalize an instrument that is used online. Out of the four skills (listening, speaking, reading and writing) three were measured with a focus on English as a FL vocabulary, thus test takers need to have good listening, reading and writing skills to reach a high score on the test.

With the item and task analysis described above, valuable data were gained with regard to future assessment. The results have provided sufficient information as to what kind of modifications must be implemented. It is also a valuable finding that most of the task types correlate significantly with one another, which means that these tasks are not independent of one another.

Chapter 6 A pilot study of the questionnaire investigating YLs' VLS

6.1 Introduction

In this chapter I intend to give an insight into the pilot study of the VLS questionnaire assessing YLs. After the presentation of the literature on VLS detailed in chapter 4, a synthesis of the different definitions and conceptualizations of VLS will be made with a special view to YLs. I will argue for the decision made with respect to which factors and items are selected for the final version of the instrument for a pilot study. A clear explanation will be given as to why various items have been included in the questionnaire and their origin will also be described. Having presented the entire instrument, I will describe the participants, the data gathering process and will discuss the results. Finally, modifications are highlighted that were made as the results of the questionnaire were analyzed. Besides descriptive statistics, item-total correlations will also be presented.

6.2 Development of the VLS questionnaire

6.2.1 Factors of the VLS questionnaire

Having investigated the instruments assessing VLS with special regard to those of YLs, a decision was made to consider Stoffer's (1995), Schmitt's (1997) and Pavičič's (2008) questionnaire items adapted from Oxford's SILL (1991) for a large item pool. The reason for this was that these instruments had been either used or adjusted for YLs VLS were concerned. The pool also comprised items that were considered worthy of being a component of a questionnaire assessing Hungarian YLs' VLS. The items from all of the selected questionnaires were considered for inclusion in the new instrument. These four questionnaires appeared relevant for my instrument development and to be best suited for the development of VLS questionnaire for YLs since these instruments had also been previously used to investigate YLs. I also added some items to my new instrument because new strategies had also come into the picture especially amongst YLs since social network sites became so popular. Some of the items were extended with different variations. For instance, the item in Pavičič (2008) 'I watch English language TV indicates spoken in English or go to movies spoken in English' was modified in the subsequent way and was broken up into three different items: 'I watch English films with subtitles', 'I watch English films without subtitles and I watch English films with Hungarian subtitles.' Table 24 presents the questionnaire items and their source in the literature. Once the pool of strategies were gathered, each and every item was examined as to whether they would fit into the instrument and into the Hungarian context. In the wake of this, the items were investigated from the perspective of dimensions of VLS.

Five factors were selected to be the composing parts of the questionnaire: cognitive strategies, strategies involving memory, metacognitive strategies, strategies involving determination and social. These factors were presented in Chapter 4. I decided not to have two major categories and six sub-categories as in Schmitt's taxonomy (1998) due to the fact the above-mentioned dimensions covered all the questionnaire items for a pilot study. Summing up the literature, the five different strategies are defined as follows: (1) cognitive strategies involve the learner using their mind to comprehend the target word, (2) memory strategies encompass the usage of old material and its linking to new knowledge, (3) metacognitive strategies are ones that exhibit evaluation and review of the cognitive processes by the learner, (4) determination strategies are used by the learners that seek to remember

where they have heard a particular word, and (5) social strategies involve interaction of the learner with their peers, teachers, and parents.

Once the five dimensions had been settled upon, the questionnaire statements were carefully phrased with a view to the specific Hungarian learning environment and circumstances. Two experts were consulted during the process of questionnaire development. All the questionnaire items were thoroughly thought over with special respect to their wording in Hungarian, the NL of the YL participants, so that they would reflect the construct. Items such as Schmitt's (2008) 'I use a word list to learn words' and Oxford's (1991) 'I use new words in a sentence so I can remember them' were adapted unchanged but these were rare cases in the questionnaire development process. The definition of the cognitive factor in my instrument is the same as Schmitt's (2008): cognitive strategies comprise the mechanical repetition of word for the sake of retention. The cognitive factor comprised eight items and each of them were meant to investigate how students seek to retain the knowledge of newly-learned items by using them in a written sentence, in a spoken utterance, etc. The memory factor contained eleven different items. The working definition is this dissertation is based on Schmitt's (2008, p. 348) definition: learners manipulate the words in order to memorize them. The metacognitive factor contained sixteen different statements as I considered it a significant factor to investigate. Metacognitive strategy is the conscious evaluation of the learners' strategies. All the statements focused on this conscious evaluation, manipulation and assessment of the VLS used by the students. The encapsulation of the eight items addressing the use of the determination factor was also motivated by Schmitt's (2008) taxonomy. Since guessing from context is a traditional, efficient and valid way of learning new words, this factor was indispensable in the instrument. The items were phrased with the aim of gaining information as to how and how often learners use context to master new vocabulary. The social factor contained nine items inquiring into the learners' conscious use of the social media and their willingness to turn to their teachers or peers to learn the meanings of the new words. None of the cited data gathering instruments inquire into the use of info-communications technologies (ICT) to learn words, which is natural, since at the time of their development ICT tools did not play as vital a role as now in education. This gap was meant to be filled in with statements added to the questionnaire. Three other statements not used by any of the cited researchers were also added as they were regarded as strategies typical in a Hungarian context. For example, the item 'My parents check if I have learned the new words by asking me' refers to an activity characteristic of the Hungarian context. Table 22 presents the traits of the questionnaire with the items in Hungarian and English.

Table 22. The traits of vocabulary learning strategy questionnaire

Dimension	Item in Hungarian	English translation	Previous instrument inclusive of item
Cognitive 1	Az új szót mondatban használom.	I use the new word in a sentence.	Stoffer (1995), Pavičič (2008), Schmitt (1997)
Cognitive 2	Az új szót sokszor leírom.	I write down new word many times.	Pavičič (2008), Schmitt (1997)
Cognitive 3	Az új szót sokszor kimondom.	I say the new word many times.	Stoffer (1995), Schmitt (1997)
Cognitive 4	Szótárfüzetet használok a szavak tanulására	I use a vocabulary list to learn words	Stoffer (1995), Pavičič (2008), Schmitt (1997)

Dimension	Item in Hungarian	English translation	Previous instrument inclusive of item
Cognitive 5	Az újonnan megtanult szót beszédben használom.	I use the newly-learned word in speaking.	Stoffer (1995), Schmitt (1997)
Cognitive 6	Az újonnan megtanult szót írásban használom	I use the newly-learned word in writing.	Stoffer (1995), Schmitt (1997)
Cognitive 7	Tárgyakra ráírom vagy ráragasztom az angol jelentésüket.	I write or stick the meaning of words onto objects.	Stoffer (1995), Pavičič (2008)
Cognitive 8	Szójátékokat játszom.	I play word-games.	added item
Memory 1	Elképzelek egy helyzetet, amikor használnám a szót.	I imagine a situation when I would use the word.	Schmitt (1997), Pavičič (2008)
Memory 2	Szólistát csinálok, hogy emlékezzek a szavakra	I make a word list in order to remember words.	Stoffer (1995)
Memory 3	Csoportosítom a szavakat hasonlóságuk alapján.	I group the words in clusters based on their similarities.	Stoffer (1995), Schmitt (1997)
Memory 4	Hasonló jelentésű szóhoz kötöm a megtanulandó szót.	I link the new word to one with synonymous meaning.	Schmitt (1997), Pavičič (2008)
Memory 5	Ellentétes jelentésű szóhoz kötöm a megtanulandó szót.	I link the new word to one with antonymous meaning.	Schmitt (1997)
Memory 6	Az új szót ismert szóhoz kapcsolom.	I link the new word to one already known.	Stoffer (1995), Schmitt (1997)
Memory 7	Képes szókártyákat készítek.	I make picture word cards.	Stoffer (1995), Pavičič (2008), Schmitt (1997)
Memory 8	Angol-magyar szókártyákat készítek.	I make English-Hungarian word cards.	Stoffer (1995), Pavičič (2008), Schmitt (1997)
Memory 9	Magamban elismétlem a szót.	I repeat the word to myself.	Stoffer (1995), Pavičič (2008), Schmitt (1997)
Memory 10	A szó mellé képeket rajzolok.	I draw pictures next to the word.	Stoffer (1995)
Memory 11	Felmérem, hogy megtanultam-e az új szót.	I evaluate if I have really learned the word.	Stoffer (1995), Pavičič (2008)
Metacognitive 1	Angol nyelvű zenét hallgatok, hogy új szót tanuljak.	I listen to English music so as to learn new words.	Pavičič (2008)
Metacognitive 2	Aláhúzom a fontos szót.	I underline the important word.	Stoffer (1995), Pavičič (2008), Schmitt (1997)

Dimension	Item in Hungarian	English translation	Previous instrument inclusive of item
Metacognitive 3	Bekarikázom a szót, amely fontos.	I circle the word that is important.	Stoffer (1995), Pavičič (2008), Schmitt (1997)
Metacognitive 4	Angol nyelvű filmeket nézek angol felirattal.	I watch English film with English subtitles.	Stoffer (1995), Pavičič (2008)
Metacognitive 5	Angol nyelvű filmeket nézek felirat nélkül.	I watch English films without subtitle	Stoffer (1995), Pavičič (2008)
Metacognitive 6	Angol nyelvű filmeket nézek magyar felirattal.	I watch English films with Hungarian subtitle.	Stoffer (1995), Pavičič (2008)
Metacognitive 7	Angol nyelvű rajzfilmeket nézek.	I watch cartoons in English.	added item
Metacognitive 8	Angol nyelvű újságot olvasok a szavak tanulására.	I read English newspapers so as to learn the words.	Stoffer (1995), Pavičič (2008)
Metacognitive 9	Angolul olvasok könyvet	I read books in English.	Pavičič (2008)
Metacognitive 10	Angol nyelvű számítógépes játékokat játszok.	I play computer games in English.	Pavičič (2008),
Metacognitive 11	Angol nyelvű képregényeket olvasok.	I read comics in English.	added item
Metacognitive 12	Elolvasom az angol nyelvű feliratokat mindenféle termékeken.	I read the English labels on every product.	Stoffer (1995)
Metacognitive 13	Azért használok írásban új szót, hogy emlékezzek rá	I use a new word in writing so as to remember it.	Stoffer (1995), Schmitt (1997)
Metacognitive 14	Azért használok beszédemben új szót, hogy emlékezzek arra.	I use a new word in my speaking so as to remember it.	Stoffer (1995), Schmitt (1997)
Metacognitive 15	Elemzem egy új szó részeit, hogy rájöjjek a jelentésére.	I analyze the meaning of new words so as to realize its meaning.	Stoffer (1995), Pavičič (2008), Schmitt (1997)
Metacognitive 16	Olvasáskor a szövegkörnyezetből következtetem ki a szó jelentését.	I infer the meaning of the new word from context when reading.	Stoffer (1995), Pavičič (2008)
Metacognitive 17	Angol nyelvű beszédből következtetem ki a szó jelentését.	I infer the meaning of the new words from spoken English.	Stoffer (1995), Pavičič (2008), Schmitt (1997)

Dimension	Item in Hungarian	English translation	Previous instrument inclusive of item
Determination 1	Nyomtatott szótárból keresem ki az új szó jelentését.	I look up the meaning of the new word in a printed dictionary.	Stoffer (1995), Pavičič (2008), Schmitt (1997)
Determination 2	Elektronikus szótárból keresem ki a jelentést.	I look up the meaning of the word in an electronic dictionary.	added item
Determination 3	Megjegyzem hol láttam az új szót a tankönyv oldalán.	I memorize where I have seen the new word on the page of the textbook.	added item
Determination 4	Megjegyzem hol hallottam az új szót.	I remember where I have heard the new word.	added item
Determination 5	Az új szót angol-magyar szótárból nézem ki.	I look up the new word in an English-Hungarian dictionary.	Schmitt (1997)
Determination 6	Az új szót egynyelvű angol szótárból nézem ki.	I look up the new word in a monolingual dictionary.	Pavičič (2008)
Determination 7	Pórbálom az új angol szó magyar megfelelőit is megjegyezni.	I try to remember the Hungarian equivalent of the new English words.	Pavičič (2008)
Social 1	A tanárt kérdezem meg, mit jelent az új szó.	I ask the teacher what the new word means.	Schmitt (1997), Pavičič (2008)
Social 2	Osztálytárssal tanulom az új szót.	I learn the new word with a classmate.	Schmitt (1997), Pavičič (2008)
Social 3	Órán, a társam kérdezem meg, mit jelent az új szó.	I ask my classmate in class what the new word means.	Schmitt (1997), Pavičič (2008)
Social 4	A szüleim kikérdezik tőlem a szavak jelentését.	My parents check if I have learned the new words by asking me.	added item
Social 5	Órán csoportmunkában együtt tanuljuk a szavakat.	We learn the new words together in group work in class.	Stoffer (1995), Pavičič (2008)
Social 6	Angolul tudó barátot keresek a közösségi oldalakon.	I look for English speaking friends on the social network sites.	added item
Social 7	Angolul használom a Facebookot	I use Facebook in English.	added item
Social 8	Angolul Twitterezek.	I use Twitter in English.	added item
Social 9	Angolul Skypeolok	I Skype in English.	added item

This section has served the purpose of determining the dimensions of the construct of VLS. After consulting scholars in the field, I settled upon the items pertaining to the factors. However, care must be taken since some of the strategies used by YLs today had not even existed a decade ago. Social media and info-communication technologies have made possible several techniques and strategies to be applied with the purpose of mastering words. The next section will discuss how the questionnaire was further developed.

6.3. Method

6.3.1 Research questions

As it was asserted in Chapter 5 in case of the vocabulary test, the main goal of the pilot study was to develop a valid instrument. Validity was defined discussed in section 5.3.1. The following research questions were phrased in the pilot study

1) How do the questionnaire items function?
2) How does the factor analysis reflect the original dimensions?

6.3.2 Instrument

The self-report VLS questionnaire was used to gather data. The development process of the instrument was described in section 6.2.2. Following the selection of the questionnaire items it was also decided that the data would be assembled on a 4-value frequency scale: 'never', 'once a month', 'once a week', 'always.' The decision was made with the intention of forcing to students not to opt for a neutral answer. Since the foundations of my questionnaire were laid on Oxford's (1991) and Schmitt's (1998) data collection instruments, their way of data collection ought not to be left out of consideration. Oxford used a 5-value frequency scale from 'never', 'rarely', 'sometimes', 'usually' to 'always' and Schmitt's instrument also sought to reveal the frequency of the use of the statements the same way. Hence choosing the frequency scale made sense and the decision was also made that instead of a 5-value scale, on which students can give a neutral answer, a 4-value scale would be used so that learners would by all means have to choose to give a solid answer.

The children took the questionnaire seriously and filled in it. When the completed questionnaires were collected, I asked each student to write down strategies that they use to learn words on their own. The lists of strategies of all the students were later considered for inclusion in the final questionnaire. This resulted in new items being involved in the modified instrument used in the large-sample assessment.

6.3.3 Participants

The pilot study was carried out with the participation of 86 Hungarian 6th graders in primary schools in Budapest, Mezőtúr and Szeged in February 2014. All the students had studied English from their 4th grade (age 10) in three lessons a week.

6.3.4 Procedure

A total of nine classes were selected to be involved in the study. The headmasters and the English teachers had been requested to provide access to the learners two weeks before the data were collected. I went to the schools with the paper-and-pencil questionnaire and I took thirty minutes of

the class time to administer the questionnaire. I went to all the schools and presented the paper-and-pencil 52-item questionnaire to the learners. The questionnaire contained a brief description in Hungarian and a sample statement to which the answer was an obvious and predictable 'never': 'I Skype with my Ugandan friend to learn new words.' This was done in order it would be a salient fact for the learners what the correct answer was and what they were expected to do.

6.3.5 Results and discussion

In this section the results are presented. Besides reporting how the different items functioned, I will also highlight some interesting and outstanding outcomes of the pilot study. The maximum value is 4 and the minimum is 1 in the questionnaire.

The reliability of the questionnaire was fairly high (Cronbach's Alpha = .91). It was also concluded that some of the items had 0 standard deviation. Every student indicated 'always' at the statement 'I use a vocabulary list to learn word'. Since this type of item provides the research with no information from the perspective of educational science, it was decided that items having zero standard deviation would not be used in the final questionnaire. The correctness of the decision on adding the item 'My parents check if I have learned the new words by asking me' was justified, since participants reported high frequency of this activity (M=3.09). Dictionary use also appeared to be a frequent activity used by students. Both the item 'I look up the new word in an English-Hungarian dictionary' and 'I look up the meaning of the word in an electronic dictionary' had high frequencies (3.09 and 3.03, respectively) as it had been previously assumed Hungarian learners have a tendency of using dictionaries for the purpose of learning words. The activities 'I infer the meaning of the new word from context when reading' and 'I infer the meaning of the new words from spoken English', also turned out to be often used by learners (M=2.86 and M=2.84, respectively). This is a finding that is in line with and is confirmed by what Hardi (2014) found when investigating Hungarian learners' vocabulary learning strategy use: Hungarian learners of a foreign language tend to infer the meanings of vocabulary from context. In Hungarian schools writing down items with the purpose of memorizing them is also a frequent strategy, as a result participants indicated they often used this strategy (M=2.87). In Table 23 the descriptive statistics of all the questionnaire items is presented.

Table 23. Descriptive statistics of the VLS questionnaire

Factor	Items	Mean	SD
Cognitive 1	I use the new word in a sentence	1.94	1.16
Cognitive 2	I write down new word many times	2.88	1.25
Cognitive 3	I say the new word many times	2.38	1.17
Cognitive 4	I use a vocabulary list to learn words	4.00	.00
Cognitive 5	I use the newly-learned word in speaking	2.48	1.11
Cognitive 6	I write or stick the meaning of words onto objects	2.59	.97
Cognitive 7	I play word-games	1.33	.94
Cognitive 8	I imagine a situation when I would use the word	1.99	.91
Memory 1	I draw the situation when I would use it	1.55	1.02
Memory 2	I make a word list in order to remember it	1.82	.47
Memory 3	I group the words in clusters based on their similarities	1.37	.79
Memory 4	I link the new word to one with synonymous meaning	1.22	.68
Memory 5	I link the new word to one with antonymous meaning	1.51	1.00
Memory 6	I link the new word to one already known	1.20	.54
Memory 7	I make picture word cards	1.65	1.08
Memory 8	I make English-Hungarian word cards	1.14	.60
Memory 9	I repeat the word to myself	1.34	.93
Memory 10	I draw pictures next to the word	2.01	1.12
Memory 11	I evaluate if I have learned the new word or not	1.09	.38
Metacognitive 1	I listen to English music so as to learn new words	3.15	1.00
Metacognitive 2	I underline the important word	2.05	1.22
Metacognitive 3	I circle the word that is important	2.05	.54
Metacognitive 4	I watch English film with subtitles	1.44	1.02
Metacognitive 5	I watch English films without subtitle	1.65	.93
Metacognitive 6	I watch English films with Hungarian subtitle	1.91	1.12
Metacognitive 7	I watch English cartoons	2.15	1.12
Metacognitive 8	I read English newspapers so as to learn the words.	1.92	1.20
Metacognitive 9	I read English books	1.41	1.02
Metacognitive 10	I play English computer games.	1.57	.94
Metacognitive 11	I read English cartoons.	1.26	1.16
Metacognitive 12	I read the English labels on every product	1.53	1.01
Metacognitive 13	I use a new word in writing so as to remember it	2.24	1.07
Metacognitive 14	I use a new word in my speaking so as to remember it	2.06	1.01
Metacognitive 15	I analyze the meaning of new words so as to realize its meaning	1.91	1.10
Metacognitive 16	I infer the meaning of the new word from context when reading	2.87	1.16
Metacognitive 17	I infer the meaning of the new words from spoken English	2.85	1.27
Determination 1	I look up the meaning of the new word in a printed dictionary	1.98	1.28
Determination 2	I look up the meaning of the word in an electronic dictionary	3.03	1.02

Factor	Items	Mean	SD
Determination 3	I remember where I saw the new word on the page of the textbook	1.58	.71
Determination 4	I remember where I have heard the new word	1.46	1.27
Determination 5	I look up the new word in an English-Hungarian dictionary	3.09	1.19
Determination 6	I look up the new word in a monolingual dictionary	2.28	.60
Determination 7	I try to remember the Hungarian equivalent of the new English words	2.66	.94
Social 1	I ask the teacher what the new word means	2.82	1.20
Social 2	I learn the new word with a classmate	2.17	.60
Social 3	I ask my classmate in class what the new word means	1.85	.94
Social 4	My parents check if I have learned the new words by asking me	3.69	.68
Social 5	We learn the new words together in group work in class	2.61	1.30
Social 6	I look for English speaking friends on the social network sites	1.41	1.00
Social 7	I use Facebook in English	1.80	1.35
Social 8	I use Twitter in English	1.25	.72
Social 9	I Skype in English	1.38	.80

Scrutinizing the ratio of occurrence of strategy usage, expedient information can be inferred. The most frequently used vocabulary learning strategies, based on the results of the questionnaire, are illustrated in Table 24. I believe 'I listen to English music so as to learn new words' and 'I look up the new word in an English-Hungarian dictionary' are strategies conducive to mastering of words for YLs nowadays and these two strategies are becoming more and more popular.

Table 24. The most frequently used strategies

Factor	Item	Mean	SD
Cognitive 4	I use a vocabulary list to learn words	4.00	.00
Social 4	My parents check if I have learned the new words by asking me	3.68	.68
Metacognitive 1	I listen to English music so as to learn new words	3.15	1.00
Determination 2	I look up the meaning of the word in an electronic dictionary	3.03	1.02
Determination 5	I look up the new word in an English-Hungarian dictionary	3.09	1.19
Cognitive 2	I write down new words many times	2.86	1.25
Metacognitive 16	I infer the meaning of the new word from context when reading	2.87	1.17
Metacognitive 17	I infer the meaning of the new words from spoken English	2.84	1.27
Social 5	We learn the new words together in group work in class	2.61	1.30
Cognitive 6	I write or stick the meaning of words onto objects	2.59	.97

Following the investigation of descriptive statistical data and the frequencies of the different items, item-analysis was carried out by means of scrutinizing corrected item-total correlations. This value

indicates how each item correlates with the rest of task. It is a regularly used statistical method in pilot studies since a clear picture is outlined in terms of the functioning of the items. On a sample of 103 students, the reliability and the validity of the items with values under .20 are endangered on account of the fact that these items work differently from the given construct (Field, 2005) as asserted in section 5.3.1. A decision was made item by item as to which items that fell under the value of .20 would be omitted from the questionnaire and those that fell near this value would further be examined. In Table 25 the items whose item-correlation values were under or near the value of .20 are presented. In response to RQ 1, the malfunctioning items are enlisted. Two items were examined and it was decided that they would be relevant items in the new questionnaire: 1) 'I make picture word cards', and 2) 'I ask my classmate what the new word means'. These are strategies that are popular with Hungarian students.

Table 25. Items with low item-total correlation values

Item	Item-total correlation value
I write down the words many times	.18
I say the new word many times	.26
I write new word and its Hun. meaning into my vocabulary	.00
I write or stick the meaning of words onto objects	.12
I relate the new word to one with antonymous meaning	.19
I make English-Hungarian word cards	.16
I group the words in clusters based on their similarities	.22
I read English comics	.18
I draw pictures next to the word	.09
I look up the meaning of the new word in a printed dictionary	.04
I imagine a situation when I would use the word	.14
I watch English film with English subtitles	.16
I ask my teacher what the new word means	.15
I ask my classmate what the new word means	.22
I watch English cartoons	.23
I infer the meaning of the new words from spoken English	.29
I learn the new word with a classmate	.22
I remember where I have heard the new word	.16
My parents check if I have learned new words by asking me	.15
We learn the new words together in group work in class	.24
I use Twitter	.18

Having examined the item-total correlation values in case of the entire questionnaire, the item-total correlation values within the five different factors were envisioned. The items under the critical .200 value within own factor were further analyzed and a decision was made accordingly whether to keep the item in the questionnaire or discard it. The low item-total correlation values within own factor are presented in Table 26.

Table 26. Items with low item-total correlation values within own factor

Item	Item-total correlation value within factor
I write down the words many times (cognitive)	.23
I say the new word many times (cognitive)	.24
I write or stick the meaning of words onto objects (cognitive)	.22
I group the words in clusters based on their similarities (memory)	.22
I read English comics (metacognitive)	.18
I draw pictures next to the word (metacognitive)	.19
I look up the meaning of the new word in a printed dictionary (det)	.08
I imagine a situation when I would use the word (memory)	.14
I watch English film with English subtitles (metacognitive)	.16
I ask my teacher what the new word means (social)	.15
I ask my classmate what the new word means (social)	.22
I watch English cartoons (metacognitive)	.23
I infer the meaning of the new words from spoken Eng. (metacog.)	.26
I learn the new word with a classmate (social)	.24
I remember where I have heard the new word (determination)	.18
My parents check if I have learned new words by asking me (social)	.17

6.3.6 Investigating the questionnaire used in the pilot study with factor analysis

Having investigated the descriptive statistics of the questionnaire results and having gained an insight into the items, factor analysis was conducted to check whether the five factors reflect the original conceptualization to answer RQ2. After the factor-analysis had been run, it turned out that ten factors existed on the basis of the results. The KMO-index was .72 which was an indication that the strength of the correlation among the five dimensions makes it moderately adequate for factor analysis. The factor-loadings over the .50 factor-loading limit (Everitt, 2002) were taken into account. It is worthwhile noting that Pavičič (2008) took a .40 factor-loading limit in her vocabulary strategy learning research and found ten factors. The ten different factors were considered too many from the point of view of interpreting the grouping of the strategies, thus in this case Varimax factor rotation was performed in order that the number of factors would decrease.

As a result of the Varimax factor rotation and the number of factors was reduced to four in the process of exploratory factor analysis. The interpretation of the four components reveals that statements focusing on metacognitive strategies such as underlining words and circling words load heavily on Factor 1. This factor includes strategies of circling and underlining important words, asking classmates about the meaning of words, using newly-learned word in speaking, using new words in a sentence and looking for friends in the social media.

It is also discovered that the factor loadings of repetitive strategy techniques such as rote-learning, repeating words to oneself, looking up words in a bilingual or monolingual dictionary along with inferring meaning from context from one cluster in Factor 2. Some of these strategies reflect traditional learning techniques dating from a long time; however remembering the Hungarian equivalent of the new English words and remembering the page of the textbook where word is seen reflect the use of memory strategies in this factor. Reading newspapers and books using Facebook, reading labels on products, listening to music, watching films with or without subtitles load heavily

together on Factor 3. Most of these strategies require encounter with authentic language used by native speakers.

In the last cluster such strategies as analyzing and evaluating newly learned words along with the use of word cards, inferring meaning from spoken context', playing video games loaded heavily on the fourth component. In Table 26 the reduced factor clusters are presented.

Table 26. The new factors reported after Varimax rotation with the strongest factor-loadings

Items	Factor 1	Factor 2	Factor 3	Factor 4
I underline the important words	. 40			
I circle the word that is important	.50			
I use new words in my speaking so as to remember them	.51			
I use new word in a sentence	.71			
I relate the new word to one with synonymous meaning	.41			
I ask my classmate in class what the new word means	.45			
I link new word to an already known word	.60			
I look for English speaking friends in the social media	.59			
I use the newly-learned word in speaking	.62			
I use the newly-learned word in writing	.44			
I make a word list to remember the words		.60		
I remember where I have seen the new word on the page of the textbook		.61		
I look up the meaning of the word in a monolingual dictionary		.50		
I use Facebook to learn English words		.39		
I use Skype to learn English words		.49		
I infer the meaning of the new word in an English context when reading		.60		
I try to remember the Hungarian equivalent of the new English word		.56		
I repeat the word to myself		.40		
I read English newspapers so as to learn words			.61	
I watch English films with Hungarian subtitle			.45	
I listen to English music in order to learn new words			.60	
I watch English films without subtitles			.38	
I read English books to learn new words			.48	
I infer the meanings of the words from spoken English			.34	
I make English-Hungarian word cards				.68
I play with word games				.70
I look up the meaning of the word in an electronic dictionary				.40
I evaluate if I have really learned the word				.40
I analyze parts of the word in order to find out its meaning				.58
I play English video games to learn new words				.58
I read English labels on all kinds of products to learn new words				.65

Items with low total-correlations have been taken out and their factor-loadings are not reported. In consequence 33 items remained in the final version of the questionnaire plus three new added items of which it was thought to fit well into the factors of the theoretical model. The new items were the ones indicated by the participants as they were requested to list the most frequently used strategies after filling in the questionnaire. The three new questionnaire items were classified under three of the factors in the theoretical model. The item 'I look up the meaning of the new words in a bilingual dictionary' was placed in the metacognitive factor, whereas the item 'I learn new words from my own vocabulary' was classified in the cognitive factor. The decision was made that the last new item 'I learn new word in order to say whatever I want' would belong to the determination factor. This classification was done according to the definitions of the different factors described in section 4.3. The factors are presented in Table 27 and their questionnaire items including the new added items from the pool of items given by the participants. The developed questionnaire was used in the assessment on a large sample which will be reported in Chapter 7.

6.3.7 Discussion of the pilot study conducted with the questionnaire

The results of the pilot study sheds light not only on VLS but also FL learning and teaching in Hungarian classrooms and in different other learning environments. It became clear from the data that besides writing the words in a bilingual vocabulary, students are checked by the parents whether they have learned the new words or not. In Hungarian schools, especially until the end of primary school a considerable part of the parents puts special focus on their children's studies (Nikolov, 2008). The other eight most frequently used strategies reported by the students reflect the special features of Hungarian YLs learning FL words. Looking up words in a dictionary has always been a popular and favored strategy by students not just in Hungary but globally (Cohen & Macaro, 2007). Reading English comics appears to be a frequent activity, consequently a strategy, applied by the Hungarian YLs. This item was not adapted from any of the cited questionnaires in the literature but it was my own decision to encompass it in the questionnaire. This result confirms and justifies the correctness of this decision. It is a remarkable fact that the participants indicated more frequent comics reading (M= 3.26) than listening to English music with the purpose of mastering words (M= 3.15), since one could assume that listening to English music is not only a daily activity but a popular trend among Hungarian 12-year-old children. It seems that reading comics is still a favored strategy by the Hungarian primary school students, a fact that was found in the second reading literacy assessment conducted by IEA (Mullis, Martin, & Gonzalez, 2004). However, on account of the low item-total correlation value of the item 'I read English comics', it was not included in the final questionnaire developed for online use. It has also been revealed, in accordance with my presupposition, that asking the teacher for the meaning of the new word, writing down the word many times, remembering the Hungarian equivalent of the new word and learning words in group work form the cluster of the most utilized VLS. Drawing pictures next to words was also reported to be a popular strategy (M= 3.01). Visualization might have become such an everyday part of the children's lives that they use images in all situations as a way of learning new words. It must also be kept in mind that in the questionnaire the learners had to indicate how often they used certain strategies. Value 3 on the 4-value scale meant 'every week'. Hence, the majority of students (M= 3.01) draws pictures next to words every week. Strategies which had been supposed to be more frequently used and which turned out to be either hardly ever used or to have low standard deviation must be examined.

Contrary to the relatively frequent activity, drawing pictures next to words (M=2.09), it is salient that students do not evaluate if they have learned a word or not do not use social networks for vocabulary learning purposes. Learning English words by using social network sites as Facebook and

Twitter and conducting English conversations on Skype is still an undiscovered domain amongst YLs. None of these strategies were reported to be used on a weekly basis as the all items referring to the use of social networks are under the value 2. Even though a considerable amount of time is spent on the use of social network sites they do not yet see an opportunity to learn English words with their assistance. The metacognitive activity, evaluation of whether the word has been learned or not, is also an infrequent strategy among young language learners. With all probability, at the age of twelve, it is too early for students to evaluate their own learning process successfully.

Even though the theoretical model was not entirely justified by the exploratory factor analysis, it was decided that the original model would be kept and in the large-sample study a confirmatory factor analysis would be conducted. The reason for this decision was two-fold: 1) the new clusters following the exploratory factor analysis did not form any new interpretable dimensions; 2) the clusters created on the basis of the factor loadings did indicate some confirmation of the theoretical model. These two perspectives of looking at the results sufficiently convincing that the theory based on the literature ought not to be debunked. The new questionnaire is presented with the items translated into English and it is also clarified which factor each item belongs to (Table 27). The English translations of some of the strategies have been altered compared to the ones presented in the report on the pilot study. It was done for the purpose of better clarity. The new instrument was developed based on the new factors and it was uploaded onto the eDia platform in order it would be used on a large sample.

Table 27. The newly-developed self-report VLS questionnaire

Factor	Item in Hungarian	Item in English	How often do you do these activities to learn words? 1 never 2 once a month 3 once a week 4 always
Memory 1	Szólistát csinálok, hogy emlékezzek a szóra.	I make a word list to remember the words	1 2 3 4
Memory 2	Angol-magyar szókártyákat készítek.	I make English-Hungarian word cards	1 2 3 4
Metacog. 1	Aláhúzom a fontos szót a szövegben.	I underline the important words	1 2 3 4
Metacog. 2	Bekarikázom azt a szót a szövegben, amit fontosnak tartok.	I circle the word that is important	1 2 3 4
Metacog. 3	Angol nyelvű újságot olvasok a szavak tanulása céljából.	I read English newspapers to learn words	1 2 3 4

Memory 3	Megjegyzem hol láttam az új szót a tankönyv oldalán.	I remember the page where I have seen the new word	1 2 3 4
Determin. 1	Azért használok beszédemben új szót, hogy emlékezzek arra.	I use the newly-learned word in speaking to remember it	1 2 3 4
Cognitive 1	Az új szót mondatban használom.	I use new word in a sentence	1 2 3 4
Social 1	Angolul használom a Facebookot, hogy angol szavakat tanuljak.	I use Facebook to learn English words	1 2 3 4
Cognitive 2	Szójátékokat játszok.	I play with word games	1 2 3 4
Memory 4	Hasonló jelentésű szóhoz kötöm a megtanulandó szót.	I link new word to one with synonymous meaning	1 2 3 4
Determin. 2	Elektronikus szótárból keresem ki a szó jelentését.	I look up the word in an electronic dictionary	1 2 3 4
Memory 5	Az új szót egynyelvű angol szótárból nézem ki.	I look up the new word in a monolingual dictionary	1 2 3 4
Social 2	Órán, a társam kérdezem meg, mit jelent az új szó.	I ask my classmate in class what the new word means	1 2 3 4
Social 3	Angolul Skypeolok, hogy angol szavakat tanuljak.	I use Skype to learn English words	1 2 3 4
Memory 6	Az új szót ismert szóhoz kapcsolom.	I link new word to one already known	1 2 3 4
Metacog. 4	Felmérem, hogy megtanultam-e az új szót.	I evaluate if I have really learned the word	1 2 3 4
Metacog. 5	Elemzem egy új szó részeit, hogy rájöjjek a jelentésére.	I analyze parts of the word in order to find out its meaning	1 2 3 4
Metacog. 6	Angol nyelvű beszédből következtetem ki a szó jelentését.	I infer the meaning of the new words from spoken English	1 2 3 4
Determin. 3	Próbálom az új angol szó magyar megfelelőjét is megjegyezni.	I try to remember the Hungarian equivalent of the new English words	1 2 3 4
Determin. 4	Szavakat azért tanulok meg, hogy könnyebben kommunikáljak.	I learn new words to communicate better	1 2 3 4
Metacog. 7	Angol nyelvű filmeket nézek magyar felirattal, hogy szavakat tanuljak meg.	I watch English films with Hungarian subtitles	1 2 3 4

Metacog. 8	Angol nyelvű zenét hallgatok, hogy új szót tanuljak.	I listen to English music in order to learn new words	1 2 3 4
Metacog. 9	Angol nyelvű filmeket nézek felirat nélkül.	I watch English films without subtitles	1 2 3 4
Metacog. 10	Angolul olvasok könyvet.	I read English books	1 2 3 4
Metacog. 11	Angol nyelvű számítógépes játékokat játszok.	I play English video games	1 2 3 4
Metacog. 12	Elolvasom az angol nyelvű feliratokat mindenféle termékeken.	I read English labels on all kinds of products to learn new words	1 2 3 4
Metacog. 13	Olvasáskor a szövegkörnyezetből következtetem ki a szó jelentését.	I infer the meaning of the new word from context when reading	1 2 3 4
Social 4	Angolul tudó barátot keresek a közösségi oldalakon.	I look for English speaking friends in the social media	1 2 3 4
Cognitive 3	Az újonnan megtanult szót írásban használom.	I use the newly-learned word in writing	1 2 3 4
Cognitive 4	Mikor angol nyelvű műsort nézek/hallgatok jegyzetelem a szavakat.	I take notes of the words when watching/listening to English programs	1 2 3 4
Cognitive 5	Az újonnan megtanult szót beszédben használom.	I use a new word in speaking so as to remember it	1 2 3 4
Memory 7	Képes szókártyákat készítek.	I make picture word cards	1 2 3 4
Memory 8	Magamban elismétlem a szót.	I repeat the word to myself	1 2 3 4
Determin. 5	Kétnyelvű szótárból nézem ki a szó jelentését.	I look up the meaning of the new words in a bilingual dictionary	1 2 3 4
Cognitive 6	Saját szótárfüzetből tanulom a szavakat.	I learn new words from my own vocabulary	1 2 3 4
Memory 9	Bemagolom a szavakat.	I rote-learn the words	1 2 3 4

Part III Online assessments

Chapter 7 Study of YLs' EFL vocabulary size and their self-report word learning strategy use

7.1 Research questions

Having piloted the vocabulary test and the questionnaire, a large-sample assessment was conducted to map YLs' EFL word knowledge and vocabulary learning strategy use, and ultimately to reveal correlations. The following research questions were phrased.

I. From the perspective of the test assessing vocabulary size:

1) How does the YLs' performance on the vocabulary test explain EFL vocabulary size?
2) How can conclusions be drawn from students' achievements as regards the way items function on the vocabulary test?
3) From a criterion-referenced testing perspective, how do students know the most frequent English words?
4) How do the relationships amongst tasks of different modalities provide an insight into the construct of YLs' EFL word knowledge?
5) How do the high-achieving students perform on the productive task of the vocabulary test?)
6) How do teachers estimate the vocabulary size of 6th graders?

1. II. From the perspective of VLS

7) Which strategies are the most frequently used ones?
8) Which strategies are used less frequently?
9) How can implications be drawn from the correlations of the the factors of the word strategy questionnaire correlate with one another?
10) What VLS do teachers assume students use?

II. From the perspective of the correlations of vocabulary size, word study strategy use and background variables:

11) How do factors of word study strategy use and other background variables explain vocabulary size?
12) How do the correlations of different tasks of the vocabulary test with word study strategy use explain vocabulary size?

7.2 Participants

The sample was selected by the coordinators of the Institute of Educational Science. The Institute filed a request to schools in Hungary and twelve schools agreed to involve their students in the research. Participants were 282 Hungarian 6th graders. Sampling was non-representative.

7.3 Instruments

In this sections the methods and the instruments are presented. The pilot study and the final vocabulary test were described in detail in Chapter 5, whereas the pilot study of the VLS questionnaire was presented in Chapter 6.

Six data collection instruments were used in the study:

1) the online vocabulary test comprising six tasks to map the EFL vocabulary of the students; the tasks of the test are presented in Appendix B.
2) think-aloud protocols elicited during taking the vocabulary test to map the students' thought processes
3) a paper-and-pencil questionnaire for teachers related to the vocabulary test to gain insight into teachers' assumptions on students' vocabulary size
4) the online VLS questionnaire
5) the paper-and-pencil questionnaire of teachers' beliefs
6) interviews with students reporting their vocabulary learning strategy use
7) a background questionnaire inquiring into learners' EFL motivation, school grades, number of EFL lessons a week, etc.

The validation of instrument 1) and 4) was described above. Instrument 2) and 6), think-aloud protocols and interviews were piloted with three 6th graders in a school located in Szeged after the data collection with the paper-and-pencil vocabulary test and the vocabulary learning strategy questionnaire took place in November, 2013 and February, 2014. Instruments 3) and 5) were piloted with two primary school EFL teachers in Szeged in July, 2015. Instruments 2), 3), 5), and 6) were judged to be suited for data collection after piloting them.

Having item-analyzed and finalized the paper-and-pencil vocabulary test and the self-report VLS questionnaire, I consulted the information-technology experts of the Institute of Educational Science of the University of Szeged. I got assistance was provided by them in converting the finalized paper-and-pencil instruments into an online format. Both the test and the questionnaire were uploaded onto the online platform called eDia developed by the Institute of Educational Science at the University of Szeged. The developmental process of the test and the questionnaire were discussed in chapters 5 and 6, respectively. A background questionnaire was administered following the vocabulary test.

In the vocabulary test, all items were classified into three categories. Category 1 words were considered the easiest and Category 3 the most difficult. This classification was determined based on corpus ranking (see section 3.5), frequency in textbooks used by 6th graders and professional recommendations. Out of the nine items the dispersion of the categories was the following: there were four or five Category 1 words, two or three Category 2 words and one or two Category 3 words in one task. Category 1 words are normally more frequent grounded on the BNC; however some words in conjunction with children's vocabulary with lower ranking were categorized higher than some higher ranked words in the BNC. The vocabulary test contained six tasks as described in section 5.3.5. Table 28 presents the items on the vocabulary test with their rank number in the BNC, frequency and their category. As was discussed in section 3.5.3, the BNC is corpus comprising 100-million words compiled from several sources. Texts of a broad array of genres were collected with the aim of creating a representative sample of British English of the late 20th century.

Table 28. Ranks, frequencies and categories of words

Item	Task	BNC Rank	Frequency	Category in the test battery
monkey	1	5,317	1,067	2
lion	1	3,722	1,828	1
airplane	1	2,002	4,505	1
tram	1	5,878	722	2
swimming	1	5,861	906	2
helicopter	1	4,240	1,517	1
ship	1	1,384	6,974	1
camel	1	2,912	658	3
skating	1	6,200	421	3
supermarket	2	4,052	1,621	2
theatre	2	1,882	4,917	2
bake	2	5,773	930	3
cinema	2	3,461	2,026	2
eat	2	662	15,446	1
hospital	2	604	16,898	2
learn	2	432	23,394	1
play	2	245	38,053	1
sell	2	494	20,902	1
boat	3	1,317	7,373	2
drinking	3	1,129	8,926	2
driving	3	618	16,477	1
heavy	3	970	10,439	1
leg	3	858	11,858	1
cleaning	3	998	10,098	1
pocket	3	1,809	5,172	2
quick	3	5,817	918	3
small	3	183	51,626	1
busdriver	4	1,264	7,806	1
waiter	4	5,534	998	2
cook	4	4,199	1,541	2
fire(fighter)	4	719	14,379	1
hair(dresser)	4	682	15,020	1
mechanic	4	3,543	1,948	2
pilot	4	2,159	4,117	1
plumber	4	6,422	322	3
tailor	4	6,826	280	3
bedroom	5	1,626	5,865	1
cook	5	4,199	1,541	2
cupboard	5	1, 831	4,876	2
curtain	5	2,621	3,119	2
dining room	5	6,068	853	3
open	5	392	25,614	1
shelf	5	3,078	2,419	2

Item	Task	BNC Rank	Frequency	Category in the test battery
talk	5	310	30,930	1
wash	5	1,854	5,027	1
cake	6	2,299	3,773	1
cheese	6	2,783	2,864	1
chicken	6	3,072	2,426	1
coffee	6	1,461	6,614	1
fish	6	1,017	9,901	1
hotdog	6	no data	no data	3
(ice)cream	6	2,930	2,638	2
cucumber	6	6,800	780	3
sausage	6	5,560	990	2

7.4 Procedure

The volunteering schools were given a passcode to be able to log into the eDia platform where the vocabulary test, the vocabulary learning questionnaire and the background questionnaire could be accessed. Data were gathered in November 2014 and data processing was performed with the use of the SPSS 17 software and the Mplus software (Muthén & Muthén, 2010).

The platform called eDia is undergoing constant development (Molnár, 2013) and is adequate for efficient data gathering on a large sample. The sound files were also attached to the first two tasks of the vocabulary test. My voice, the researcher's, was recorded reading out the items. Every task contained a sample task that was presented to the students before they went about taking the test. Taking the vocabulary test took approximately fifteen minutes and filling in the online questionnaire also took this amount of time. Students sat down in front of the screen with head-sets over their ears so that they could hear the voice file of the first two tasks.

7.5 Results and discussion

7.5.1 Students' achievement on the test

As was described in Chapter 5, the vocabulary test contained six tasks and 54 items. In all the six tasks, except for Task 3, there were nine items plus one item was an exemplary item and one was a distractor; as a result test-takers had to know nine items. In Task 3, students had to know nine items and there were nine distractors and six exemplary items. In every task the maximum points were nine. This meant that the maximum points in the whole test were 54 points. Reliability of the test proved to be acceptable (Cronbach's Alpha = .869). In Table 29 the descriptive statistics of the six tasks is presented.

Table 29. Descriptive statistics of the six tasks in the vocabulary test

	Mean	SD	Reliability (Alpha)
Task 1: Listen to words and match them with pictures	6.39	2.03	.76
Task 2: Listen to definitions and match them with words	3.80	2.53	.81
Task 3: Match 6 written words with 3 pictures	6.13	2.50	.76
Task 4: Match written words with picture	2.76	2.29	.74
Task 5: Match written definitions with words	2.73	2.29	.77
Task 6: Write word next to picture	3.38	1.93	.72

For the purpose of procuring a clear picture of the significance in the differences among the tasks, fifteen paired samples t-tests were conducted as all the tasks were compared with one another one by one. Numerous significant differences were found among the tasks (Table 30).

Table 30. Comparisons of the significance of differences between tasks

	Task 1	Task 2	Task 3	Task 4	Task 5
Task 2	t=3.68, p<.001				
Task 3	n.s	t=3.54, p<.001			
Task 4	t=2.66, p<.001	n.s	t=3.23, p<.001		
Task 5	t=3.28, p<.001	n.s	t=2.88, p<.001	n.s	
Task 6	t=2.26, p<.001	n.s	t=2.98, p<.001	n.s	n.s

As regards Task 1, there was significant difference between this task and Task 2 and Task 4, and Task 5, and Task 6. As far as Task 2 is concerned, the scores on this task differed significantly from those in Task 1, as mentioned before, and Task 3. As for Task 3, there was significant difference in scores between this task and Task 2 (see above) and Task 4, and Task 5, and Task 6. There was no significant difference among the scores of Task 4, Task 5, and Task 6.

Schmitt (2014) argues that form recognition is expected to be harder than meaning recognition. In the case of the two reading tasks, this argument proved incorrect. In spite of the fact that students performed below 30% in Task 5, in Task 4 they scored fewer points. This hypothesis that a form recognition task would be more difficult than a meaning recognition task would be refuted if there was a significant difference between the two tasks based on the ANOVA but there is none.

Contrary to the paper-and-pencil pilot study that was reported in Chapter 5, on the online test with a larger sample size, participants had the best achievement on Task 1. In the pilot study, Task 3 proved to be the task where students had the highest achievement. Nonetheless, Task 1 and Task 3 proved to be the easiest tasks during both test procedures. Both tasks are completed in meaning recognition modality which is assumed to be the easiest in the hierarchy of modalities (Laufer at el., 2004; Schmitt, 2014).

It is worth noting that students scored a lower number of overall test points in the online version than in the traditional paper-and-pencil version; however it is not the goal of this dissertation to compare online and paper-and-pencil tests. Another important finding is that the two reading tasks proved to be the most difficult of all six tasks. Task 4 that required task solving in the modality of meaning recognition and the use of reading skills appeared to be the most difficult for the test-takers whereas in the reading Task 5 demanding form recognition, participants reached a bit higher number of points than in Task 4, a modality that is assumed to be a simpler task solving modality. The task that necessitated the use of productive vocabulary, Task 6 of the modality of form recall (assumedly the most difficult modality), students scored significantly more points than in Task 4 and Task 5. This finding ought to be examined more profoundly. In Task 5 students had to link the lexical item and the pertaining definition whilst in Task 6 a set of well recognizable pictures were at their disposal and they had to write one item next to picture. In an online environment it may be easier for students to recall words by recognizing pictures of food than linking words and their definitions. It is also essential to remark that the productive task, Task 6, had the lowest reliability value whereas Task 2 in which learners were expected to match definitions they heard the words proved to be the most reliable task. The two reading tasks (Task 4 and Task 5) were the most difficult and the first listening task (Task 1) and a reading task in meaning recognition modality (Task 3) were the easiest. Having analyzed the six tasks, the descriptive statistics of all the items on the vocabulary test must inevitably be examined with particular regard to the item-total correlation values that give account of how each item behaves in a test. In Table 31 the descriptive statistics of the items on the test is presented.

Table 31. Itemwise descriptive statistics of the vocabulary test

Item	Task	Mean	SD	Item-total correlation
monkey	1	.71	.46	.33
lion	1	.63	.48	.27
airplane	1	.51	.50	.31
tram	1	.70	.45	.40
swimming	1	.86	.34	.33
helicopter	1	.86	.34	.33
ship	1	.89	.44	.35
camel	1	.85	.23	.42
skating	1	.59	.49	.43
supermarket	2	.58	.49	.38
theatre	2	.86	.34	.40
bake	2	.36	.48	.38
cinema	2	.48	.50	.47
eat	2	.32	.47	.40
hospital	2	.21	.40	.44
learn	2	.25	.43	.40
play	2	.66	.47	.46
sell	2	.53	.50	.42
boat	3	.71	.45	.42
drinking	3	.69	.47	.39
driving	3	.68	.47	.49

Item	Task	Mean	SD	Item-total correlation
heavy	3	.73	.44	.43
leg	3	.47	.50	.30
cleaning	3	.93	.25	.26
pocket	3	.80	.40	.45
quick	3	.68	.47	.53
small	3	.43	.50	.29
busdriver	4	.37	.48	.28
waiter	4	.67	.47	.50
cook	4	.41	.49	.48
firefighter	4	.37	.48	.43
hairdresser	4	.24	.44	.33
mechanic	4	.15	.36	.27
pilot	4	.16	.36	.34
plumber	4	.13	.33	.33
tailor	4	.19	.39	.28
bedroom	5	.68	.47	.20
cook	5	.41	.43	.23
cupboard	5	.42	.49	.22
curtain	5	.38	.48	.21
dining room	5	.24	.43	.20
open	5	.15	.36	.26
shelf	5	.16	.36	.23
talk	5	.14	.34	.26
wash	5	.18	.39	.28
cake	6	.23	.40	.27
cheese	6	.51	.50	.26
chicken	6	.45	.50	.28
coffee	6	.82	.38	.26
fish	6	.38	.48	.25
hotdog	6	.16	.37	.30
icecream	6	.59	.49	.01
cucumber	6	.19	.31	.33
sausage	6	.16	.36	.29

Since the results of all the items on all the tasks will be examined in the subsequent section, in this section a general insight is given with regard to the descriptive statistics of the entire test. It ought to be highlighted that the item-total correlation values of all items except for 'icecream' proved to be acceptable, i.e., above the .20 limit (Field, 2005). Even though some items were in the vicinity of this critical value (e.g., 'lion', 'sausage', 'cleaning' and 'busdriver') the instrument does not appear to suffer from low item-total correlation values, thus it can be claimed that the entire instrument yields valid results. It is a remarkable fact as well that items with low item-correlation values have an even distribution across tasks. No task has more than one item that works inconsistently with the average

functioning of the other items. This might provide evidence for the fact that the tasks requiring different task-solving modalities have equal strength and assess the same construct.

Having analyzed the results of the items with the means of classical test theory, the applicability of the tools of modern test theory was also considered. The Rasch-model was employed to gain a deeper insight into the reliability of the test and the difficulty of each item. The Conquest program was used to conduct the Rasch-analysis. The value used in modern test theory, EAP/PV, of .912 yielded evidence of high reliability. In Figure 3 the item difficulty values are presented. The logit values are shown from -4 to 3. The values below zero indicate easy items and those above zero indicate difficult items. The further an item is in the positive range, the more difficult it was in the test and conversely, the further the item is in the negative range, the easier it proved to be in the vocabulary test. As 54 items were assessed in the test, the same number of items are scaled by logits. Based on the model, the assertion can be made that the test has a relatively normal distribution. Most of the items are in or near logit 0, which indicates a normal distribution. As regards easiness and difficulty of items, easy and difficult items are represented almost in an equal ratio, so the test differentiates properly. Every five x values represent two students.

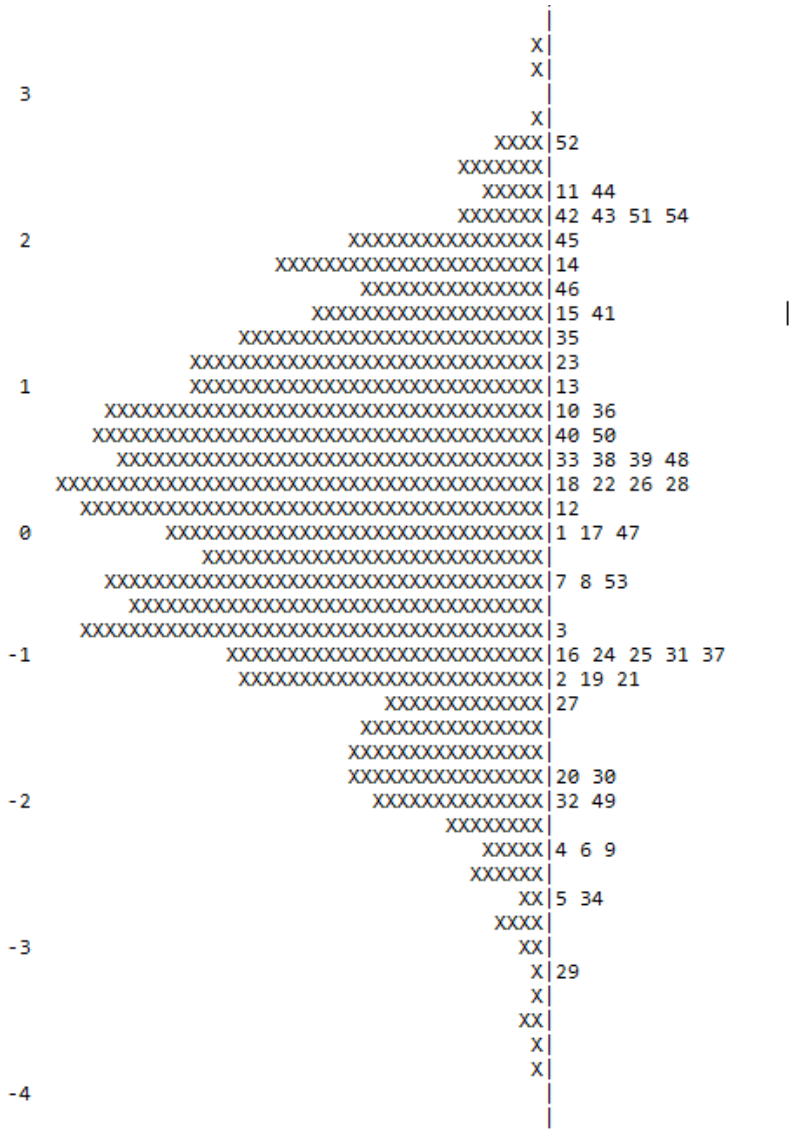


Figure 3. The item difficulty values of the vocabulary test

Using item response theory, the distribution of the items can also be examined visually as the output of the Rasch-model analysis reflects the findings of the vocabulary test. Item 29, 'cleaning' clearly stands out (below the – 3 value) as the easiest item which the students had the highest achievement on. 'Ship' (item 5), 'swimming' (item 34), 'helicopter' (item 4), 'camel' (item 6) and ''coffee' (item 9) are the items between the minus two and minus three values. Since students achieved at least 80 % on all of these items, it can be stipulated that Figure 3 correctly reflects the results calculated with the methods of classical test theory.

On the other hand, difficult items are indicated above the zero value. Item 52, 'plumber' apparently stands out as the most difficult item being between the two and three values. Item 11 'Mechanic' (item 11), 'talk' (item 44), 'open' (item 42), 'cucumber' (item 43), 'tailor' (item 51), and 'pilot' (item 54) are all portrayed also in the range of two and three indicating difficult items.

7.5.2 Students' achievements on the six tasks

7.5.2.1 Students' achievements on Task 1

In the previous section the results of all the items in the test were presented. This section will shed light on the results of the six individual tasks separately. Table 34 presents the results of the items in the first task. Students achieved the best at item 'ship', the most frequent word according to the BNC (rank=1,384) among the nine items. Another Category 1 word, a cognate, 'helicopter' also proved to be easy for the learners (M=.86). As nine is the maximum number of points, it can be highlighted that the vast majority of the students recognized these two items when they heard them. In a meaning recognition task it can be expected that these frequent words in the language are known by the students. One fact must also be highlighted in case of 'helicopter'. Albeit the word has a low rank (rank=4,240) and is outside the list of the 2,000 most frequent words, the decision proved correct that 'helicopter' was classified as a Category 1 item in terms of difficulty (with Category 1 being the easiest expected item, Category 2 being of average difficulty and Category 3 being the most difficult item). Two other items reached the level over a mean of .80: 'camel' and 'swimming'. 'Camel' is also an item outside the 2,000 most frequently occurring words; however it seems that children encounter the name of this popular animal so often in cartoons and comics that it is easily recognized by the students in a meaning recognition modality.

The outcomes cinfirm expectations; however, the most difficult item was 'airplane', a relatively frequent word (rank=2,002). No reasonable explanation can be given to this fact. The mean value of .50 suggests that slightly more than half of the students recognized the meaning of the word after hearing it. The picture could have been identified simply and there was no disturbance in the audio file either. 'Skating' was the second most difficult item, which is explicable by means of the fact that it is relatively infrequent (rank=6,200) and it is not among the most popular activities among Hungarian students. Table 32 presents the results of Task 1.

Table 32. Results of Task 1

Item	Category/Frequency	Mean	SD
monkey	2 / 1,067	.71	.46
lion	1 / 1,828	.63	.48
airplane	1 / 4,505	.51	.50
tram	2 / 722	.70	.45
swimming	2 / 906	.86	.34
helicopter	1 / 1,517	.86	.34
ship	1 / 6,974	.89	.44
camel	3 / 658	.85	.23
skating	3 / 421	.59	.49

7.5.2.2 Students' achievements on Task 2

Task 2 proved to the most reliable task (Cronbach's Alpha=.81). In this task, a listening task requiring form recognition in which participants had to listen to definitions and recognize the form of the word pertaining to the definitions, 'theatre' was the easiest item (M=.86). The item 'theatre' was classified as Category 2 in terms of expected difficulty; a considerable number of the participants knew the item in form recognition modality. It must be added that 'theatre' (rank=1,882) is within the most frequent 2,000 words. The Category 1 item 'play' (rank=245), a very frequent word in English had a mean value of .658. This outcome is unexpected considering the fact that students achieved better on the item 'theatre'. I assume that 'play' is a verb very often used by students and teachers in the early months of foreign language education, in addition children probably encounter this word on a daily basis. Thus it is unanticipated that participants reached a low score in light of the frequency, the expected simplicity and the popularity of the word. In this task, students heard definitions that they had to match with the given items. There is a likelihood that the phrasing 'This is what children do in kindergarten' was not comprehensible for some of the students. Another Category 2 item 'supermarket' (rank=4,052), a cognate, had the third highest result (M=.585). The word is not so frequent compared to the other items in the Task (e.g., 'eat', 'play', 'sell') but students by 6th grade will have encountered with it many times since all of the course-books used by the students contain this word. As in Section 5.1.2 it was confirmed that prior to research the contents of the course-books were checked in detail.

Considering the expected simplicity and the frequency of the items 'sell', 'learn' and 'eat', students performed poorly on these items. The only reason that can be brought up is the difficulty with the interpretation of the definitions. It must, however, be noted that the results of the pilot test had not highlighted this problem. The very frequent item 'eat' (rank=662) had as low a mean value as .320, meaning that slightly over one-third of the participants could match the heard definition 'This is what you do when you are hungry' with the written word. The definition can by no means be perceived as exigent and it can clearly be heard online in case proper headset is provided for the students in the schools. Another unanticipated outcome was the mean value (253) of 'learn'. The definition 'This is what children do in school' was piloted and it had not been expected to be so difficult that not even one-third of the students would know it in a listening task of form recognition modality.

The item 'hospital' that posed extreme difficulty merits further attention. Even though it is frequent in English, 'hospital' (rank=604) had been classified as a Category 2 since YLs do not face this word as often as adult learner do. This can be supported by the fact that course-books do not

appear to emphasize this item as often as other vocabulary more relevant to children. Yet, the low mean value of .206 is as unanticipated as the score of 'learn'. The definition 'This is where doctors and nurses work' contains one word 'nurse1 that is less frequent than the target item 'hospital', which is against the recommendations of Nation (2001); however, I anticipated the definition would be easily interpreted by the test-takers. There is a likelihood that the relative pronoun 'where' caused problems in comprehension as grammatically it is approximately always faced by the YLs as a question word.

The results of Task 2 is a good reminder for all vocabulary test developers that multiple modalities must be applied so that a more shaded picture will be received as not even the simplest expected items might be known by the learners in different task modalities demanding different skills. Table 33 presents the results of Task 2.

Table 33. Results of Task 2

Item	Category/Frequency	Mean	SD
supermarket	2 / 1,621	.58	.49
theatre	2 / 4,917	.86	.34
bake	3 / 930	.36	.48
cinema	2 / 2,026	.48	.50
eat	1 / 15,446	.32	.47
hospital	2 / 16,898	.21	.40
learn	1 / 23,394	.25	.43
play	1 / 38,053	.66	.47
sell	1 / 20,902	.53	.50

7.5.2.3 Students' achievements on Task 3

In Task 3 that demanded reading skills in a meaning recognition modality, participants were required to match three pictures with three words out of six in three sub-tasks with one sample task. The task contained 18 items. Nine items were correct and nine were distractors. The word class was the same in each sub-task. This led to the task including six nouns, six adjectives and six verbs. In this task word classes were evenly represented. Eventually, word class was not a factor that determined students' achievements. This might prove the assertion that word knowledge does not depend on word class (Nation, 2011).

The word 'cleaning' proved to be the highest scoring item (M=.932). It was this item that students knew the best in the test. Recognizing the meaning based on the picture of a girl cleaning appeared to be the least difficult not only in Task 3 but in the test. The verb 'clean' was classified as Category 1 in terms of difficulty on the basis of the BNC (rank=998). However, 'cleaning' is not the most frequent word in the task. Even though 'small' (rank=183) and 'driving' (rank=618) are more frequent words, students averaged lower scores with a mean of .43 and .67 on them, respectively. The fact that less than half of the test-takers recognized the meaning of 'small' is unanticipated albeit the adjective 'little' is predominantly used in books. Students saw an unambiguous image of two small babies; thus recognition of the item was anticipated being simple.

The adjective 'quick', a Category 3 item due to its position in the BNC (rank=5,817) demonstrated a relative high score (M=.68) in spite of its low ratio of occurrence. This fact might corroborate the evidence that a considerable number of infrequent words that are relevant from the point of view of YLs are known by the children. YLs might score a higher number of points with an

infrequent item and they are likely to achieve a lower number of points in the same test with a more frequent item. The word ‘leg’ (rank=858) is frequent and was classified in Category 1 in the test but less than half of the participants could recognize the meaning of the word based on a very simple and unambiguous picture. It is remarkable that this item had the highest standard deviation (.500) that indicates that the data points in case of ’leg’ are spread out over a wider range of values. This result was rather unexpected since body parts are taught in the first year of language learning and they are relevant vocabulary from the perspective of YLs. Table 34 presents the results of Task 3.

Table 34. Results of Task 3

Item	Category/Frequency	Mean	SD
boat	2 / 7,373	.71	.45
drink	2 / 8,926	.69	.47
drive	1 / 16,477	.68	.47
heavy	1 / 10,439	.73	.44
leg	1 / 11,858	.47	.50
cleaning	1 / 10,098	.93	.25
pocket	2 / 5,172	.80	.40
quick	3 / 918	.68	.47
small	1 / 51,626	.43	.50

7.5.2.4 Students’ achievements on Task 4

In Task 4 students were required to read words and match them with pictures. The task had the modality of meaning recognition. This task was very similar to Task 3 in the meaning had to be recognized on the basis of pictures but different in that it had only one distractor compared to three in all three sub-tasks adding up to nine and Task 4 had no sub-tests. As it was highlighted in section 8.1.1, the reliability of both tasks very similar but the mean values of the two tasks differed to a great extent. Task 3 had a mean value of 6.13 and Task 4 had that of 2.75. The difference cannot be explained by the assumed difficulty of items in the task since relatively frequent and regularly taught words (’busdriver’, ’cook’, ’pilot’) were inclusive of Task 4. The entire task contained words denoting jobs so that any kind of distraction could be avoided. Jobs are taught in the early stages of foreign language studies according to Nikolov (2011), course-books and teachers interviewed prior to data collection, so the decision of involving words signifying jobs in a diagnostic test was well established.

The meaning of the word ‘waiter’ (rank=5,534) far outside the first 2,000 words was recognized by more than half of the test-takers. None of the rest of the items in the task were known by more than half of the students. The word ‘cook’ was the second highest scoring item (M=.418), which is also far beyond the most frequent 2,000 words in English with the gradation of 4,199 in the BNC.

It is worth highlighting that some of the words were extremely exigent for the learners. The pictures portraying a mechanic, a plumber and a pilot were recognized by hardly any students. ‘Plumber’ had a mean value of .136, thus learners scored the fewest point on this item in the task. It might be that students are not taught this infrequent word (rank=6,422) and they are simply not interested in its meaning. The poor recognition of the meaning of ‘pilot’ (M=.16) can be given hardly any reason as ‘pilot’, a cognate, is the most frequent word denoting a job (rank=2,159) and children are expected to encounter with this cognate in animation and cartoon movies. The picture portraying a pilot in the online test is easily recognizable and does not give rise to any confusion, yet only 16%

of the learners could recognize it. The only reasonable explanation could be that after completing three tasks students might have been tired of another new form of assessment and fatigue might have played a significant role in their poor achievement. This assumption was supported by two teachers (personal communication). The poor performance at the item 'tailor' (M=.19) might be attributed to this word's relatively low ratio of occurrence. 'Tailor' is only the 6,826th most frequent word in English and students do not encounter it either in their everyday life or in animation movies and songs. Thus poor performance can be explained; in addition, the item was classified as Category 3 so anticipation had been that most of the students would find it difficult to recognize.

To sum it up, the poor performance of the students in Task 4 was not expected. Jobs are items that are expected to be known by YLs for several reasons: they are easily taught and portrayed with the use pf pictures, they are covered in every course-book used by students as early as 4th grade and their knowledge is regularly assessed by teachers in primary school as it was indicated by teachers through personal communication. A relevant practical implication can be deduced from these outcomes: knowledge of not so frequent English words are not satisfactory and more efficient teaching and assessment method should be applied in case of these words. Table 35 presents the results in Task 4.

Table 35. Results of Task 4

Item	Category/Frequency	Mean	SD
busdriver	2 / 7,806	.37	.48
cook	2 / 7,806	.67	.47
firefighter	1 / 14,379	.41	.49
hairdresser	1 / 15,020	.37	.48
mechanic	1 / 1,948	.24	.44
pilot	1 / 4,117	.15	.36
plumber	2 / 322	.16	.36
tailor	3 / 280	.13	.33
waiter	1 / 998	.19	.39

7.5.2.5 Students' achievements on Task 5

Task 5, similarly to Task 4, was a reading task in form recognition modality. In the online format, instead of writing the number of the word next to the definition, a drag-and-drop method was chosen. The definitions were listed on the screen below one another and students had to drag the words next to the definitions. In Task 4 the knowledge of the noun 'cook' was assessed, in this task the knowledge of the verb 'cook' was tested. Three other verbs were involved in the task. The nouns denoted either places or objects in and around the house. Except for the verb 'talk', the meanings of all the words were related to housework. The definitions also comprised words related to this topic. This was done with the intention of not causing any distraction to the test-takers. The least frequent word 'dining room' (rank=6,068) in the task was known by slightly over 20% of the students. However, a very frequent word 'talk' (rank=310) was known by 14% of the learners rather unexpectedly. The definition 'This is what people do in the living room' might have been too difficult to interpret for the students. It could be the case that if 'talk' had been assessed in a different task of different modality, it would have been known by more students. In Task 3, a picture of two people talking might have been recognized by the majority of the students. However, the validity of the entire test

is not risked since words known by students in Task 3 or Task 1, might have been known by a similar ratio of students in Task 5 resulting in a similar overall test score. The recognition of another frequent and often taught word ‘wash’ (rank=1,854) also proved to be difficult for the students. Similarly to ‘talk’ the definition of ‘wash’, ‘This is what people do in the bathroom’, must have been exigent or the test-takers to recognize and match it with the word. Table 36 presents the results of Task 5.

Table 36. Results of Task 5

Item	Category/Frequency	Mean	SD
bedroom	1 / 5,865	.68	.47
cook	2 / 1,541	.41	.43
cupboard	1 / 4,876	.42	.49
curtain	2 / 3,119	.38	.48
dining room	3 / 853	.24	.43
open	1 / 25,614	.15	.36
shelf	2 / 2,419	.16	.36
talk	1 / 30,930	.14	.34
wash	1 / 5,027	.18	.39

7.5.2.6 Students’ achievements on Task 6

Task 6 assessed productive vocabulary in form recall modality, the hardest modality according to Schmitt (2014). Students saw a visual menu card with images of food and they had to write the word related to the images. Thanks to the constant development of the eDia platform, online assessment of writing was made possible. A pool of the potential correct items was given to the platform developers who generated an automatic key to the evaluation of the written words. Several solutions were accepted in case of all the items. When test-takers saw a picture of roast chicken, both ‘chicken’, ‘roast chicken’ were accepted so that the validity of the test would not be endangered.

Form recall modality proved to be the hardest among all the tasks. Even though the knowledge of several often recurring words in English was tested (e.g., ‘fish’, ‘chicken’, cake’), students scored less than 50% on the six items. The three easiest items were ‘coffee’ (M=.82), ‘icecream’, (M=.59) and ‘cheese’ (M=.51). The low scores of ‘sausage’ and cucumber can be on the one hand explained by their relatively difficult ortography, and on the other hand students either did not learn these items adequately. The low scores of ‘cake’ (M=.23) and ‘hotdog’ (M=.16) were unanticipated as both words ought to be well known for the learners with ‘hotdog’ is a cognate. In case of ‘cake’ most learners either did not write anything or sought to write compound words such as ‘chocolate cake’ giving rise to a higher rate of mistakes.

In Task 6 it is also conspicuous that by the time learners accessed a new form of vocabulary assessment, they were fatigued. It would be a point to consider to alter the order of tasks and start with the most difficult modality as expected instead of starting with the simplest. Table 37 presents the results of Task 6.

Table 37. Results of Task 6

Item	Category/Frequency	Mean	SD
cake	1 / 3,773	.23	.40
cheese	1 / 2,864	.51	.50
chicken	1 / 2,426	.45	.50
coffee	1 / 6,614	.82	.38
fish	1 / 9,901	.38	.48
hotdog	3 / no data	.16	.37
icecream	2 / 2,638	.59	.49
cucumber	3 / 780	.19	.31
sausage	2 / 990	.16	.36

7.6 Teachers' assumptions on the YLs' vocabulary size

With the aim of gaining a more profound insight into students' vocabulary size, 18 teachers were involved in a study. The teachers were given a sheet and were requested to estimate the score of an average student on each task. Data were gathered in June 2015. All the 18 teachers of English had been teaching 6th graders for several years and were supposed to have wide experience with this age-group. However, it merits attention that the teachers involved in my study were not the teachers of the learners I had tested. The teachers were given the vocabulary test in print and were given a card with an instruction (Table 38). A number between zero and nine had to be allotted by the teachers. The results of the online vocabulary test were not shown to any of the teachers. Each teacher took approximately ten minutes to fill in the data. The data collection instrument is presented in Table 38.

Table 38. Data collection instrument on teachers' assumption regarding an average student's test achievement

Instruction: Please look carefully at the six tasks and write your assumed score of an average student below the 'Assumed score heading.' The minimum amount of points is 0 and the maximum is 9. Thanks for your help and cooperation.	
Task	Estimated score of an average student
1	
2	
3	
4	
5	
6	

Once the teachers submitted their sheets filled-in, their assumed scores were uploaded into the SPSS software and the descriptive statistics of the teachers' answers was analyzed.

The participants in the online test scored a mean of 6.39 whereas teachers expected them to score over 7.38 which a significant difference ($t=1.96$, $p<.05$). The assumed scores are characterized by an over-estimation on part of the teachers. As regards all the tasks, teachers over-estimated the achievement of the students. According to them, in Task 2 students ought to score 5.62 whereas in

reality students scored below 4.00 on the online test. In Task 3 teachers, for instance, over-estimated the expected task score by one %. The two reading tasks, which proved to be the most difficult for the students in the online test, were also over-estimated, so was Task 6. However, it must be highlighted that teachers were very good at ranking the tasks based on difficulty. Teachers predicted well the order of difficulty on the basis of the mean value of their assumed test scores. Teachers expected Task 1 to be the easiest and so it was on the online test and they expected Task 3 to be the second easiest and this was the case on the test. The expected difficulty of Task 4 and 5 was justified on the test. It is a striking fact that Task 6, the productive vocabulary task in form recall modality, was over-estimated by the teachers compared to what the students had really achieved. The independent sample Student's t-test also indicated a significant difference between the assumptions of teachers and the results of the participants ($t=2.46$, $p<.05$). Table 39 presents the results of the teachers' questionnaire and the comparison of significance between teachers' assumptions and students' scores. All results are presented by the estimated scores teachers indicated on the sheet.

Table 39. Test scores estimated by teachers and their comparison of significance

Task	Test scores estimated by teachers (mean)	Student's test scores (mean)	t-values
1	7.38 (SD=2.40)	6.39 (2.03)	2.34 (p<.05)
2	5.62 (SD=1.82)	3.80 (2.53)	3.32 (p<.05)
3	7.26 (SD=2.53)	6.13 (2.50)	2.42 (p<.05)
4	3.84 (SD=1.41)	2.75 (2.29)	2.76 (p<.05)
5	3.42 (SD=.44)	2.76 (2.29)	2.47 (p<.05)
6	5.46 (SD=.82)	3.38 (1.93)	2.86 (p<.05)

As it is clear from Table 39, teachers significantly overestimated students' scores. Comparing the results of the assumed test scores provided by teachers may give us a better insight into the intersecting field of YLs' real vocabulary size and teachers' beliefs. The conclusion can be drawn that teachers might have had better students in mind compared to the ones that had taken the test. One limitation of this investigation into teachers' assumption has been stated earlier in this section, namely, participating teachers were not the teachers of the participants.

7.7 Investigating sub-samples based on the vocabulary assessment

For the purpose of looking more profoundly into the results of the vocabulary test scores, a division was made in the sample. The sample of 282 participants was divided into three sub-samples of equivalent numbers (94 students in each sub-sample). The sub-samples were created on the basis of the vocabulary test results (Table 40).

Table 40. The classification of the sub-samples by achievement

Sub-sample	Mean (SD)	Number of students
Students in the high achieving tercile	.68 (.22)	94
Students in the medium-achieving tercile	.49 (.27)	94
Students in the low achieving tercile	.33 (.17)	94

In Table 40, it is saliently portrayed that the first, best-achieving, sub-sample scored higher number of points on all tasks than the second and the third sub-sample. In Tasks 1, 2 and 3, the differences between the students in the high achieving tercile and the Students in the medium-achieving tercile are striking; however, in the last three tasks even the students in the high achieving tercile of the overall test performed around 50%. It must also be noted that in Task 5 and Task 6 a small gap can be seen between the second and the third, the worst-achieving, sub-sample. The gap is caused by the fact that the average-achievers performed very poorly (M= 1.17 and 2.34 in the two tasks, respectively). It is worth pointing out that both the medium-level and the lowest achieving sub-samples performed better in a supposedly more challenging form recall task (Task 6) than in a form recognition reading task (Task 5). This might indicate the fact that students with poor word knowledge perform worse in meaning and form recognition modality than in form recall modality. One other striking piece of data is that of the students in the low achieving tercile' task score in Task 4. Almost none of the students in the worst sub-sample could recognize the meaning of any of the words portrayed in the pictures. This might be due to poor visual skills or guessing. In Table 41 the descriptive statistics of the three sub-samples is presented.

Table 41. The descriptive statistics of the three sub-samples

	Students in the high achieving tercile Mean (SD)	Students in the medium-achieving tercile Mean (SD)	Students in the low achieving tercile Mean (SD)
Task 1	7.22 (.64)	5.75 (1.32)	3.89 (1.78)
Task 2	6.70 (1.31)	4.14 (2.12)	1.23 (1.56)
Task 3	8.02 (.62)	6.18 (.79)	3.16 (2.78)
Task 4	4.39 (2.36)	2.59 (1.56)	.94 (1.34)
Task 5	4.19 (1.76)	2.46 (1.72)	1.59 (1.38)
Task 6	3.58 (1.84)	3.36 (1.52)	2.19 (1.29)

The three sub-samples were compared to see which task result proved to be a determiner in the differences among the students. Having performed the ANOVA, I examined the homogeneity of variances (Maxwell & Delaney, 2004). Firstly, the values on the Levene statistics must be investigated. If the level of significance is less than .05, the post hoc Dunnett-T3 test must be performed whereas in case the level of significance of the Levene statistic is more than .05 then Tukey-B test must be taken (Maxwell & Delaney, 2004). The levels of significance are presented in Table 42.

Table 42. Levels of significance on the Levene statistic

	Levene Statistic	Significance
Task 1	15.81	.00
Task 2	16.18	.00
Task 3	20.32	.00
Task 4	1.83	.18
Task 5	3.76	.04
Task 6	11.09	.00

The Levene Statistic indicates significant divergences except for Task 4 and Task 5. The Dunnertt-T3 test was performed for Tasks 1, 2, 3 and 6 and the Tukey test was run in case of Task 4 and 5. Besides the Levene statistic, the F-values of the analysis of variance were also examined. In each task significant differences were found amongst the three sub-samples. In Task 1, a high value was found: F (3, 282)=52.46 ($p < .001$). Task 2 had a lower but significant value: F(3, 282)=41.92 ($p < .001$). In Task 3, which the students had the second best achievement among tasks, had the following value: F (3, 282)=50.49 ($p < .001$). The two most difficult tasks, Task 4 and Task 5, had the lowest F-value of 23.49 and 34.46, respectively. Finally, the productive task, Task 6, had a value of 22.68 ($p < .001$). In itself, it is not enough to observe the F-values derivative of ANOVA (Lowry, 2008). In cases where it was needed Tukey tests were performed (Task 4 and Task 5) to see which task made a significant difference among the sub-samples; on the other tasks, Dunnett-T3 tests were taken. A significant difference was expected as regards Task 5 and Task 6 concerning all sub-asmples. In case of Tasks 5 and 6, no significance was stipulated between students in the high achieving tercile and those in the medium-achieving tercile. This means that neither a receptive task in form recognitiomodlity nor a productive task in form recall modality differentiates between students of high abilities and thise of average abilities.

7.8 A criterion-referenced perspective of the vocabulary test

It was asserted in Vidákovich et al. (2013) that there may bea minimal EFL vocabulary size expected from 6th graders and in Vidákovich et al. (2013) it was determined that this minimum is around 600 words. Determining a minimal vocabulary size is not unique. Nagy (2004) outlined the expected NL minimal vocabulary size among Hungarian 6th graders. This figure was 5,000 and the Hungarian as a NL test was created with this minimal criterion in focus.

The purpose of the criterion-referenced investigation was to diagnose the critical EFL vocabulary size and to present the snapshot of the process of learning this critical vocabulary. In order to determine and point out the minimal limit of Hungarian 6th graders in terms of EFL vocabulary size, I considered the knowledge of Category 1 words as the minimal criterion. The minimal criterion is the knowledge of Category 1 words to the extent of 80 % (Nagy, 2006). This decision was supported by two factors: (1) the mastery of the 2,000 most frequent words is emphasized (Nation, 2001) and Category 1 words typically fall into the list of the 2,000 most frequent words; (2) some studies in Hungary had determined the critical EFL vocabulary size concerning 6th graders in the amount of 600 (Vidákovich et al., 2013; Vígh & Thékes, 2014). For the description of the process of defining categories, see section 5.3.3. In the test there were 27 test items that were classified as Category 1 (for the specific classification of categories of words, see Table 29). Once the list of Category 1 words

was clarified (see Table 22), I conducted an analysis to see students' knowledge of these words. The results of students' achievements on Category 1 words are presented in Table 43

Table 43. Results of students' achievements on Category 1 words

Item	Mean	SD
cleaning	.93	.25
ship	.89	.44
helicopter	.86	.34
coffee	.82	.38
heavy	.73	.44
driving	.68	.47
bedroom	.68	.47
play	.66	.47
lion	.63	.48
sell	.53	.50
airplane	.51	.50
cheese	.51	.50
leg	.47	.50
chicken	.45	.50
small	.43	.50
fish	.38	.48
busdriver	.37	.48
firefighter	.37	.48
eat	.32	.47
learn	.25	.43
hairdresser	.24	.44
cake	.23	.40
wash	.18	.39
pilot	.16	.36
open	.15	.36
talk	.14	.34

Students' overall mean knowledge of Category 1 words was 58.36 (SD=42.44). It must be also noted that some students (see the ones in the high achieving tercile) know over ninety % of the Category 1 words. It is obvious that the mastery of Category 1 words is inevitable in the process of learning less frequent words and of progressing to higher ability levels in EFL.

Nagy (2006) determines the critical threshold of criterion-referenced knowledge in the value of 80 %. This means that in order for the students to continue with a new learning material, they must know at least 80 % of the current learning material. Therefore, I set the critical limit of proceeding to next stage of learning at the knowledge of 80 % of Category 1 words. It was found that out of the 282 participants 108 (38.29%) knew at least 80 % of Category 1 words. More than one-third of the participants had a knowledge of at least every four Category 1 words. The rest of them (61.71%) ought to endeavor into reaching the critical value, i.e., the knowledge of 80 % of Category 1 words.

Following the investigation of the knowledge of Category I words, I intended to compare the knowledge of the words of different categories; therefore pair-sample t-test were conducted. The

analysis of variance indicated that there is a significant difference in the knowledge of the words classified in an assumedly simpler category. Category 1 words were known by the students significantly better than Category 2 words ($t=21.92$; $p<.001$) whereas Category 2 words were known significantly better than Category 3 words ($t=17.82$; $p<.001$). The difference in the knowledge between Category 1 and Category 3 words was the most robust in significance ($t=29.27$; $p<.001$) as it had been expected. These results are good indicators that the method of determining the categories was justified and students did know words previously judged simplebetter than those judged difficult (for the classification of words into categories, see section 7.3). This means that categorization of words was done properly.

7.9 Investigating the vocabulary test with a think-aloud protocol

With the aim of triangulating the data a think-aloud protocol was also done. Participants must be selected carefully for a think-aloud protocol (Cohen, 2003). The trustworthiness, the reliability and the validity of think-aloud protocols can be increased by selecting volunteers, guaranteeing anonymity of the participant and by reducing stress during the procedure. According to Ericson (2002, p. 983), by verbalizing the thoughts the participants may provide expedient and relevant data for the researchers and may report their conscious thoughts at the time they are being processed.

A teacher was asked to select a student who has average FL ability, who has sometimes difficulties in mastering words, i.e., an average student, who scores grades B and C on the school tests) was intentionally chosen to be involved in the study. One student, Bence, was selected to be the participant of the think-aloud protocol procedure. I intended to gather data with regard to the cognitive processes that take place during test solving. Bence is a 12-year-old boy who had a grade 4 (B) at the end of the 2014/15 schoolyear. He studied in a primary school in Szeged, Hungary. Bence was not among the participants of the online vocabulary test and it was the first time during the think-aloud protocol that he had ever seen the vocabulary test. Bence was learning English for two years in three lessons per week. His teacher showed Bence's summative tests taken during the previous school year and it was revealed that he tended to make a lot of mistakes; however his teacher said that he was a very enthusiastic and well-behaving student. The think-aloud protocol was performed in June 2015 in a primary school in Szeged, Hungary.

Bence logged into the eDia platform and was told to perform all six tasks and report his thoughts by speaking loudly. I, the researcher, recorded his think-aloud process in Hungarian. The English translated version of the think-aloud protocol is presented in six extracts.

> Extract 1 (Task 1)
>
> Researcher: You see here eleven pictures and you will hear ten words. You see the example. Please do the task and tell me what you are thinking.
> Bence: well, airplane is easy, so is helicopter, I see their pictures……I see this picture of this animals, yes this is a monkey…another…animal…I like animals. this is a camel …here is the picture. I write this number below camel next to picture…..this vehicle here on water…it is a ship and another picture of water…well they are swimming….yes, swimming. I know it. what is this other vehicle? well, it is a train …train. I don't know its number. I heard it, though.
> Researcher: are you sure it is a train?

Bence: no, it is a tram, yes thanks for telling me, the other picture is a train. what are these two pictures left? baloon, I heard no baloon, eh…but these people are skating, so this is the word. yes. it is a good feeling to get all of them right.

Extract 2 (Task 2)

Researcher: you see here ten words and you will hear eleven definitions. the example is given. bakery is a shop where you can buy bread and rolls. match the definitions with the words by typing in their numbers.
Bence: you can buy food, household goods and a lot of other things here …I think it is the butcher's…no?.. it is the supermarket…then…let's try this. this is what students do at school. they play *(in Hungarian* ….no? then they learn…correct?
Researcher: yes that's correct. focus on the rest of the words.
Bence: hospital…what is it? theatre, I have never heard. supermarket…maybe it is a shop. it is not a big shop, so farmers sell their vegetables there. cinema…people go to this place to watch films, eh. film and cinemaI know that. eat isn't it 'eat'*(in Hungarian*? where is the definition? oh you cannot tell…I don't know. oh, it's so difficult…I will randomly write in the numbers. I wish I had my vocabulary list here. I couldn't hear the definitions well…I wish I could have listened to them more times.

Extract 3 (Task 3)

Researcher: you see here three tasks. in each task there are six words and three pictures. match three words to three pictures. so, three words are not needed in each task.
Bence: this first one is easy. they are reading and this boy…what is he doing? he is sitting *(in Hungarian* …sitting? there is no sitting among the words. then probably he is thinking. right? the other boy is sleeping…so this is the example. this other task…he is driving and the girl is drinking…what is this tool, a vacuum cleaner? the girl is doing something with it…so…she is cleaning….cleaning *(in Hungarian*. it is in my vocabulary list. i wrote it in there this summer. the next one…the babies are small, but the man…he is carrying something. he is sweating...i don't know…he is deep….maybe
Researcher: are you sure?
Bence: no, he is not deep, he is heavy…or the thing that he carries is heavy, yes….then the man is running so he is… how do you say fast ?...which one is it out of these? maybe. sour? wide? I don't know what they mean. I think he is quick.
the next task: blood? what's that? I have no clue. boat *(in Hungarian* …I know it…it is boat. that's the picture. leg…yes they are her legs. I know that. what's that in the picture. jeans? there is no jeans on the left side. pocket? field? blood? let's go for blood

Extract 4 (Task 4)

Researcher: You see here ten words and eleven pictures. The example is given. Read the words related to jobs and try to do the task.
Bence: let's see the pictures. I see a waiter , a dentist , a hairdresser , a bus driver , a cook , a man repairing a pipe. well, waiter is the picture here…..the next picture… i don't know. the next picture is a hairdresser, though….. he is driving a bus in the next picture, so bus driver. this man is repairing a car. I don't know…maybe, he is a plumber, then the second picture will be mechanic and picture in the middle on the right side is a plumber……this man is in the kitchen. he is a cook. picture he is like fireman Sam, so he is a fireman. the picture on the bottom right side is a pilot, yes…I will go for pilot. picture on top right… I have no idea. and the second picture from bottom rigth is guide …I don't know in English….wait…which picture has no matching word? I don't know. I will choose randomly now.

Extract 5 (Task 5)

Researcher: You see here ten definitions and eleven words. The example is given. Read the words related to the household and try to match the words with the definitions by dragging them next to the definitions.
Bence: uh...this is what you do in the kitchen to make food. ? maybe it is cook? my mom cooks in the kitchen…so it's cook. next one. it is a thing hanging in the window as a decoration. or shade. what's decoration and shade? i have no clue….. next one. this is what people do in the bathroom. sorry…. it is not clear… if i see wash then it is the bathroom. I think it is correct, so wash….. next ones. you eat your meals in this area in the house. what does dining room, curtain and garbage mean? one of these two. oh, yes, you cannot help me. then it is garbage because open, shelf, talk i know and this seems to be the most likely. it is a place in the kitchen for dishes. it is cupboard. I know this. my father learns English and this word card is written on our cupboard. this is where you keep books. it is either shelf or curtain. maybe curtain….people sleep in this place of their house…sleeping has something to do with bed…so bedroom.…people sleep in this place of their house. sleep? we sleep in the bedroom…this is what you do with the door when you want to enter…I don't know, maybe this is talk

Extract 6 (Task 6)

Researcher: You see nine pictures of food. Write words next to the pictures with your keyboard.
Bence: first one is cucumber , I don't know in English. wait… it is in my vocabulary…. I wrote it in there this spring…but I don't remember… next one is hotdog, .. do I write it with a hyphen this next picture is fish, then what's this food? next one is cheese, I know that. next one is chicken…how do I write it? with a c? no? with a 'ch', maybe, let's go for this. . the next one is a meat …I have no idea. we learned it with Ági néni, teacher Ági néni, but I forgot…. this next one is a sausage .I don't know in English. oh, next one is icecream, I love it…the last but one is cake ….I don't know in English….the last one is coffee …I don't know how to write it, maybe 'cofe' or 'café'

Bence was a medium-achieving student based on his score (M=5.22). The think-aloud protocol reflected the task solving practices, the mistakes made and the correct answers given by students in the medium-achieving tercile. In Task 1 he had particular difficulty in knowing the word 'skating', the item which proved to be the most challenging for the test-takers (M=.59). The recognition of animals posed no challenges for him in alignment with the large scale test where 'monkey' (M=.71) and 'camel' (M=.85) had high means. Nevertheless, he faced problems in recognizing vehicles such as tram and train. The fact that the item 'balloon' was a distractor was perceived by Bence.

In Task 2, the comprehension of the heard definitions was very difficult for him. He recognized 'supermarket' and 'learn'. Participants had a mean score of .58 and .25, respectively on these two items; thus there is a discrepancy between the large-scale results and Bence's achievement. An average-achieving student such as him recognized 'learn' whereas there were students in the high achieving tercile that failed to do so. It must also be noted, however, that he was uncertain of both of the words. Eventually he ended up matching the words with definitions randomly in the task. This was the case with the average and the students in the low achieving tercile during the test-taking process so a congruence can be noticed here between the large-scale results of the instrument and Bence's performance. Nevertheless, the rest of the task posed an enormous challenge for Bence. It was slightly surprising that he had never heard about theatre, albeit in the large-scale study participants had scored highly on 'theatre' (M=.86)

Similar to several test-takers, Task 3 that required students to match written words with pictures posed the least difficulty for Bence and recognized almost all of the words and pictures. Matching pictures with words did not pose a challenge for him in most of the cases. However, the item 'pocket' known by exactly 80% of the participants was unknown for him. From the think-aloud protocol it is conspicuous that he was totally unaware of the word 'blood' and if 'blood' had not been a distractor but a point-scoring item, he would have not known it. The verbs 'cleaning', 'driving', 'drinking' were simple items for him in this modality of meaning recognition. The item 'small' that had a mean of .432 on the large-scale test, was known by him, so he achieved on this item above average. In summary, Bence's achievement on this task reflects well the outcomes of the large-scale online test.

Bence's achievements on Tasks 4, 5 and 6 reflects that of the large sample. Especially in Task 5, the definitions were difficult to recognize meanings. This is a proof that not only listening to definitions but reading them causes difficulty, so this might be attributed to a reading comprehension problem. In the end he admitted to selecting the matching pairs randomly. He knew 'waiter', 'busdriver' and 'hairdresser'. Knowing the item 'waiter' is not extraordinary since 67.5% of the participants had known it; however being aware of the meaning of 'busdriver' and 'hairdresser' is conspicuous albeit 'busdriver' is supposed to be a simple word for YLs. Participants scored a mean of .37 on 'busdriver' and they achieved a mean of .37 on 'hairdresser'. Since they were items below average, knowing them is a remarkable achievement

In Task 5, Bence showed signs of fatigue. He did not recognize the meaning of the activity of opening a door. However, he knew the word 'cupboard' which had a mean of .42 on the large-scale test. This he achieved better than the average on this item. He induced the meaning of the item 'bedroom' from the context of sleeping, which appears to be an efficient test-taking technique. More than 60% of the participant knew 'bedroom' so the knowledge of this word was expected on the part of Bence. On the rest of the items, the students taking the online test had scored less than 50%, so it had been assumed that Bence would not perform better than on the other tasks. This assumption was justified on the basis of the think-aloud protocol since most of the items were guessed by Bence. He, in fact admitted to be unaware of 'garbage', 'shelf', 'curtain', 'wash', and 'dining room'. The source of the knowledge of 'cupboard' is intriguing as his father also seeks to master English words and uses word cards on objects, a strategy reported being hardly ever used by YLs (M=1.56) as reported in section 8.1.1.

Task 6, the productive task, was not easy for Bence either. He said he had a problem with writing 'chicken' and 'coffee' and admitted to not being able to recall the form of 'cucumber', 'cake', 'sausage'. He had the completely inefficient test-taking strategy of uttering words in Hungarian and requesting help from me, the person sitting in front of him and knowing English. This last task reflected the findings of the large-scale assessment, namely that form recall poses extreme difficulty for a student of average communicative competence. He evidenced lack of knowledge in his EFL vocabulary. Based on pictures he could not recall English words to a large extent and write them down. The implication is that productive knowledge of words must be empowered by teachers in classrooms through teaching techniques and formative assessment.

By following the thought-processes of this student, qualitative data could be gained; thus an insight into the vocabulary size of one YL was gained. It was revealed that in case of poor knowledge he rather did guessing and that connected words in spoken or written sentences were hardly comprehensible for them.

7.10 Frequencies of score ranges

Having analyzed the items in all tasks, the distribution of the score ranges must be examined so that students' achievement is mapped in more detail. Prior to going into any discussion, it is salient that the test distinguish properly among students. It merits noting that there were more students in the high achieving tercile than students in the low achieving tercile.

The maximum point to be received was nine on each of the six tasks, making 54 the overall maximum total score. No student achieved 54 points; however twelve reached a remarkable score of 46-48 points. Ten ranges were determined on the basis of achievement with five point units except for the top range that was calibrated to the above-mentioned 46-48 since none of the students achieved higher than 48 points. The number of the worst-achieving students, within the range of 1-5 was four and by doing a slight extension to the range of 1-10, the cumulative number of students in the low achieving tercile is twelve. This means that not even the 10% of the students achieved below ten points.

By examining the other extremity, the students in the high achieving tercile, it can be stated that the number of the students in the high achieving tercile, number of students within the range of 41-48 is ten, which means that not even 5% of the students scored more points than 41. It is inevitable to note that 23 students, almost exactly 10% of the sample scored over 36 points.

As expected from an adequately differentiating diagnostic test (Vidákovich, 1990), most students achieved in the range of 40%-60%. The 50% of the total points is 27, which means that in the range of 26-30 points there were 63 students and 53 students reached scores in the range of 31-35 points. Out of 288 test-takers 116 of them achieved in the average range of 26-35 points, which means that nearly one-third of the sample had an average achievement.

Apart from examining the score ranges of students' achievements, I also sought to look more profoundly into the items students reached the most points on. The fifteen best scoring items were selected and investigated based on their category and frequency. Table 44 presents the fifteen highest scoring items. Out of the fifteen items, six had been classified into Category 1, seven into Category 2, and two belonged to Category 3. The first three highest scoring items ('cleaning', 'ship', and 'helicopter') had been classified as Category 1 items. A notable finding must be highlighted, i.e, 'driving', the most frequent word (frequency=16,477) out of the fifteen highest scoring items had a mean of .67, whereas the word 'ship', a considerably less frequent word (frequency=6,974) had a mean of .89; thus students scored more than 20% higher on a less frequent item proving the fact that YLs do not necessarily know frequent items better than less frequent ones. The fact that students were successful on the item 'camel', a Category 3 item and one of the most infrequent words in the entire test, is an evidence that YLs might know words very well which are of interest to them as asserted by Vidákovich et al. (2013).

It is conspicuous that no item from Task 4 and Task 5 is found amongst the fifteen highest scoring ones. This reflects the results of the entire test as discussed in section 7.5.1. It is also noteworthy that one item represents Task 6 ('coffee') that is within the 2,000 most frequent English words; in addition, Task 2 is represented by only one word 'theatre', which is the 1,882nd most frequent English word. The fact that seven words on the list of the fifteen highest scoring items were inclusive of Task 3 might be a proof that a multiple choice test of meaning recognition modality is the simplest as claimed by Laufer et al. (2004).

Table 44. List of the fifteen highest scoring items

Item / Task	Category	Frequency	Mean	SD
cleaning / 3	1	10,098	.93	.25
ship / 1	1	6,974	.89	.44
helicopter / 1	1	1,517	.86	.34
theatre / 2	2	4,917	.86	.34
swimming / 1	2	906	.85	.34
camel / 1	3	658	.85	.23
coffee / 6	1	6,614	.82	.38
pocket / 3	2	5,172	.80	.40
heavy / 3	1	10,439	.73	.44
boat / 3	3	7,373	.71	.45
tram / 1	2	722	.70	.45
monkey / 1	2	1,067	.70	.45
drinking / 3	2	8,926	.68	.46
quick / 3	2	918	.68	.46
driving / 3	1	16,477	.67	.46

Having analyzed the test scores at the item and student levels, in the next section it is essential to examine the correlations among tasks so that deeper relationships can be revealed at task level.

7.11 Correlations across tasks in the vocabulary test

The diagnostic instrument assessing word knowledge, as was described, comprised six tasks. The first two tasks were listening comprehension tasks in meaning and form recognition modality. The third task was a reading task in meaning recognition modality that expected test-takers to match items with pictures. The fourth and the fifth tasks were reading tasks in meaning and form recognition modality, respectively; whereas the sixth task was a productive writing task in form recall modality. The correlations among these tasks were investigated to see how they compared to one another. It was also inspected how significantly Task 6 correlated with the rest of the tasks. Table 45 presents the correlation matrix of the six tasks.

Table 45. Correlations among tasks of the vocabulary test

	Task 1	Task 2	Task 3	Task 4	Task 5
Task 1					
Task 2	.50**				
Task 3	.43**	.55**			
Task 4	.33**	.53**	.51**		
Task 5	.06	.01	.06	.36*	
Task 6	.14*	.11	.07	.05	.47**

**. Correlation is significant at the .01 level (2-tailed).

*. Correlation is significant at the .05 level (2-tailed).

Task 1 and Task 2, the two listening tasks yield an indication of a modest relationship with a significant correlation (r=.50, p<.01), meaning that no matter whether the modality is meaning recognition or form recognition, the two tasks measure similar construct. Task 4 and Task 5 also correlate significantly with a weaker relationship (r=.36, p<.05). Two similar tasks which required the students to match pictures with the items, Task 1 and Task 4 correlate significantly in a weak relationship (r=.33, p<.01); however the listening task, Task 2, requiring learners to match items with definitions does not imply any relationship with the reading task, Task 5, requiring learners also to match definitions with items. It is intriguing to observe that two related tasks in terms of task solving function have hardly any relationship and insignificant correlation within the same test. This outcome reflects the assumption (Vidákovich et al., 2013, p.126) that listening to and reading definitions require different task solving subskills. Furthermore, it is hard to rely on previous research data as YLs' vocabulary had been assessed in only one modality with previous testing instruments. Vocabulary knowledge in different modalities were assessed in my test; thus no comparable data were accessible.

By investigating the correlations of Task 6, the productive writing task in form recall modality, crucial information can be procured. Task 6 has a very weak relationship with Task 1; the correlation is significant (r=.14, p<.05). This means that a task requiring the use of a receptive skill, listening, has a somewhat stronger relationship with a productive task than with another task also requiring reading skills, namely Task 5. Task 6 is also significantly correlated with Task 5 (r=.47, p<.01). This relationship plausibly originates from the fact that words in these two tasks were ones denoting household items and activities (Task 5) and food (Task 6). These are closely related themes. These two tasks are related due to an overlap in the topic. These items form a set of words that are usually learned in a cluster. Learners who know words meaning food are likely to know those meaning household activities and learners who are not aware of household vocabulary are also less knowledgeable about food vocabulary in a recognition modality, let alone in a form recall modality.

In order to see whether there is a significant difference in the correlations between tasks of similar modality, z-tests were conducted. A significant difference was found between the correlations of Task 1 and Task 2, two listening tasks, and those of Task 4 and Task 5, two reading tasks (z=2.42, p<.05). A significant difference was also found between the correlations of Task 1 and Task 4, two tasks of meaning recognition modality and those of Task 2 and Task 5, two tasks of form recognition modality (z=2.82, p<.05). These findings demonstrate the fact that the empirical data support the theoretical construct. Tasks of similar modalities have a stronger correlation with one another than with tasks of different modalities.

Chapter 8 Results and discussion of the vocabulary learning strategy questionnaire

8.1.1 What do the data of the VLS questionnaire reflect?

As was described in Chapter 6, the VLS questionnaire included 38 items. The participants had to indicate how often they resort to the stated strategies of learning EFL words on a 4-grade scale: 'never', 'once a month', 'once a week' and 'always'. A more profound insight could be gained into YL's VLS use by examining dimensions established within the theoretical framework (see Chapter 6). It was analyzed which of the five strategy dimensions (cognitive, memory, metacognitive, social, determination) outlined by Schmitt (1997) was reported to be used the most frequently and the reliability of the factors within questionnaire was also examined (Table 46). The reliability of the questionnaire was acceptable (Cronbach's Alpha = .81)

Table 46. Descriptive statistics of the online vocabulary learning strategy questionnaire

Strategies	Mean	SD	Cronbach's Alpha
Cognitive	2.46	1.71	.80
Memory	2.72	1.89	.82
Metacognitive	2.58	1.63	.86
Determination	1.89	.89	.78
Social	1.49	1.12	.69

It is conspicuous from Table 47 that students reported using memory strategies the most often. Based on Student's t-test, memory strategies are significantly used more frequently than metacognitive strategies, the second most often used strategies ($t=1.48$, $p<.05$). This finding debunks the outcomes of the research conducted by Doró and Habók's (2013) who asserted that metacognitive strategies were most often used by YLs. However, they also found that memory, cognitive and social strategies were almost equally often applied by YLs. In this research, it stands out that social strategies are less frequently used than any other strategy. There is a significant difference between the frequency of use of determination, the second least used strategies and social strategies ($t=1.88$, $p<.05$). The plausible reason for memory strategies being the most frequently used ones is that YLs learn FL words in chunks and memorizing these chunks is a crucial way of acquiring them (Wray, 2002). My finding is, in contrast to Doró and Habók (2013), confirmed by Lan (2006) who stipulated that memory strategies were most often used by Taiwanese YLs (age=11). As for metacognitive strategies, Hardi (2014), within the framework of self-regulation, found that they were used by YLs to a similar extent to other vocabulary learning strategies. This means that YLs of EFL have a tendency of using metacognition to learn words. Strategy training on metacognitive strategies might be an expedient approach to enhancing the efficiency of EFL vocabulary learning by YLs.

Having seen the results of the word learning strategy dimensions, outcomes of all the items must be examined in details. Two items 'I use the newly-learned word in speaking to remember it' and 'I use a new word in speaking so as to remember it' were judged very similar and they had approximately equivalent results; thus, one of them ('I use the newly-learned word in speaking to remember it') was discarded from further analysis. In Table 47 the descriptive statistics of the questionnaire is presented with means and standard deviations. It is also clarified which factor each item belongs to.

Table 47. Descriptive statistics of the questionnaire items

Item	Mean	SD	Item-total corr.
I make a word list to remember the words	2.17	1.19	.36
I make English-Hungarian word cards	1.56	.93	.31
I underline the important words	3.00	1.20	.44
I circle the word that is important	2.84	1.24	.43
I read English newspapers to learn words	2.43	1.15	.49
I remember the page where I have seen the new word	2.68	1.23	.38
I use new word in a sentence	2.50	1.17	.61
I use Facebook to learn English words	1.56	1.03	.27
I play with word games	2.83	1.14	.26
I link new word to one with synonymous meaning	2.60	1.27	.53
I look up the word in an electronic dictionary	2.12	1.16	.14
I look up the new word in a monolingual dictionary	2.30	1.18	.37
I ask my classmate in class what the new word means	1.37	.85	.35
I use Skype to learn English words	1.36	1.18	.47
I link new word to one already known	2.48	1.15	.50
I evaluate if I have really learned the word	2.96	1.13	.41
I analyze parts of the word in order to find out its meaning	2.22	1.17	.53
I infer the meaning of the new words from spoken English	2.41	1.02	.48
I try to remember the Hun. eq. of the new English words	3.25	1.11	.41
I learn new words from my own vocabulary	3.08	1.00	.40
I watch English films with Hungarian subtitles	2.08	1.13	.32
I listen to English music in order to learn new words	3.09	1.13	.30
I watch English films without subtitles	1.60	.95	.46
I read English books	1.64	.94	.50
I play English video games	2.36	1.15	.33
I read English labels on products to learn new words	1.69	1.04	.49
I infer the meaning of the word from context when reading	2.49	1.16	.52
I look for English speaking friends in the social media	1.67	1.04	.48
I use a new word in speaking so as to remember it.	2.36	1.13	.40
I take notes of the words when watching English programs	1.58	.90	.40
I make picture word cards	2.48	1.19	.56
I repeat the word to myself	3.32	1.03	.55
I look up the meaning of the words in a bilingual dictionary	2.88	1.17	.44
I rote-learn the words	2.95	.95	.44

Following the descriptive analysis of the questionnaire I examined the correlations among the factors of the questionnaire in order to look deeply into the internal structure of the instrument and to investigate the underlying relationships among the factors. In Table 48, the correlational matrix is presented.

Table 48. Correlations across the factors of the questionnaire

	Cognitive	Memory	Metacognitive	Determination
Cognitive				
Memory	.45**			
Metacognitive	.49**	.47**		
Determination	.41**	.41**	.46**	
Social	.12	.11	.14	.11

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

In order to see whether there is a significant difference in the correlations among the factors of the questionnaire, z-tests were conducted in case of significant correlations. No significant difference was found among either of the correlations. In all cases the p-value was over .05.

It is conspicuous from Table 49 that social strategies show very weak relationship and no significant correlations with the rest of the factors. This is an indication that social strategies are not part of the internal structure in the questionnaire. The insignificant and low correlational values point to the fact that the items of social strategies function discrepantly in relation to the other items in the instrument. This might give rise to considering discarding this factor from the questionnaire. All the other four factors indicate a significant correlation among one another; however there is not a strong relationship among them with r-value .49 being the highest in the correlational matrix.

8.1.2 The most frequently used strategies

The most frequently used strategy reported by the learners is repetition of words to oneself. The 'I repeat the word to myself' statement is almost always used by the students (M= 3.31, SD= 1.03). Repetition might empower learners transfer the meaning of words from working memory to long-term memory and the use of this technique is often encouraged by teachers and parents even though repetition can be executed without understanding. Griva, Kamaroudis and Geladari (2009) had similar results in their research based on the self-report questionnaire and interviews with young learners as it was pointed out in section 4.5.

In the self-report process, the participants were requested to write down the strategies they used frequently to learn words. Translating into the mother tongue, repeating orally and looking up words in a dictionary were reported as the most frequently used strategies. During the think-aloud protocols, the researchers also revealed that metacognitive strategies were also a frequent instance of the attempt to learn new words

In an educational context, repetition is of great value when efficient learning is discussed. Another well-established strategy in foreign language learning in Hungary used for decades is learning the Hungarian equivalent of the English word (M=3.25, SD= 1.16). This is reflected by the fact that this strategy was reported to be very often used by YLs. Based on class observation, mastering the meaning in Hungarian is also encouraged by teachers. Hungarian YLs of EFL write the Hungarian meaning in their vocabulary and very often repeat them aloud by reading out the meaning and the English word. This strategy has been applied for a long time and appears to be still used by the YLs. The use of these two strategies is in line with what Hardi (2014) found in her research with Hungarian YLs (n=50). According to her assertion, repeating words and seeking to remember the Hungarian equivalent of words is often used by YLs in Hungary. Her findings are comparable to

those in this research since a frequency scale of four possible answers was used, similar to the one reported in this dissertation. Both strategies had a mean over the value of 3 and this finding corresponds to what Hardi (2014) found. Doró and Habók (2013), in their research with YLs, using Oxford's (1990) SILL questionnaire, also reported similar results.

Three other strategies were over the value of 3, which yields the evidence that these strategies are often used by nearly all of the students. The statement 'I use a new word in speaking so as to remember it' denotes a memory strategy that reflects a well-established intention on the part of the student to strengthen their long-term memory. The strategy of using a new word with the purpose of memorizing it had a mean value of 3.10 (SD=1.09). Metacognitive strategies and those strategies that require a heavy cognitive load are often used by successful language learners (Doró & Habók, 2013; Hardi, 2014). The statement 'I listen to English music in order to learn new words' was reported to be used also frequently (M=3.09, SD=1.13), which reflects Hardi's (2014) findings as well. Listening to music can be a powerful tool to learn new English words (Jedynak, 2000, p. 31), especially in the case of YLs, the majority of whom are assumed to listen to English songs for a considerable number of hours on their tablets, laptops or by using different downloaded applications. Listening to music to learn vocabulary proved to be even more often used by students than learning words from their own vocabulary book (M=3.07, SD=1.00) which was also frequent. The majority of the students learning a FL have a vocabulary book to write the Hungarian meaning next to the target language words. Teachers also encourage students to use their vocabulary book to write words taught during class time.

While the high frequency of all the above-mentioned strategies was anticipated, the strategy 'I underline the important words' was reported to be used also on a daily basis by most of the students (M=3.00, SD=1.21). Underlining words is plausibly an efficient cognitive strategy; however, it is an unexpected finding of this research that this strategy is the fifth most often used one for the purpose of mastering and memorizing words amongst Hungarian YLs.

The metacognitive strategy (Schmitt, 1998), 'I evaluate if I have really learned the word' is also a frequently applied strategy (M=2.95, SD=1.13) in the dataset. This finding corresponds to outcomes of Pavičič's research (2008) that was carried out with the participation of 11-year-old and 12 year-old Croatian children. Similarly to using evaluation, the strategy 'I circle the word that is important' also proved to be quite frequent (M=2.48, SD=1.24).

Using a bilingual dictionary is within the ten most frequently used strategies (M=2.88, SD=1.11) reported by the participants. Hardi (2014) also came to the conclusion that using a bilingual dictionary was a strategy popular with the learners. It appears that this strategy is independent of age and sociocultural variables since Hardi's (2014) and Schmitt's (1998) participants and methods were completely different. Schmitt's (1998) participants were Japanese adults who had to indicate the ten most frequently used strategies in a list whereas Hardi (2014) investigated the strategy use of Hungarian 5th and 6th graders in semi-structured interviews. These interviews revealed the fact that one of the preferences of Hungarian YLs was relying on a Hungarian-English dictionary. The findings in this research have confirmed the previous two reports as the statement 'I look up the meaning of the words in a bilingual dictionary' had a mean value of 2.88 (SD=1.11).

So far the most often recurring strategies have been discussed. Before going further, the issue of frequency is elaborated on and the least frequently used strategies are investigated. It merits attention that frequency of strategy use does not mean that it is appropriately used. Appropriate use will be discussed later in this dissertation.

8.1.3 The least frequently used strategies reported by the students

Several strategies turned out to be very rarely used. Observing these strategies provides information as to what strategies Hungarian YLs eschew using. Based on the literature this rare strategy use must be compared to findings of studies examining YLs' vocabulary learning strategy use. In case efficient strategies are not used by the learners, it must be pointed out that strategy training is needed for the students in order that they will have a wider repertoire of learning strategies.

The least frequent item turned out to be 'I use Skype to learn English words' (M=1.36, SD=1.18). Skype is mostly used for business communication and by families whose in-laws live abroad. In the case of communication with family members, the NL is used. It appears that hardly any of the participants use Skype with the aim of mastering English words. The other online tool used for communication, Facebook, is also hardly ever used for the purpose of learning English words (M=1.56, SD=1.03). The reason for this might be that YLs have few foreign friends on the social network site and also the language on Facebook opted for by the children is their NL, Hungarian, thus they nearly never communicate in English. Based on these data, it can be asserted YLs do not use social media with the goal of mastering English words in mind. This is confirmed by the mean value of the item 'I look for English speaking friends in the social media' (M=1.67, SD=1.04), which is yet another indication of the fact that Hungarian YLs do not use social networks for the purpose of learning EFL vocabulary.

Asking the classmate about the meaning of a word is also rather infrequently used (M=1.36, SD=.85). This might suggest that pair-work is rare in EFL classes in Hungary and students' talking to each other during class is not promoted by teachers (see Nikolov, 2008). Without taking an adventure into deeper analysis on the educational system in Hungary, it can be asserted that YLs are not trained to ask for each other's help in class or out of it.

The strategy 'I make English-Hungarian word cards' (M=1.56, SD=.93) was also reported to be rarely used. The mean value denotes that it is basically never used by the majority of the students. Mastering words with the help of word cards is a strategy usually encouraged by language teachers but it has turned out that Hungarian YLs hardly ever make word cards. Nowadays with the use of electronic devices, learners are more likely to apply an online dictionary or an online word game to learn new English words rather than cut pieces of paper into several parts and tediously write the English equivalent of the Hungarian words.

The item 'I read English labels on products to learn new words' (M=1.69, SD=1.04) was also found to be rarely utilized by students. Reading labels is supposed to be an efficient way of learning words and some teachers also use it as innovative realia in the classroom (Thornbury, 2004, p. 32) but both Schmitt's (1998) finding and that of this dissertation suggest that it is not preferred by students. The strategy 'I ask my classmate in class what the new word means' (M=1.36, SD=.85) was also found to be rarely used by most of the YLs. The feasible reason for this is that frontal teaching is still the trend in Hungarian foreign language classrooms and students are not provided with enough opportunities to work in pairs or groups. This reflects Nikolov's research (1999a), who found that foreign language teachers tended to use traditional methods in schools.

8.1.4 Teachers' beliefs on YLS' foreign language vocabulary learning strategies

In order to triangulate the data, 18 teachers of English teaching in 6th grade were requested to approximate how YLs learn English vocabulary. Only teachers teaching YLs were asked intentionally so that relevant data would be procured in this field. It must again be noted (see section 7.6) that teachers involved in this investigation were not the ones of the participating students. Data were

gathered in June 2015. A decision was made that teachers would not receive open-ended questions so that the dataset would be simple and easily comparable with the results of the questionnaire. The ten most frequent and the five least frequent strategies reported by the YLs on the online questionnaire were listed and this list was given to the teachers who saw the question: 'How often do you believe students use these strategies? The rationale behind the decision on selecting 15 strategies (ten frequent and five infrequent) was that I intended to see how realistically teachers assume what strategies students use. It is worth highlighting that teachers did not over-evaluate the use of these strategies that involve using social media. However, this turned out not to be the case. Table 49 presents the data collection instrument given to teachers. While teachers know that students spend a lot of time on social media and listen to English music, they, quite correctly, believe that these activities are hardly ever done with the conscious intention of learning new English words.

Table 49. Teachers' questionnaire on YLs' VLS
How often do you think students use these strategies?

	never	once a month	once a week	always
Students repeat the new word to themselves				
Students use Skype to learn English words				
Students try to remember the Hungarian equivalent of the English words				
Students use Facebook to learn English words				
Students learn new words from their vocabulary				
Students listen to English music in order to learn words				
Students take notes of words when watching English programs				
Students evaluate if they have really learned the new words				
Students use a new word in speaking so as to remember it				
Students look up the meaning of new words in a bilingual dictionary				
Students play with word games				
Students underline the important words				
Students circle the word that is important				
Students look for English speaking friends in the social media				
Students ask their classmate in class what the new word means				

Teachers involved in the study were not teachers of the participants. There is a nine-month gap in the two instances of data collection. Teachers reporting the data did not come from the same geographical location, allowing for a representative sample. Data reported by them were still considered relevant since they had taught 6th graders for a long time. Teachers were informed on the rationale behind data collection. They were given printed questionnaires and were given as much time as they needed to

complete the instrument. They were also told that the outcomes of the present dissertation would be shared with them. Table 50 presents the results of the teachers' questionnaire.

Table 50. Teachers' beliefs regarding YLs' VLS compared with the results

	Mean (SD)	Students' questionnaire results (SD)	t-values
Students repeat the new word to themselves	3.30 (1.20)	3.32 (1.03)	1.24 (p>.05)
Students use Skype to learn English words	1.92 (1.17)	1.36 (1.18)	1.86 (p<.05)
Students try to remember the Hungarian equivalent of the English words	3.4 (1.03)	3.25 (1.11)	1.20 (p>.05)
Students use Facebook to learn English words	2.21 (1.14)	1.56 (1.03)	1.92 (p<.05)
Students learn new words from their vocabulary	2.5 (1.27)	3.08 (1.00)	2.18 (p<.05)
Students listen to English music in order to learn words	2.80 (1.16)	3.09 (1.13)	2.18 (p<.05)
Students take notes of words when watching English programs	1.42 (1.18)	1.58 (.90)	.88 (p>.05)
Students evaluate if they have really learned the new words	2.82 (.78)	2.96 (1.13)	.26 (p>.05)
Students use a new word in speaking so as to remember it	2.67 (1.24)	2.36 (1.13)	.46 (p>.05)
Students look up the meaning of new words in a bilingual dictionary	3.72 (2.01)	2.88 (1.17)	2.14 (p<.05)
Students play with word games	2.22 (1.89)	2.83 (1.14)	.72 (p>.05)
Students underline the important words	3.46 (.92)	3.00 (1.20)	2.07 (p>.05)
Students circle the word that is important	2.52 (1.72)	2.84 (1.24)	.78 (p>.05)
Students look for English speaking friends in the social media	1.72 (1.65)	1.67 (1.04)	.62 (p>.05)
Students ask their classmate in class what the new word means	1.80 (.80)	1.37 (.85)	1.78 (p>05)

Comparing the mean values of the teachers' and the students' questionnaire it can be concluded that what teachers believe is not distant from what students reported. Those strategies that were reported being used not so frequently by students are exactly the ones that teachers believe students hardly ever use. The fact that teachers' views are in parallel to what students do in terms of FL word learning

strategy use is a positive fact since efficient teaching takes place when teachers know what their students actually do (Borg, 2003, p. 82).

Similarly to the least often used strategies, teachers reported approximately analogous data to those of the students as regards the most often used strategies. Teachers are very well aware of the fact that students repeat the words to themselves so as to learn them and that students very often seek to remember the Hungarian equivalent of the English words. A considerable number of teachers in Hungary themselves encourage students to use these two strategies frequently. Teachers involved in the study also clearly know that students use the traditional way of learning words from a vocabulary and that they look up the meanings of new words in a bilingual rather than a monolingual dictionary. Underlining and circling new words in a text are used very often by students and teachers' beliefs reflect this fact.

Requesting teachers of English to report their beliefs on YLs' word learning strategy use proved to be a good decision and it was discovered that teachers are aware of the word learning strategies used by YLs. It is a very positive thing that teachers know what students do to learn more efficiently because the teaching of successful strategies can be implemented in the classroom process, thus facilitating the learning of new FL words.

8.1.5 Interviews with students on their vocabulary learning strategies

With the aim of triangulating the data, three 6th graders were interviewed in a primary school in Szeged, Hungary. Their teacher was requested to select students from both genders and that had at least a final mark "B" (4 in Hungary) in English at the end of the previous semester. Data were gathered through the interviews in June 2015. Students were interviewed in Hungarian. The excerpts of the interviews translated into English are presented below.

> Interview 1: Foreign language vocabulary learning strategy use (grade 6, male)
>
> Researcher: Which statements are the most typical of you when you learn English words? Name those five statements that you most generally use.
> Student: Well…I think I use my vocabulary. I also repeat words with my mom at home. I also use Hungarian-English dictionary and I also underline words. I sometimes circle the words in the reading.
> Researcher: Do you learn words on Facebook, on the net and in video games?
> Student: I do…I do, but it is incidental. I do not play and use Facebook to learn words

This interview reflects the large-sample data gained in the online questionnaire. Using a vocabulary list and repeating words were reported by this student as a typical strategy. Through this interview, similar to the following ones, data were also gained with respect to the use of the social media: independent of how much time students spend on social media, they do not use it for the mastery of vocabulary. Incidental word learning might occur (see section 2.5.2).

> Interview 2: Foreign language vocabulary strategy use (grade 6, male)
> Researcher: Which statements are the most typical of you when you learn English words? Name those five statements that you most generally use.
> Student: I write words in my vocabulary many times…I rote-learn the words many times….English music? I listen to that but I never understand it. I do not learn words from that. What else? I underline words many times but I do not circle them. I never Skype…so, I think I use a vocabulary, I repeat the words to myself when I feel like…I underline the words.
> Researcher: Do you learn words on Facebook, on the net and in video games?
> Student: I do all of these but I never think of learning words when doing them.

Interview 2 also reflects the results of the online questionnaire. This student, similar to what was reported in the questionnaire, uses a vocabulary book and rote-learns words, which is a strategy used by average and students in the low achieving tercile. Underlining words is a popular strategy and this interview is a confirmation of this fact. With respect to social media, it is clear that this student does not consciously use it for the purpose of learning words. Using Skype had been supposed to be an efficient strategy among YLs; however it seems that the YLs, who participated in the research, hardly ever use it.

> Interview 3: Foreign language vocabulary learning strategy use (grade 6, female)
> Researcher: Which statements are the most typical of you when you learn English words? Name those five statements that you most generally use.
> Student: I always use my vocabulary…I underline words and I also listen to music and I am happy when I learn a new word. I watch English films with subtitles. My mom has a collection of DVDs at home and when she watches series on DVD I sit next to her. Unfortunately, I rote-learn the words, but let's see I evaluate…it means I think over the meaning? Yeah, then I evaluate the meaning of the word.
> Researcher: Do you learn words on Facebook, on the net and in video games?
> Student: Sometimes, Facebook is not for learning, I do not play videogames…I learn many words on the net but it is just accidental.

The third interview also supports the finding of the online questionnaire and on the one filled in by teachers reflecting their beliefs. Using a vocabulary and underlining words are mentioned by this student as well. She admits to rote-learning words which she regrets. This regret is expressed by the word 'unfortunately'. The use of this adverbial indicates that this student is aware of the inefficiency and obsolescence of this word learning strategy and she knows she ought not to use it. She is the only student out of the three that reports listening to music with the intention of mastering words. Another strategy with the use of media is mentioned: watching DVD film at home with sub-titles. She is aware of the fact that it is an expedient word learning strategy.

Hungarian YLs vocabulary learning strategy use was examined by means of a self-report questionnaire, a teachers' report on their assumptions and interviews. Having triangulated the data, a deeper insight into a few students' word learning strategies was gained. Classroom implications can be drawn, so the results are of great value not only for researchers but also for teaching practitioners.

8.1.6 Validating the questionnaire with confirmatory factor analysis

Confirmatory factor analysis (CFA) was applied to examine the underlying measurement model of vocabulary learning strategies. CFA is a linear model in which continuous observed item responses are predicted from latent factors (traits) and error. The goal is to reproduce observed item covariance matrix using estimated parameters (intercept, loading, and error variance for items, factor variance). Factor model makes specific testable mathematical predictions about how item responses should relate to each other: loadings predict covariances (Muthén & Muthén, 2010). At least 3 items per factor for the model to be identified are necessary and at least 4 items for model fit to be testable.

Different fit indices, the Tucker-Lewis Index (TLI), the comparative fit index (CFI) and the root mean square error of approximation (RMSEA), were computed to provide necessary information in determining model fit. Weighted Least Square and Mean- and Variance-adjusted (WLSMV) estimation was used (Muthén & Muthén, 2010). The TLI analyzes the discrepancy between the chi-squared value of the hypothesized model and the chi-squared value of the null model (Bentler & Bonett, 1980). RMSEA helps analyze the digression between the hypothesized model and the

empirical results with optimally selected parameter estimates. It has a range of 0 to 1. The smaller the value is, the better indication one has of the model fit. In case of CFI, the range is also between 0 and 1; however the bigger the value is the better model fit is illustrated (Bentler & Bonett, 1980).

First a five-dimensional model was investigated with the five factors. The five-dimensional model did not show a good model fit according to the CFI and TLI indices. In section 8.1.1, upon examining the correlational matrix, it was pointed out that social strategies did not show a significant correlation with the rest of factors. The inconsistence in the functioning of the items belonging to the social strategies factor made it suspicious that the social factor ought to be discarded. The CFA with the five-dimensional model (with the social strategies being part of it) gave evidence to this suspicion. Due to the low covariance values of the social factor in the matrix, its low factor-loadings and the improvable CFI and RMSEA values, a decision was made to discard the factor and to run a four-dimensional model. After conducting the CFA with the four-dimensional model I found that it proved to have better model fit (Table 51).

Table 51. Goodness of fit indices for testing dimensionality of vocabulary learning strategies

Model	**χ^2**	**df**	**p**	**CFI**	**TLI**	**RMSEA**
Five-dimensional	1,350.89	655	.00	.67	.64	.06
Four-dimensional	597.68	246	.00	.91	.92	.07

Note: df = degrees of freedom; CFI = Comparative Fit Index; TLI = Tucker–Lewis Index; RMSEA = Root Mean Square Error of Approximation; χ^2 and df are estimated by WLSMV.

According to Muthén and Muthén (2010), the following interpretations ought to be given to the different indices: RMSEA: < .05 or .06 = 'good', .05 to .08 = 'acceptable', .08 to .10 = 'mediocre', and >.10 = 'unacceptable'; CFI: from 0 to 1: bigger is better, > .90 = 'acceptable', > .95 = 'good'; TLI: from 0 to 1: bigger is better, > .90 = 'acceptable', > .95 = 'good'. On the basis of this interpretation, the four-dimensional model fit is acceptable since the CFI is over .90, the TLI is also over .92 and the RMSEA falls into the acceptable range.

The four-dimensional model lacked not only the items of the original social factor but items from the other four factors were also discarded due to low factor-loading values. Besides the items of the social factor, the following items were removed before testing the four-dimensional model (for the identification of the items, see Table 28): Memory 7, Metacognitive 1, Metacognitive 2, Metacognitive 8, Metacognitive 11, Determination 2, Cognitive 4, Cognitive 6.

Having examined the main indices giving information of whether measures of the vocabulary learning strategies construct are consistent with my hypothesized measurement model, I also sought to analyze the factor-loadings of the items. It was found in the midst of the CFA that the items had the highest factor loadings within their own factor which might indicate the confirmation of the theoretical model. Table 52 presents the factor loading estimates (all loadings are significant at p-value=.00; for the identification of the items, see Table 28).

Table 52. The factor-loadings of the questionnaire items following CFA

	Cognitive	Memory	Metacognitive	Determination
Cognitive 1	.66			
Cognitive 2	.39			
Cognitive 3	.63			

Cognitive 5	.70				
Memory 1		.50			
Memory 2		.41			
Memory 3		.44			
Memory 4		.68			
Memory 5		.41			
Memory 6		.67			
Memory 8		.58			
Metacognitive 3			.51		
Metacognitive 4			.48		
Metacognitive 5			.50		
Metacognitive 6			.58		
Metacognitive7			.56		
Metacognitive 9			.52		
Metacognitive 10			.50		
Metacognitive 12			.51		
Metacognitive 13			.47		
Determination 1				.60	
Determination 3				.52	
Determination 4				.51	
Determination 5				.42	

It is obvious from Table 51 that most of the factor-loadings are over the .50 value. Only Cognitive 2, Memory 2, Memory 3, Memory 6, Metacognitive 4, Metacognitive 13 and Determination 5 strategies load weakly on the their pertaining factors.

After conducting CFA on the vocabulary learning strategies factors, it can be asserted that a valid and reliable instrument has been created. The items in the social factors had shown hardly any covariance with the rest of the items in the different factors that they were discarded; however in future assessment it needs to be considered whether the social factor or some of its items ought to be included in the questionnaire and it will need further factors analysis and validation as to where the new items will belong.

Chapter 9 Correlations of YLs' word knowledge with VLS and other background variables

9.1.1 The strategies used by sub-samples

In this dissertation the aim was also to see the divergences of word learning strategy among the three sub-samples. In Table 53 the ten most frequent strategies used by the students in the high achieving tercile, in Table 54 the ten most frequent strategies used by the Students in the medium-achieving tercile and in Table 55 the ten most frequent strategies used by the students in the low achieving tercile are listed.

It is clear that the most successful students claimed to use the strategy 'I try to remember the Hungarian equivalent of the English word'. Nation (2001, p. 78) argues that in spite of the beliefs of many teachers representing the communicative approach, the NL may be a good aide in language learning so students might as well make use of it. Students with a broad vocabulary appear to use this strategy very often and they do so successfully. The following pedagogical implication can be deduced: when it is really necessary, teachers and students ought not to turn away from using the NL. Students in the high achieving tercile also use a traditional, mechanical strategy 'I repeat the word to myself.' It seems that frequent repetition will lead to efficient word learning. Thus repetition, no matter how mechanical it might be, could be efficient. Strategies used by successful foreign language word learners to almost an equal extent are: underlining words, evaluation of newly-learned words and learning new words from their own vocabulary book. Underlining and evaluating are both metacognitive strategies (Schmitt, 1998) and they prove to be efficient among Hungarian 6th graders. Using a vocabulary book is a traditional word learning strategy in Hungary and it goes hand in hand with the most frequent strategy of remembering the equivalent of the English word in Hungarian. Students generally use their bilingual vocabulary book to write the new words on the left side by giving the Hungarian equivalent on the right side for the purpose of remembering the meanings. It is also worth highlighting that students with good English vocabulary breadth, the students in the high achieving tercile on the online test, reported the use of new words in writing, playing video games and linking words to synonymous meanings quite frequently. Hungarian 12-year-old students might spend a lot of time playing video games but not all of them use it as an efficient activity from the perspective of learning words. However, the students in the high achieving tercile on the vocabulary test appear to play games with the purpose of learning English vocabulary relatively frequently. This entertaining activity can be efficiently and simultaneously turned into successful word learning in case a conscious goal exists. Playing English video games was used by the students in the low achieving tercile relatively frequently (M=2.88, SD=1.36), However, the consciousness behind this strategy is questionable.

Table 53. The ten most frequently used strategies by the students in the high achieving tercile

Strategy	Mean	SD
I try to remember the Hungarian equivalent of the new English words	3.27	1.06
I repeat the word to myself	3.13	.98
I evaluate if I have really learned the word	3.06	1.52
I learn new words from my own vocabulary	2.98	1.48
I use the newly-learned word in writing	2.82	1.36
I underline the important words	2.80	1.30
I play English video games	2.78	1.45
I link new word to one with synonymous meaning	2.72	1.12
I remember the page where I have seen the new word	2.64	1.46
I use a new word in speaking so as to remember it	2.58	1.05

Table 54. The ten most frequently used strategies by the Students in the medium-achieving tercile

Strategy	Mean	SD
I learn new words from my own vocabulary	3.38	1.22
I try to remember the Hungarian equivalent of the new English words	3.36	1.54
I underline the important words	3.08	1.09
I rote-learn the words	3.02	1.34
I learn new words in order to communicate	2.98	1.19
I look up the meaning of the new words in a bilingual dictionary	2.88	1.54
I repeat the word to myself	2.79	1.34
I circle the word that is important	2.78	1.36
I remember the page where I have seen the new word	2.59	1.02
I link new word to one already known	2.45	1.26

Table 55. The ten most frequently used strategies by the students in the low achieving tercile

Strategy	Mean	SD
I learn new words from my own vocabulary	3.28	.99
I try to remember the Hungarian equivalent of the new English words	3.18	1.02
I look up the meaning of the new words in a bilingual dictionary	3.01	1.06
I repeat the word to myself	2.97	1.18
I play English video games	2.68	1.36
I rote-learn the words	2.59	1.14
I learn new words to communicate better	2.54	1.34
I link new word to one with synonymous meaning	2.36	1.09
I remember the page where I have seen the new word	2.32	1.18
I link new word to one already known	2.29	1.15

Students in the high achieving tercile reported that linking new words to a synonymous meaning was used quite frequently (M=2.72, SD=1.12). This strategy is among the ten most frequently strategies used by the students in the low achieving tercile (M=2.36, SD=1.09) to a similar extent to the students

in the high achieving tercile. A plausible assertion from this finding is that students with poor English vocabulary do not use this strategy as effectively as the students in the high achieving tercile. They might seek to link the words to a synonymous one but since they lack sufficient vocabulary they cannot find synonyms to new words as opposed to the students in the high achieving tercile who find synonyms with ease and thus increase their vocabulary.

Rote-learning words is not among the ten most frequent strategies by the students in the high achieving tercile (M=2.08, SD=1.62) contrary to average and the students in the low achieving tercile. This might be taken as proof to the hypothesis that rote-learning, mechanical learning of words, is hardly ever efficient. Rote-learning is a strategy used by the weaker sub-sample and it is clearly indicated that repeating words without any consciousness results in unsuccessful word learning and narrow vocabulary breadth. Rote-learners achieved poorly especially on the productive writing task in form recall modality as it was pointed out in section 8.1.5.

Another striking piece of data is related to the evaluation of newly-learned words. The students in the high achieving tercile reported applying this strategy quite often (M=3.02, SD=1.48) contrary to the average and the students in the low achieving tercile. Evaluation of a word, i.e., looking for its synonyms, antonyms, usage is held an efficient strategy by Nation (2001) and Schmitt (1997) and their assertion is evidenced by this finding: high achieving students on a foreign language vocabulary test use self-assessment by evaluating words as opposed to their low achieving counterparts who do not. The pedagogical implication is clear: all students must be taught how to use the technique of evaluating a word because once this technique is learned, word learning will become more successful.

Besides evaluating the strategy 'I use the new word in writing' is also among the ten most often used strategies by the students in the high achieving tercile (M=2.92, SD=1.32). This strategy was not reported by the average and the students in the low achieving tercile. This finding calls our attention to the fact that evaluating words and using them in writing are both effective strategies and students ought to be encouraged to apply them. By using a word in writing, the word can be more efficiently stored in long term memory similarly to any study material in education as stipulated by Anderson, Baddeley and Eysenck (2010, p. 42). Writing down the word many times and using it in a sentence is also found to be an efficient word learning strategy by Pavičič (2008). The finding in this dissertation thus confirms Pavičič's finding (2008)

9.1.2 Investigating the predictors of foreign language word knowledge

Geared from the pilot study and the analysis of the two data gathering instruments, further statistical investigations were performed so that correlations could be revealed related to foreign language word knowledge and other background variables regarded as potential influencing factors in foreign language word knowledge. First of all, the correlations between the vocabulary test and such background variables as number of classes per week, attitude towards further education, opportunity to use Internet daily and mother's highest education were investigated. No significant correlations were revealed between foreign word knowledge and the listed variables. In the Hungarian educational context, the mother's education generally has a strong relationship with any cognitive test. The results of the investigations targeting correlations are presented in Table 56.

Table 56. Correlations between FL word knowledge and other variables

	English grade	Frequency of Eng. classes	Mother's highest education	Attitude towards language
FL word knowledge	.26	.38*	.42*	.56*

* p< .05

In order to see whether there is a significant difference in the correlations between FL word knowledge and other variables, z-tests were conducted in case of significant correlations. No significant difference was found between the correlations of FL word knowledge with attitude towards language and those of FL word knowledge with the mother's highest education (z=1.96, p=.05). There was no significant difference between correlations of FL word knowledge with frequency of English classes and there was none between those of FL word knowledge with the mother's highest education, either. In addition, no significant difference was found between the correlations between FL word knowledge with frequency of English classes and those of FL word knowledge with attitude towards language. This means that bot of these background variables exert a similar influence on EFL word knowledge.

As outlined in section 2.3.4, in the model of EFL vocabulary learning three main factors were determined. First of all it was pointed out that certain antecedents such as biological and experimental factors play a role in vocabulary learning. It was also asserted that in a vocabulary learning model, dimensions of individual differences was worth encompassing (strategies, attitude towards language, NL vocabulary knowledge and language aptitude). It must be noted that in my dissertation, besides EFL word knowledge, strategies and attitude towards language learning were measured. Motivation was not assessed because taking the online test, filling in the online strategies questionnaire and filling in the online background questionnaire in one session was exhausting enough for the students and having students fill in Dörnyei 's (2005) questionnaire on motivation would have been overwhelming.Similarly to this decision, language aptitude was not assessed because the application of the single validated instrument in the Hungarian context, Kiss and Nikolov's (2005) test assessing language aptitude would have been fatiguing. NL vocabulary was not measured in my investigation either due to the fact that it would be a heavy cognitive load for the students to participate in an online EFL vocabulary test, to fill in an online questionnaire and a background questionnaire, plus to sit for Nagy's (2004) NL vocabulary test.

In addition, it was also defined that the model must comprise the factor of vocabulary learning context that might be formal or informal. However, no data were gathered of context since the main goal of this dissertation was to explore the correlations between EFL word knowledge and word learning strategies. In my research, data were gathered on EFL vocabulary size, word learning strategies and with a background questionnaire, attitude towards language, replacing motivation) and the antecedent variables. Instead of language aptitude school grade in English was involved was used as a single piece of data gained on the background questionnaire.

A multiple linear regression was calculated to predict vocabulary size based on strategy use, attitude towards language, school grade in English, mother's highest education and frequency of English classes. Data on strategy use were gathered from the online questionnaire; attitude towards language was the variable calculated from the answers given by the students to the question: 'What would you like to do and achieve with the English language?' Six possible answers were the option in the range of 'I want to stop learning it as soon as possible' to 'I want to have university degree as

an English major.' Frequency of English classes, the mother's highest education, school grade in English were pieces of data provided by the students on the online questionnaire. Table 57 presents the regression analysis with the vocabulary test scores being the dependent variable.

Table 57. Regression analysis with the vocabulary test scores being the dependent variable predicted by other background variables (rβ%)

Dependent variable: Vocabulary test scores	
Independent variables	
Cognitive strategies	3.24*
Memory strategies	3.42*
Metacognitive strategies	5.42*
Determination strategies	1.86
Social strategies	1.12
School grade in English	2.32
Frequency of English classes	6.66*
Attitude towards language	6.24*
Mother's highest education	6.26*
Total variance explained (%)	37.54

* p< .05

The regression analysis yields the indication that the frequency of English classes is the strongest predictor of EFL word knowledge. This means that the more English classes YLs have and the more intensive their EFL learning is, the more words they know. Attitude towards language was found to be the second strongest predictor of EFL word knowledge which is a finding similar to Fonetcha's (2014) and to what Tseng and Schmitt (2008) hypothesized. Similar to previous findings of studies conducted in a Hungarian context in language learning and in other educational domains (Csapó, 2001), the mother's highest education was a strong predictor of the results scored on the vocabulary test. However, school grade in English was a background variable that did not significantly predict EFL word knowledge, which is a confirmation of the hypothesis (Csapó, 1998) that school grades might not always be the reflection of real knowledge.

As for the relationship between word study strategy use and the results scored on the vocabulary test, cognitive, memory and metacognitive strategies prove to be strong predictors; however it appears that the use of determination and social strategies do not significantly predict EFL word knowledge. Even though the strategy 'I try to remember the Hungarian equivalent of the new English words' is used by the high-achievers to the greatest extent (see section 9.1.1), which is a determination strategy, determination strategies appear not to exert a significant influence on EFL word knowledge. However, the use of memory strategies does predict word knowledge. The memory strategy factor is represented by three items amongst the ten most frequently used strategies by the high-achievers: 'I repeat the word to myself', 'I link the new word to one with synonymous meaning', 'I remember the page where I have seen the new word'.

Similar to memory strategies, cognitive and metacognitive strategies have a significant predicting effect on EFL word knowledge. The cognitive strategies 'I learn new words from my vocabulary', and 'I use a new word in speaking so as to remember it.' and the metacognitive strategies 'I evaluate if I have really learned the word', 'I underline the important words, 'I play English video games' are among the ten most frequently used strategies by high-achievers; thus the use of these

items might be the predictors of successful word learning. However, as mentioned above, social and determination strategies do not play a determining role in the model of EFL word knowledge. It must also be added that as much as 37.54 % of the variance is explained, which means that more than 60 % is not explained, i.e., we have no knowledge as to what other variables predict EFL word knowledge, which is a limitation of this dissertation.

In order to map the predictors of word knowledge more deeply, I conducted six more regression analyses with the six tasks in the vocabulary test being the dependent variables. I wanted to investigate how the variables in the model predict word knowledge requiring different skills (listening, reading, or writing) in different modalities. The Tables present the regression analyses with the following dependent variables: results scored on Task 1 (Table 58), results scored on Task 2 (Table 59), results scored on Task 3 (Table 60), results scored on Task 4 (Table 61), results scored on Task 5 (Table 62), results scored on Task 6 (Table 63).

Table 58. Regression analysis with results scored on Task 1 being the dependent variable predicted by other background variables (rβ%)

Dependent variable: Results scored on Task 1	
Independent variables	
Cognitive strategies	3.74*
Memory strategies	3.28*
Metacognitive strategies	5.01*
Determination strategies	1.78
Social strategies	1.23
School grade in English	2.49
Frequency of English classes	6.29*
Attitude towards language	5.53*
Mother's highest education	7.86*
Total variance explained (%)	37.21

* p< .05

Task 1 was a listening task in meaning recognition modality. Besides the background variables (frequency of English classes, attitude towards language, and mother's highest education) being strong predictors of knowledge of words in meaning recognition modality, similarly to the entire test, in case of the results scored on Task 1, cognitive, memory, and metacognitive strategies prove to be the strongest predictors of the success in recognizing words students listen to. Of all the strategies, metacognitive strategies have the strongest predicting power in this task, confirming what Bacsa (2014, p. 166) found, namely that the use of metacognitive strategies play a role in a listening task. Having examined the regression analysis as concerns Task 1, I will present the results of the regression analysis with results scored on Task 2 being the dependent variable in the following tables.

Table 59. Regression analysis with results scored on Task 2 being the dependent variable predicted by other background variables (rβ%)

Dependent variable: Results scored on Task 2	
Independent variables	
Cognitive strategies	2.28*
Memory strategies	3.21*
Metacognitive strategies	4.86*
Determination strategies	1.89
Social strategies	1.86
School grade in English	2.86
Frequency of English classes	5.87*
Attitude towards language	4.48*
Mother's highest education	6.86*
Total variance explained (%)	34.17

* p< .05

In case of the students' achievements on Task 2, similar results are found in the regression analysis. The same variables as in the case of Task 1, predict the results scored on a listening task in form recognition modality. Metacognitive strategies exert the strongest effect on the knowledge of words in this modality of all the strategies, similarly to Task 1. Having examined the regression analysis as far as Task 2 is concerned, I will present the results of the regression analysis with results scored on Task 3 being the dependent variable in the following table.

Table 60. Regression analysis with results scored on Task 3 being the dependent variable predicted by other background variables (rβ%)

Dependent variable: Results scored on Task 3	
Independent variables	
Cognitive strategies	3.52*
Memory strategies	3.58*
Metacognitive strategies	5.22*
Determination strategies	1.88
Social strategies	1.54
School grade in English	2.78
Frequency of English classes	6.32*
Attitude towards language	5.42*
Mother's highest education	7.96*
Total variance explained (%)	38.52

* p< .05

In case of Task 3, a reading task in meaning recognition modality, almost the same statements can be made as in case of the results scored on Task 1 and Task 2. However, there is one small diversion: as opposed to the regression analysis conducted with Task 1 and Task 2 (two listening tasks) being the dependent variables, memory strategies prove to be stronger predictors than cognitive strategies. The explanation might be that for a reading task in meaning recognition modality, one needs to use more of their memory than more cognitively complex techniques. Having seen the regression analysis in

terms of Task 3, I will present the results of the regression analysis with results scored on Task 4 being the dependent variable.

Table 61. Regression analysis with results scored on Task 4 being the dependent variable predicted by other background variables (rβ%)

Dependent variable: Results scored on Task 4	
Independent variables	
Cognitive strategies	2.26
Memory strategies	1.78
Metacognitive strategies	3.38*
Determination strategies	1.45
Social strategies	1.62
School grade in English	1.08
Frequency of English classes	4.32*
Attitude towards language	4.47*
Mother's highest education	6.59*
Total variance explained (%)	26.95

* p< .05

As regards the students' achievement on Task 4, a reading task in meaning recognition modality (similarly to Task 3 but with a different test format) besides the three background variables (frequency of English classes, attitude towards language and the mother's highest education), out of the strategies only metacognitive strategies prove to be strong predictors of the students' achievements. It appears that memory strategies and cognitive strategies do not significantly influence the success in a meaning recognition reading task. It must be noted here that the results of this task being the dependent variable have the lowest value of the total variance explained; thus in this model, one has no knowledge of what might explain the students' achievement in this reading task. Having investigated the regression analysis as regards Task 4, I will present the results of the regression analysis with results scored on Task 5 being the dependent variable.

Table 62. Regression analysis with results scored on Task 5 being the dependent variable predicted by other background variables (rβ%)

Dependent variable: Results scored on Task 5	
Independent variables	
Cognitive strategies	2.12
Memory strategies	1.48
Metacognitive strategies	3.82*
Determination strategies	1.62
Social strategies	1.78
School grade in English	1.29
Frequency of English classes	4.29*
Attitude towards language	4.58*
Mother's highest education	6.46*
Total variance explained (%)	27.44

* p< .05

As far as the regression analysis is concerned with results scored on Task 5 being the dependent variable, the value of total variance explained is almost as low as the one in case of Task 4. In Task 5 students had to solve the task in form recognition modality by reading the words and matching them with pictures (see section 6.3.6). The use of memory strategies and determination strategies do not play a role in the achievement on this task. However, the use metacognitve strategies appear to be necessary since reading labels on pictures and trying to infer meaning based on pictures are useful strategies to recognize the forms of words. Having examined the regression analysis as regards Task 5, I will present the results of the regression analysis with results scored on Task 6 being the dependent variable.

Table 63. Regression analysis with results scored on Task 6 being the dependent variable predicted by other background variables (rβ%)

Dependent variable: Results scored on Task 6	
Independent variables	
Cognitive strategies	3.26*
Memory strategies	2.46
Metacognitive strategies	3.38*
Determination strategies	1.86
Social strategies	1.78
School grade in English	1.26
Frequency of English classes	4.22*
Attitude towards language	4.10*
Mother's highest education	5.58*
Total variance explained (%)	27.90

* p< .05

The regression analysis with results scored on Task 6 indicates a diversion compared to that conducted with Task 4 and Task 5. Cognitive strategies significantly predict the achievement on this task in form recall modality. Having to use their productive vocabulary, YLs appear to resort to cognitive strategies to a greater extent than in the two reading tasks in meaning recognition and form recognition modalities. This is a useful finding of these analyses that different strategies are needed for the success in the achievement in a form recall task than in a task of different modality. Having discussed the regression analyses, I was also seeking to examine the effect of two strong predicting variables of EFL vocabulary size: the mother's highest education and attitude towards language.

A 2 X 2 ANOVA was conducted to compare the effect of attitude towards language and the mother's highest education on each other and on the vocabulary test scores. These two variables were selected for the ANOVA because these two variables had a tendency of predicting variable size to the greatest extent. There was a significant effect of attitude towards language on the vocabulary test scores at the $p<.05$ level [$F(44,217) = 2.24$]; there was also a significant effect of the mother's highest education at the $p<.05$ [$F(44,217) = 1.98$]. As for the influence exerted by the two background variables on each other, I found that the mother's highest education also had a significant effect on attitude towards language at the $p<.05$ [$F(44,217) = 1.68$]. Since I found a statistically significant result in this example, I needed to compute a post hoc test. I selected the Tukey-b post hoc test. This test is designed to compare each of my conditions to every other conditions. This test compared the effect of attitude towards language with that of the mother's highest education. There was no

significant difference in the effect exerted by the two background variables. Based on the results of the analysis of variance it can be concluded that the variables have a significant effect on EFL vocabulary size; however there is no significant difference between their effects, implying that they similarly exert an influence on EFL vocabulary size.

Chapter 10 General discussions, conclusions, limitations and further research areas

10.1 General stipulations

After analyzing the results of the online vocabulary test and the online vocabulary learning strategy questionnaire and after triangulating the data, the research questions (RQ) listed in Chapter 6 must be answered. The relevant points will be highlighted in answers to research questions.

The investigation of YLs' EFL vocabulary size and VLS was a major endeavor since two data collection instruments were developed and piloted. After I had conducted a pilot study with the two instruments, item-analysis and several statistical procedures were conducted in order that a adequately functioning test and questionnaire would be used on large sample for the sake of unveiling correlations and of gaining a deeper insight into the organization of vocabulary and the frequencies of word study strategies.

It was of utmost importance to triangulate the data. With regard to the vocabulary test, a think-aloud protocol was conducted with one student of average language proficiency and school achievement, and teachers were also requested to estimate the probable achievement of 6th graders on the test. As far as the VLS questionnaire was concerned, besides the data gained on the questionnaire, teachers were requested to share their beliefs as to the students' VLS. Besides these two sources of data, interviews were also performed with students so that another set of qualitative data would support the findings.

With regard to the results, the listening task of meaning recognition modality proved to be the easiest and the most difficult task was Task 4, a reading task of meaning recognition modality. It was asserted during data analysis that a task of form recall (Task 6), a presupposedly difficult task, proved to be easier than Task 4 and Task 5. This is an indication that form recall might not always be more difficult than meaning or form recognition, a finding that refutes Laufer et al.'(2004) stipulations.To gain a clear picture of the functioning of the items, total-correlation values were also envisioned. None of the items, except for 'icecream' (.01) fell below a critical value.

The sample was fragmented into score ranges. Four students fell within the score range of 1-5 points and eight students within the 6-10 point units. This means that twelve students knew fewer than ten words out of 54 items. Even though they had been learning English for two years, at the time of test-taking they knew only around ten percent of the words in the vocabulary test. As for the students in the medium-achieving tercile, within the score ranges of 21-25, 26-30 and 31-35, there are 168 students out of the 288 test-takers. By carefully envisioning the badly-achieving, the medium-achieving and the high-achieving parts of the sample, a normal distribution can be noticed, which means that the criterion of the classical test theory of proper differentiation is achieved. Nevertheless, it must be clarified that the vocab test was not an achievement test. The actual words were chosen based on word frequency rankings and curriculum; thus it may mean that they knew many other words, but not the items on the test.

10.1.1 The most simple and most difficult task of the vocabulary test (RQ 1: How does the YLs' performance on the vocabulary test explain EFL vocabulary size?)

As was discussed in section 7.5.1, it was found based on t-tests that Task 1, the listening task of meaning recognition modality, proved to be significantly the easiest (M=6.39) and the significantly

most difficult task was Task 4, a reading task of meaning recognition modality (M=2.75). It was asserted during data analysis that a task of form recall (Task 6), a supposedly difficult task, proved to be significantly easier (M=3.38). In Table 30 the descriptive statistics of the six tasks was presented. The vocabulary test comprised six tasks and 54 items. In all the six tasks, except for Task 3, there were nine items in addition with one item that was an exemplary item and one was a distractor.

In Task 3, participants had to comprehend nine items and there were nine distractors and six exemplary items. In every task the maximum points were nine. This meant that the maximum points in the whole test were 54 points. Reliability of the test proved to be acceptable (Cronbach's Alpha = .86).

As Schmitt (2014) argued, form recognition was more challenging than meaning recognition. In the case of the two reading tasks, this stipulation was justified. However, students scored fewer points in Task 5 (M=2.76), than in Task 4 (M=2.75). This refuted the hypothesis that a form recognition task would be more difficult than a meaning recognition task.

It is also necessary to emphasize that in the task that necessitated the use of productive vocabulary, Task 6 in the modality of form recall, assumedly the most difficult modality, students scored significantly more points than in Task 4 and Task 5. This finding was examined in a more profound way. In Task 5 students had to link the lexical item and the pertaining definition whilst in Task 6 a set of well recognizable pictures were at their disposal and they had to write one item next to picture. The results on the online test were conformed by the think-aloud protocol conducted with a student of average communicative competence as described in section 7.7. The sample was divided into score ranges of five point units. Four students fell within the score range of 1-5 points and eight students within the 6-10 point units. This means that twelve students knew fewer than ten words. Even though they had been learning English for two years or more, at the time of test-taking they had a vocabulary of around ten words of the ones that were involved in the investigation. It is incredibly low. As for the Students in the medium-achieving tercile, within the score ranges of 21-35, there are 168 students out of the 288 test-takers. By carefully examining the low achieving, the medium-level achieving and the high achieving parts of the sample, a low figure can be noticed, which means that the criterion of the classical test theory of adequate differentiation is realized.

It was also concluded that both the medium-level and the lowest achieving sub-samples performed better in a supposedly more challenging form recall task (Task 6) than in a form recognition reading task (Task 5). This was an indication that students with poor word knowledge performed worse in meaning and form recognition modality than in form recall modality.

10.1.2 The functioning of the items (RQ 2: How can conclusions be drawn from students' achievements as regards the way items function on the vocabulary test?)

The item-total correlation values were evaluated. This value is calculated to see if any of the items fails to have responses that vary in line with those items for other tests in the population. In other words, this calculation is performed to check if any item is inconsistent with the other items. The minimum of this item-total correlation value is .20 (see section 5.3.4). None of the items, except for 'icecream' (.01) fell below this value. In case a test is under development, it is suggested that the items below .20 should be discarded. In this case there was no possibility to replace 'icecream'; however in further research a new item will be used in Task 6. Some very low values were unveiled. The item, for example, the most learners knew, 'clean' had a value of only .26. 'Lion' was also near the critical limit with an item-total correlation value of .27. In an instrument with 54 items, one item not being consistent with the rest of the items might be acceptable. However, it is a striking finding

that in Task 4 all of the items' total-correlation values are below .30 but above the .20 limit. Task 4 proved to be the most difficult task as was stated earlier. In section 8.1.5 it was also discussed that Task 4 correlated significantly with Task 1, Task 2 and Task 3 and had a weak relationship and insignificant correlation with the rest of the tasks. Since none of the items in Task 4 are of unacceptably low item-total correlation values, the assertion can be made that Task 4 fits in well with the entire test.

It was also highlighted that the item-total correlation values of all items except for 'icecream' were acceptable, i.e., above the .20 limit (Field, 2005). Albeit some items were in the vicinity of this critical value the instrument does not appear to suffer from low item-total correlation values, the whole instrument yielded valid results. Items with low item-correlation values have an even distribution across tasks.

10.1.3 A criterion-referenced perspective of the vocabulary test. (RQ 3: From a criterion-referenced testing perspective, how do students know the most frequent English words?)

Students' overall mean knowledge of Category 1 words was 48.34 (SD=43.73). It was also asserted that some students (see the ones in the high achieving tercile) knew over ninety percent of the Category 1 words. It is obvious that the mastery of Category 1 words is inevitable in the process of learning less frequent words and of progressing to higher ability levels in EFL. The critical limit of proceeding to the next stage of learning was set at the knowledge of 80 % of Category 1 words based on Nagy (2004). It was found that out of the 282 participants 108 (38.29%) knew at least 80 % of Category 1 words.

10.1.4 The correlation of the tasks on the vocabulary test (RQ 4: How do the relationships amongst tasks of different modalities provide an insight into the construct of YLs' EFL word knowledge?)

As for RQ 4, the six tasks indicated significant correlations with one another with the exception of Task 5 and Task 6. Task 5 had a weak relationship with Task 2 (r=.01) and a strong relationship but no significant correlation with Task 1 and Task 3 (r=.06 and r=.06, respectively). The correlations were shown in Table 41 in section 7.9. Task 6 had a weak relationship with Task 2 (r=.11) and no significant correlation with Task 3 and Task 4. It was also asserted that it was hard to find hardly any relationship between Task 5 and Task 2 because they were of the same modality (form recognition) and the task was the same: matching words with definitions. The only difference was the skills required to solve the tasks: listening and reading plus the actual words.

Task 1 and Task 2, the two listening tasks yielded an indication of a modest relationship with a significant correlation (r=.50, p<.01), meaning that no matter whether the modality was meaning recognition or form recognition, the two tasks measured a similar construct. Task 4 and Task 5 also correlated significantly with a weaker relationship (r=.36, p<.05). Two similar tasks requiring matching pictures with the items, Task 1 and Task 4 correlated significantly in a weak relationship (r=.33, p<.01); however the listening task, Task 2, requiring learners to match items with definitions did not imply any relationship with the reading task, Task 5, demanding learners to match definitions with items. It was observed that two related tasks in terms of task solving function had hardly any relationship and insignificant correlation within the same test. This outcome reflected the assumption (Vidákovich et al., 2013, p. 126) that listening to and reading definitions demanded different task solving subskills. Furthermore, it is hard to rely on previous research data as YLs' vocabulary had

been assessed in only one modality with previous testing instruments. Vocabulary knowledge in different modalities was assessed; thus no comparable data were accessible.

Task 6 had a very weak relationship with Task 1; the correlation was significant ($r=.14$, $p<.05$). This meant that a task requiring the use of a receptive skill, listening, has a somewhat stronger relationship with a productive task than with another task also requiring reading skills. Task 6 was also significantly correlated with Task 5 ($r=.47$, $p<.01$). The explanation given to this fact in section 7.9 was that these two tasks were related due to an overlap in the topic. These items formed a set of words that are usually learned in a collected cluster.

10.1.5 The performance of the students in the high achieving tercile on the productive task of the vocabulary test (RQ 5: How do the highest achieving students perform on the productive task of the vocabulary test?)

As far as RQ 5 is concerned, it was expected that the productive task in form recall modality would be the most difficult task and as such it would be a major differentiating factor among the participants of different word knowledge. As it was discussed earlier in response to RQ 1, Task 6 did not prove to be the most challenging task. However, I intended to know how students in the high achieving tercile performed on this particular task to gain better insight into the organization of their vocabulary. Students in the high achieving tercile had a mean of 4.78 on the productive task, which means that they reached nearly 50% on this task. It is a low value compared to the number of points they reached on Task 1, Task 2 and Task 3. None of them had the maximum nine points on this task and one of the students in the high achieving tercile on the overall test has as few as two points. This outcome gives evidence to the fact that this form recall modality task is difficult and most of the participants were not prepared to use words in production. The classroom implication can be concluded that even learners of good ability must be trained for productive use of the foreign language so that their communicative skills can be improved.

10.1.6 The estimation of 6th graders' vocabulary size (RQ 6: How do teachers estimate the vocabulary size of 6th graders?)

As regards RQ 6, it can be asserted that 18 teachers of English of 6th graders generally overestimated the word knowledge of students, following the comparison of the results of what teachers assumed and what students achieved. Besides examining the descriptive statistics of teachers' assumptions and students' test scores, the t-test also confirmed the existing over-estimation of students' word knowledge.

In section 7.6 it was discussed that for the purpose of obtaining a more profound insight into students' vocabulary size, 18 teachers were requested to approximate the performance of 6th graders on the online test. Table 38 presented the instrument that had been given to the teachers. Once the teachers submitted their filled-in questionnaires, a comparison was made between them and the results on the online test.

It was highlighted that students scored a mean of 6.39 on the online test whereas teachers expected them to score over 7.38. The assumed scores were characterized by an over-estimation on part of the teachers. As regards all the tasks, teachers over-estimated the achievement of the students. As for the assumptions of the teachers, they indicated that in Task 2 students ought to score 5.62 whereas students scored below 4.00. In Task 3 teachers, for instance, over-estimated the expected task score by one %. The two reading tasks, were also over-estimated, so was Task 6. However, it is

worth noting that teachers ranked the tasks based on difficulty very well. Teachers predicted well the order of difficulty on the basis of the mean value of their assumed test scores. Teachers expected Task 1 to be the most simple and they gained justification on the online test and they expected Task 3 to be the second easiest and this was the case on the test. The expected difficulty of Task 4 and 5 was reflected on the test. Task 6, the productive vocabulary task in form recall modality, was over-estimated by the teachers. The independent sample Student's t-test also indicated a significant difference between the assumptions of teachers and the results of the participants.

10.1.7 The most and the least frequently used strategies (RQ 7: Which strategies are the most frequently used ones?, RQ 8 Which strategies are used less frequently?)

RQ 7 and RQ 8 enquired into the ratio of occurrence of VLS. The descriptive statistics of the self-report vocabulary learning questionnaire is presented in section 8.1.2. The traditional strategy 'I repeat the word to myself' is the most frequently used strategy followed by the strategy 'I try to remember the Hungarian equivalent of the new English words.' The strategies reported by students 'I use a new word in speaking so as to remember it' and 'I listen to English music in order to learn new words' are also very frequently used by learners as it was reported by them. In order to gain information regarding the distribution of the frequency of strategy use of YLs, it was also investigated which strategies students reported using less frequently. Asking classmates what the new word means is a strikingly infrequent strategy. Making English-Hungarian word cards goes out of fashion in terms of strategy use as it was reported to be used very rarely. The strategy 'I use Skype to learn English words' is also an opportunity not exploited by the YLs.

As for my findings in comparison to previous research it was concluded that Griva, Kamaroudis and Geladari (2009) had had similar results in their research based on the self-report questionnaire and interviews with young learners as was pointed out in section 4.5. The most frequently used strategy reported by the learners is repetition of words to oneself. The 'I repeat the word to myself' statement is almost always used by the students (M= 3.31, SD= 1.03). Repetition might empower learners transfer the meaning of words from working memory to long-term memory and the use of this technique is often encouraged by teachers and parents even though repetition can be executed without understanding.

It was also argued in section 8.1.2 that in an educational context, repetition is quite an efficient strategy. Hungarian YLs of EFL have a tendency of writing the Hungarian meaning in their vocabulary and keep repeating them aloud by reading out the meaning and the English word. Hardi (2014) had similar findings in her research with Hungarian YLs (n=50). According to her assertion, repeating words and seeking to remember the Hungarian equivalent of words are frequently used strategies by YLs in Hungary. I also concluded that Hardi's (2014) findings could be compared to those in this research since a frequency scale of four possible answers was used. Both strategies had a mean over the value of 3 and this outcome was in alignment with what Hardi (2014) had found. Doró and Habók (2013), in their research with YLs, using Oxford's (1990) SILL questionnaire, also reported similar results.

Further on in section 8.1.2 it was stipulated that The statement 'I listen to English music in order to learn new words' was reported to be used also frequently which had a congruence with what Hardi (2014) had found. It was also pointed out that listening to music could be a powerful tool to learn new English words (Jedynak, 2000, p. 31), especially in the case of YLs, spend a considerable number of hours on their tablets, laptops, and smartphones.

The strategy 'I underline the important words' proved also to be quite frequent (M=3.00), which was not anticipated prior to the research. The probable causes of this outcome were discussed in section 8.1.2. The metacognitive strategy (Schmitt, 1998), 'I evaluate if I have really learned the word' is also a frequently applied strategy, which corresponds to the outcomes of Pavičič's research (2008) that had been carried out with the participation of 11-year-old and 12 year-old Croatian children. These findings were confirmed during the qualitative data-gathering procedure when three interviews were conducted with 6th graders as described in section 8.1.5.

10.1.8 The correlations of the factors of the word study strategy questionnaire (RQ 9: How can implications be drawn from the correlations of the factors of the word strategy questionnaire correlate with one another?)

In terms of correlation s across the factors in the questionnaire, it was found that social strategies showed very weak relationship and no significant correlations with the rest of the factors. This is an indication that social strategies are not part of the internal structure in the questionnaire. The insignificant and low correlational values pointed to the fact that the items of social strategies function discrepantly in relation to the other items in the instrument. This might give rise to considering discarding this factor from the questionnaire. In case of all the other four factors a significant correlation was found among one another. It was also highlighted that there was not a strong relationship among them with r-value .49 being the highest in the correlational matrix.

10.1.9 The assumption of teachers on the VLS use of students (RQ 10: What VLS do teachers assume students use?)

RQ 10 queried into the teachers' estimation of YLs' strategy use. For the sake of triangulating data with respect to students' vocabulary strategy use, not only quantitative data gathering and interviews were conducted but teachers were also requested to express their beliefs on the vocabulary strategy use of YLs. It was revealed that teachers believe that students use the listed strategies most frequently: 1) repeating the new word to themselves, 2) using Skype to learn English words, 3) trying to remember the Hungarian equivalent of the English words, 4) using Facebook to learn words, and 5) learning words from their vocabulary.

Following the comparison of the mean values of the teachers' and the students' questionnaire it was concluded that what teachers believed was in congruence to what students reported. Similarly to the least often used strategies, teachers estimated well the most often used strategies by students. Teachers are very well aware of the fact that students repeat the words to themselves so as to learn them and that students very often seek to remember the Hungarian equivalent of the English words. A considerable number of teachers in Hungary themselves encourage students to use these two strategies frequently. It was argued in section 8.1.3 that teachers involved in the study are aware that students use the traditional way of learning words from a vocabulary and that they prefer looking up the meanings of new words in a bilingual rather than a monolingual dictionary. Underlining and circling new words in a text are used very often by students and teachers' beliefs reflect this fact.

10.1.10 The correlations between the word study strategy use word knowledge (RQ 11: How do factors of word study strategy use and other background variables explain vocabulary size?)

In response to RQ 11, correlations between the vocabulary learning strategy use and the results of the vocabulary test were analyzed. Previous studies (Schmitt, 1997) pointed out that repetition and

mechanical learning strategies were more popular than strategies requiring heavy cognitive load. This assertion of his can be related to YLs as well. However, popular strategies are not necessarily the ones that are needed for successful vocabulary learning; therefore, it was observed what strategies were used by students in the high achieving tercile to the greatest extent.

A more profound insight may be gained into which strategies are the most efficient if one examines the strategies used by the high-achieving students. Students in the high achieving tercile have a tendency of trying to remember the Hungarian equivalent of the new English words; however it must be noted that participants were not assessed in a test requiring the knowledge of the NL equivalents of the items. They use the traditional memory strategy of repeating the word to themselves. They underline words to remember them. They also assess themselves if they have learned the word. Students in the high achieving tercile also frequently learn new words from their own vocabulary. The list of frequent strategies used by students in the high achieving tercile was presented in section 8.3.1.

The five most frequent strategies used by students in the high achieving tercile are 'I try to remember the Hungarian equivalent of the new English words' (M=3.47, SD=1.00), 'I repeat the word to myself' (M=3.23, SD=.94), 'I underline the important words (M=3.05, SD=1.21), 'I evaluate if I have really learned the word' (M=3.00, SD=1.28), and 'I learn new words from my own vocabulary' (M=3.00, SD=1.28).

It was also asserted that what students in the high achieving tercile report they do to learn words might not be the most efficient EFL word learning strategy. This statement is also justified by the fact that, as was presented in section 9.1.2, vocabulary strategy use explains less than 13% of the total variance of EFL word knowledge.

10.1.11 The effects of background variables on the vocabulary test tasks (RQ 12: How do the correlations of different tasks of the vocabulary test with other background variables explain vocabulary size?)

The regression analysis indicated that the frequency of English classes is the strongest predictor of EFL word knowledge. Attitude towards language was found to be the second strongest predictor of EFL word knowledge which is a finding similar to Fonetcha's (2014) and to what Tseng and Schmitt (2008) hypothesized. Similar to previous findings of studies conducted in a Hungarian context in language learning and in other educational domains (Csapó, 2001), the mother's highest education was a strong predictor of the results scored on the vocabulary test. However, school grade in English was a background variable that was not a significant predictor of EFL word knowledge, which is a confirmation of the hypothesis (Csapó, 1998) that school grades might not always be the reflection of real knowledge.

As for the relationship between word study strategy use and the results scored on the vocabulary test, cognitive, memory and metacognitive strategies appear to have predictive strength; however, it seems that the use of determination and social strategies do not significantly predict EFL word knowledge. Even though the strategy 'I try to remember the Hungarian equivalent of the new English words' is claimed to be used by the high-achievers to the greatest extent (see section 9.1.1), which is a determination strategy, determination strategies appear not to exert a significant influence on EFL word knowledge. However, the use of memory strategies does predict word knowledge. The memory strategy factor is represented by three items amongst the ten most frequently used strategies by the high-achievers: 'I repeat the word to myself', 'I link the new word to one with synonymous meaning', 'I remember the page where I have seen the new word'.

It was also asserted that similarly to memory strategies, cognitive and metacognitive strategies have a significant predicting effect on EFL word knowledge. The cognitive strategies 'I learn new words from my vocabulary', and 'I use a new word in speaking so as to remember it.' and the metacognitive strategies 'I evaluate if I have really learned the word', 'I underline the important words, 'I play English video games' are among the ten most frequently used strategies by high-achievers; thus the use of these items might be the predictors of successful word learning. However, as mentioned above, social and determination strategies do not play a determining role in the model of EFL word knowledge. It must also be added that as much as 37.54 % of the variance is explained, which means that more than 60 % is not explained, i.e., we have no knowledge as to what other variables predict EFL word knowledge.

10.2 Limitations of the dissertation and further research opportunities

Inevitably, there are a number of limitations that need to be noted in this study. First, the sample was not representative and a larger number of participants might have increased the reliability of both the vocabulary test and the self-report VLS questionnaire. This caveat of my research in some cases restricted the significance level of my results; therefore, the extension of the results to the population also encountered restrictions. On the other hand, the sample size number of 288 is not as low as that in previous research so classroom implications might be drawn from the results.

Limitations concerning the vocabulary test are the following: 1) items were assessed only one single task limiting the measure of items to one single modality. Fewer number of students might have known one item in a difficult task (Task 4, Task 5) than in an easier task (Task 1 and Task 3); 2) no equivalent test version was created, thus validation of the test battery is somewhat restricted.

As for the self-report questionnaire there is always reason for skepticism whether learners use the strategy in practice that they actually report using. In order to draw conclusions as to what might go in the learners' minds when using strategies to learn EFL words, more interviews would have been necessary. In Hardi's (2014) research investigating vocabulary learning strategies, over 25 structured interviews were conducted, which is considerably more than the ones conducted in my research; thus the number involved in my study could increase in follow up research. Another limitation of the questionnaire was highlighted by the CFA which shed light on the fact that items in the social strategy factor did not show any consistency with the internal structure of the instrument. The social strategy factor was discarded from the five-dimensional model and a new, four-dimensional model was tested in the CFA.

As regards the questionnaire focusing on teachers' estimation of EFL vocabulary size and VLS of YLs, it is worth noting that the teachers participating in the study were not the teachers of the YLs taking part in the study. They were EFL teachers teaching 6th graders and they must have had different students of different abilities in mind. As far as the qualitative investigation is concerned, think-aloud protocols and interviews were plausibly also limited on account of a small sample size.

Several components of the model (see section 2.3.4), native language vocabulary knowledge, motivation were not investigated in the current research. In a follow up large-scale study, the correlations may be examined with a Hungarian NL vocabulary test. There is evidence that NL vocabulary is a good predictor of FL vocabulary (Swan, 1997). Another component, language anxiety was not involved in my study, either. The reasons for this decision were pointed out in section 2.3.4. In future research language aptitude will be regarded as a latent variable of vocabulary knowledge in a structural equation modeling measure.

As for the model outlined in section 2.3.4, it must be tested in future research with previously validated data collection instruments. In the fall of 2016, I am planning to conduct a correlational study of FL vocabulary and NL vocabulary. The assessment will be executed online with the instrument described in this dissertation for the measure of FL vocabulary and Magyar's (2015) online NL vocabulary test grounded on Nagy's (2004) reference-oriented diagnostic instrument which is the most accessible and applicable one for this type of measure since it is the only Hungarian word knowledge test that is available online (Magyar, 2015).

For the future measure of the correlations between FL vocabulary and FL motivation, Csizér and Dörnyei's (2005) questionnaire will be used and to investigate the relationship between FL vocabulary and FL aptitude, Kiss and Nikolov's (2006) test will be used.

10.3 Pedagogical implications of the online test and the VLS questionnaire

In Hungarian primary schools the teaching practice is still based on out-of-date methodologies (Nikolov, 2003). It is asserted by Nikolov (2011, p. 12) that inefficient methodologies do not correspond to either the characteristics of this age-group or the principles of communicative language teaching. According to Hungarian 6th and 8th graders, frontal classwork based on questions and answers, code-switching, word and grammar explanation in Hungarian are the most typical of English language classes. Pair and group work are considerably rare (Nikolov, 2003). The most frequent classroom procedures are still the traditional grammar-translation, reading alound, and drilling techniques. Watching videos, listening to music, word games, and role-plays, activities popular with students, are very rare (Nikolov, 2003).

It is evident from these that efficient word learning might take place with a wide variety of classroom and learning techniques involving traditional techniques. Hungarian primary school students' EFL motivation can be maintained with modern techniques that are of interest to them: activities related to context, songs, parlor games, word games, creative story-telling, and role-plays that involve constant repetition of everyday chunks (Moon, 2000).

Since children progress slowly in FL vocabulary uptake and their attention span is short, classroom tasks have to converge with how YLs can focus their attention on any activity. Repetition of the same tasks elicits boredom and bored students can hardly be motivated to master words. Activities ought to be diverse and a range of tasks types need to be applied in the EFL classroom so that efficient vocabulary learning can be achieved. Thornbury (2004, p. 32) argues that students need to believe that they can master FL words. This statement can be interpreted likewise in the context of YLs.

Teachers must keep individual differences in mind as well: what is interesting for one student might not be motivating for the other; therefore, vocabulary tasks must be interesting and short. The low achievement on Task 6 might also be the cause of the fact that students grew fatigued by the time they had to do it. It might be benefcial that tasks of more difficult modalities will preceed those of simpler modalities in a vocabulary test. Vocabulary tasks ought to exceed the level of the students to a minimum amount and are expected to be realistically achievable.

Classroom implications from the major findings of this research can be gained as far as vocabulary learning strategy training is concerned. The willingness to learn vocabulary is of utmost importance. Without motivation no vocabulary learning takes place. Since it can be stipulated that a considerable part of mastering vocabulary is limited to the school setting, it is necessary for teachers to provide tailor-made word learning strategy training for students.

Selecting motivating course books, age-appropriate teaching material and using motivating teaching methodologies and techniques are cornerstones of motivation, especially in the case of YLs. Teaching students efficient (e.g., those used by high-achieving students) word strategy techniques can also be motivating for the learners. Teachers ought to get learners acquainted with a wide range of VLS so that vocabulary uptake can take place at an even pace and their level of motivation will be kept up. YLs need to be taught how to monitor their progress of word learning and by teaching them strategies and their awareness of them ought to be raised during their vocabulary learning process.

Strategy training and awareness raising are plausibly beneficial in the word learning progress for students; howeve, I do not believe that showing and teaching the YLs too many strategies can be efficient. Strategies need to be calibrated individually according to several factors: e.g., age, achievement on school tests, type of student, etc.

As for specific implications of this current research, strategies that involve repetition and memorization turned out to be key learning strategies. In my research, as was pointed out in section 7.9.1, students reported that they repeat words to themselves quite often (M=3.31). However, there are different other memory learning strategies. According to Baddeley (1997), if spaced repetition of words takes place, long-term memory retention can be achieved. This implies that teachers should promote the use of various ways of repetition for mastery of words that are motivating. Care needs to be taken since the mindless memorization of word lists leads to wasted time and energy on mastery of words (Hardi, 2014). On the contrary as Cameron (2004) argues, it is expedient to take the words out of a meaningful context and memorize them. I believe an even balance of contextualized and decontextualized learning of words may be useful.

Teachers must be aware of the fact that YLs encounter a lot of English words in the social media; however both the descriptive statistics and the interviews (see section 7.9.5) gave the indication that Hungarian YLs hardly ever use online tools, social media and digital games for the purpose of learning words. However, it must be borne in mind that children may have reported their conscious and intentional learning (or the lack of it), not their learning acquisition opportunities. Thus, the distinction between learning and acquisition must be taken into consideration (see section 1.3.3).

As for the classroom implications of the correlations between VLS and the vocabulary test, a few conclusions can be drawn. Since students in the high achieving tercile reported using such strategies frequently as ‘I try to remember the Hungarian equivalent of the new English words’, ‘I repeat the word to myself’, ‘I underline the important words’, ‘I evaluate if I have really learned the word’, and ‘I learn new words from my own vocabulary’, these strategies might be considered as efficient ones; however that does not mean that students achieve well on the vocabulary test because they use these particular strategies. In addition, the sub-samples based on achievement use by and large the same types of strategies according to this study’s findings. For the sake of the students’ advancement in EFL word learning, strategy training is plausibly expedient. It is nowadays axiomatic that YLs use online media tools very often and their way of learning differs to a great extent from what their teachers applied when they were students. It was also asserted in this dissertation that YLs did not consciously use online tool to learn EFL vocabulary. Thus, teachers themselves must be prepared and be aware of the fact that their students learn differently and use different strategies. Teachers’ promoting online glossing that involves providing the definitions, whether brief or long, of key words alongside the text in which they appear. The use of online dictionaries and even conscious use of social media for the purpose of mastering words could also be beneficial.

The training of students on the methodology of conscious use of digital tools could be a huge step forward in the field of teaching vocabulary in class. Students ought to be also encouraged to learn

words outside the classroom as they use smartphones, laptops and tablets. Once they are taught how to enrich their EFL vocabulary, they will have a more efficient uptake of EFL words.

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Appendices

Appendix A. The paper-and-pencil vocabulary test

I)

Instruction	Listen to 10 words and match them one by one with a picture from the list (A-K). There is an extra picture you don't need. See the example (1).
Maximum points	9
Evaluation	each correct answer is worth 1 point

Words	Answers
1) airplane	C
2) camel	
3) helicopter	
4) monkey	
5) lion	
6) ship	
7) skating	
8) swimming	
9) train	
10) tram	

Pictures
A) 
B) 
C) 
D) 

E) 

F) 

G) 

H) 

I) 

J) 

K) 

II)

Instruction	You will hear 10 definitions. Find what they mean in the list of words (A - K). There is an extra word you don't need. See the example (1).
Maximum points	9
Evaluation	each correct answer is worth 1 point

Definitions	Answers
1) You can buy meat in this shop.	C
2) This is what buses do at the final stop.	
3) This is what students do at school.	
4) This is what you do to make bread or cakes.	
5) You can buy food, household goods and a lot of other things here.	
6) This is what farmers do with their fruit at the market.	
7) People watch films here.	
8) This is a building where doctors and nurses work.	
9) This is what children do in a kindergarten.	
10) This is what you do when you are hungry.	

Words
A) arrive
B) bake
C) butcher's
D) cinema
E) eat
F) grocery
G) hospital
H) learn
I) play
J) sell
K) theatre

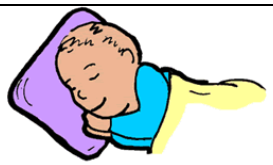
III)

Instruction	You can see six words and three pictures in each box. Match the words with the correct pictures. In the example, the first three answers are given.
Topic	Mixed: nouns, verbs, adjectives
Maximum points	9
Evaluation	each correct answer is worth 1 point

Example

	Answers
1) crying	
2) dancing	
3) sleeping	A
4) reading	B
5) thinking	C
6) walking	

A)



B)

C)

	Answers
1) cutting	
2) cleaning	
3) drinking	
4) driving	
5) mowing	
6) robbing	

A)

B)

C)

	Answers
1) deep	
2) heavy	
3) quick	
4) sour	
5) tiny	
6) wet	

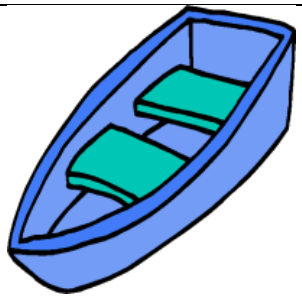
A)

B)

C)

	Answers
1) barrel	
2) boat	
3) legs	
4) pocket	
5) t-shirt	
6) tomato	

A)



B)

C)

IV)

Instruction	Find the pairs of the jobs (1-10) in the list of pictures (A - K). There is an extra word you don't need. See the example (1).
Maximum points	9
Evaluation	each correct answer is worth 1 point

Words	Answers
1) bus driver	E
2) cook	
3) dentist	
4) firefighter	
5) hairdresser	
6) mechanic	
7) pilot	
8) plumber	
9) tailor	
10) waiter	

Pictures
A) 
B) 
C) 

D) 

E) 

F) 

G) 

H) 

I) 

J) 

K) 

V)

Instruction	Pair the definitions (1-10) and words (A - K). There is an extra word you don't need. See the example (1).
Maximum points	9
Evaluation	each correct answer is worth 1 point

Definitions	Answers
1) You can do this on a chair.	I
2) This is what you do in the kitchen to make food.	
3) It is a thing hanging in the window as decoration or shade.	
4) This is what people do in the bathroom.	
5) You eat your meals in this part of the house.	
6) This is what people can do in the living room.	
7) It is a place in a kitchen for dishes.	
8) This is where you keep books.	
9) People sleep in this place of their house.	
10) This is what you do with the door when you want to enter.	

Words
A) bedroom
B) cook
C) cupboard
D) curtain
E) dining room
F) garbage
G) open
H) shelf
I) sit
J) talk
K) wash

VI)

Instruction	You see 10 pictures on a restaurant's menu card. Write the names of the **food** next to the pictures. In the example one answer (*soup*) is given.
Maximum points	9
Evaluation	each correct answer is worth 1 point

G) 	
H) 	
I) 	
J) 	

VII)

Instruction	You can see 10 words. Look at the table in the example and chose one of the options in Hungarian.
Maximum points	18
Evaluation	Student knows Hungarian meaning: 1 point Student can write a sentence in Hungarian: 2 points

Example

1)

cloud	Sosem láttad még ezt a szót.	
	Láttad, de nem tudod a jelentését.	
	Tudod a magyar jelentését írd ide!	felhő
	Írj egy mondatot a szóval!	There are a lot of clouds in the sky in spring.

2)

frozen	Nem láttad még ezt a szót.	
	Láttad, de nem tudod a jelentését.	
	Tudod a szó magyar jelentését) írd le ide!	
	Írj egy mondatot a szóval!	

3)

fruit	Nem láttad még ezt a szót	
	Láttad ezt, de nem tudod a jelentését	
	Tudod a szó magyar jelentését) írd le ide	
	Írj egy mondatot a szóval	

4)

foreign	Nem láttad még ezt a szót	
	Láttad ezt, de nem tudod a jelentését	
	Tudod a szó magyar jelentését) írd le ide	
	Írj egy mondatot a szóval	

5)

whole	Nem láttad még ezt a szót	
	Láttad ezt, de nem tudod a jelentését	
	Tudod a szó magyar jelentését) írd le ide	
	Írj egy mondatot a szóval	

6)

lightning	Nem láttad még ezt a szót	
	Láttad ezt) de nem tudod a jelentését	
	Tudod a szó magyar jelentését) írd le ide	
	Írj egy mondatot a szóval	

7)

through	Nem láttad még ezt a szót	
	Láttad ezt, de nem tudod a jelentését	
	Tudod a szó magyar jelentését) írd le ide	
	Írj egy mondatot a szóval	

8)

accuse	Nem láttad még ezt a szót	
	Láttad ezt, de nem tudod a jelentését	
	Tudod a szó magyar jelentését) írd le ide	
	Írj egy mondatot a szóval	

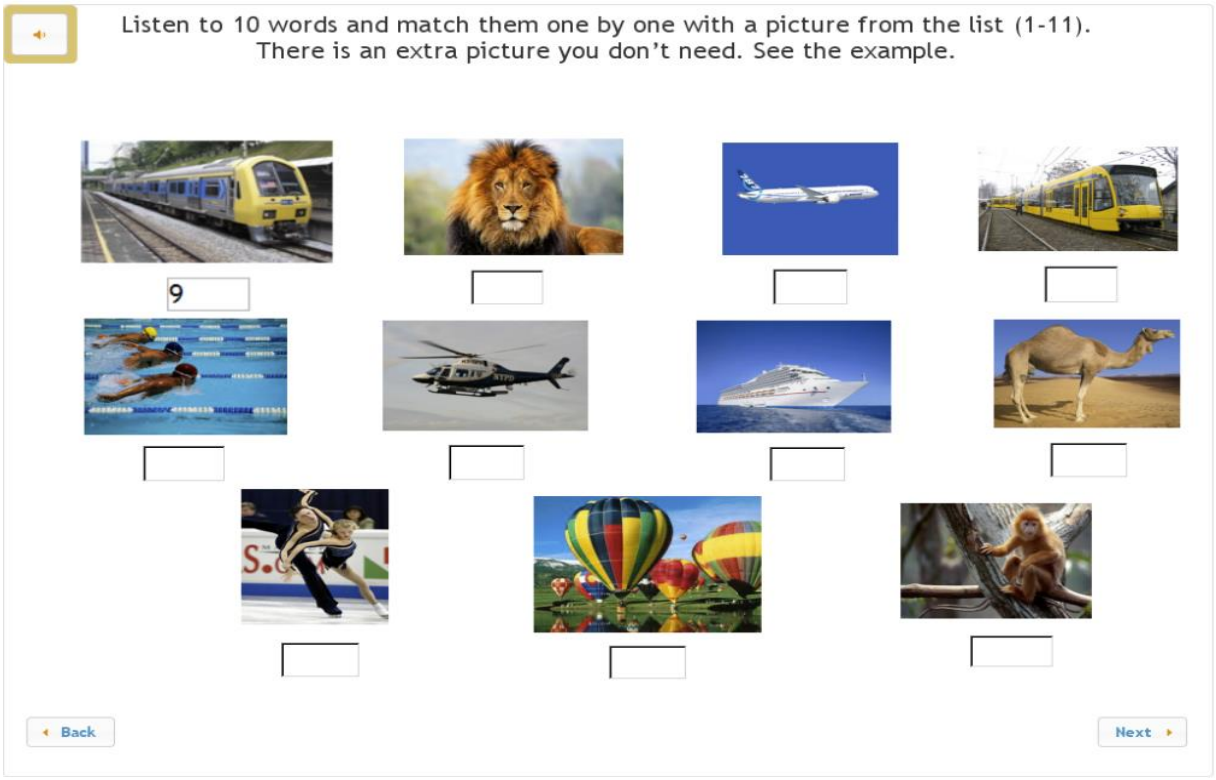
9)

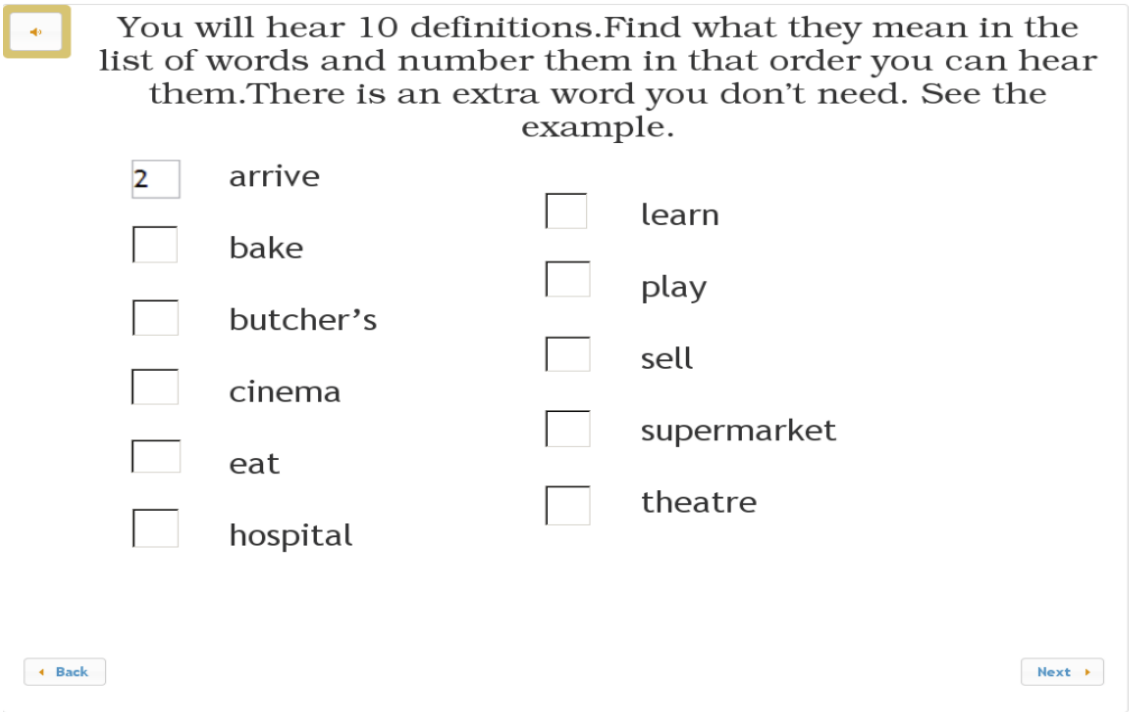
probably	Nem láttad még ezt a szót	
	Láttad ezt, de nem tudod a jelentését	
	Tudod a szó magyar jelentését) írd le ide	
	Írj egy mondatot a szóval	

10)

handsome	Nem láttad még ezt a szót	
	Láttad ezt , de nem tudod a jelentését	
	Tudod a szó magyar jelentését) írd le ide	
	Írj egy mondatot a szóval	

Appendix B. The online vocabulary test





You can see six words and three pictures. Match the words with the correct pictures. In the example, the first three answers are given.



crying ☐ dancing ☐ sleeping 1

reading 2 thinking 3 walking ☐



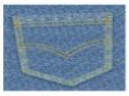
cutting ☐ cleaning ☐ drinking ☐

driving ☐ mowing ☐ robbing ☐



deep ☐ heavy ☐ quick ☐

small ☐ sour ☐ wet ☐


blood ☐ boat ☐ cup ☐

field ☐ leg ☐ pocket ☐

Back Next

Find the pairs of the jobs (1-10) in the list of pictures. There is an extra word you don't need. See the example.

1. bus driver
2. cook
3. dentist
4. firefighter
5. hairdresser
6. mechanic
7. pilot
8. plumber
9. tailor
10. waiter











3

Back Next

Drag the words to the definitions from the list of words. There is an extra word you do not need. See the example.

You can do this on a chair.	sit	bedroom
This is what you do in the kitchen to make food.		cook
It is a thing hanging in the window as decoration or shade.		cupboard
This is what people do in the bathroom.		curtain
You eat your meals in this area in the house.		dining room
This is what people can do in the living room.		garbage
It is a place in the kitchen for dishes.		open
This is where you keep books.		shelf
People sleep in this place of their house.		talk
This is what you do with the door when you want to enter.		wash

Back Next

You see 10 pictures on a restaurant's menu card. Write the names of the food below the pictures. In the example, one answer is given.





soup





Back Next

Appendix C. The paper-and-pencil questionnaire

Jelöld be X-szel azt az állítást, ami leginkább jellemző rád!

	Soha	Hetente	Havonta	Mindig
1. Az új szavakat mondatban használom.				
2. Úgy tanulom az új szavakat, hogy sokszor leírom azokat.				
3. Az új szavakat sokszor hangosan kimondom				
4. Szótárfüzetet használok a szavak tanulására				
5. Az újonnan megtanult szavakat szóban használom, hogy minél előbb megtanuljam.				
6. Az újonnan megtanult szavakat írásban használom, hogy minél előbb megtanuljam				
7. Tárgyakra ráírom vagy ráragasztom az angol megfelelőiket.				
8. Szójátékokat játszok, hogy megtanuljam a szavak jelentését				
9. Mikor a szavakat tanulom, elképzelem vagy azt a helyzetet, amikor használnám.				
10. Mikor a szavakat tanulom, lerajzolom azt a helyzetet, amikor használnám.				
11. Szólistát csinálok, hogy emlékezzek a szavakra.				
12. Csoportosítom a szavakat hasonlóságuk alapján.				
13. Hasonló jelentésű szavakhoz kötöm a megtanulandó szavakat.				
14. Ellentétes jelentésű szavakhoz kötöm a megtanulandó szavakat.				
15. Az új szavakat ismertekhez kapcsolom.				
16. Képes szókártyákat készítek.				
17. Angol-magyar szókártyákat készítek.				
18. Elképzelem a szó jelentését.				
19. A szavak mellé képeket rajzolok.				
20. Felmérem, hogy megtanultam-e az új szót.				
21. Angol dalokat hallgatok, hogy új szavakat tanuljak.				
22. Aláhúzom, vagy azokat a szavakat, amelyek fontosak.				
22. Bekarikázom azokat a szavakat, amelyek fontosak.				
24. Azért, hogy növeljem a szókincsemet, angol filmeket nézek angol felirattal.				
25. Azért, hogy növeljem a szókincsemet, angol filmeket nézek felirat nélkül.				
26. Azért, hogy növeljem a szókincsemet, angol filmeket nézek magyar felirattal.				
27. Azért nézek angolul rajzfilmeket, hogy angol szavakat tanuljak.				

	Soha	Hetente	Havonta	Mindig
1. Az új szavakat mondatban használom.				
28. Azért, hogy növeljem a szókincsemet, angol újságot olvasok.				
29. Azért, hogy növeljem a szókincsemet, angol könyvet olvasok.				
30. Azért, hogy növeljem a szókincsem, számítógépes játékokat játszok.				
31. Azért, hogy növeljem a szókincsem képregényeket olvasok.				
32. Azért, hogy növeljem a szókincsem angol nyelvű feliratokat olvasok.				
33. Szándékosan azért használok új szavakat írásban, hogy emlékezzek rájuk.				
34. Szándékosan azért használok új szavakat szóban, hogy emlékezzek rájuk.				
35. Azért, hogy növeljem a szókincsem, számítógépes játékokat játszok.				
36. Azonnal a szavak első jelentését szeretném megtudni.				
37. Azért, hogy rájöjjek az új szó jelentésére, a szó részeit elemzem, hogy kitaláljam a jelentését.				
38. Azért, hogy új szavakat tanuljak, a filmeket angolul nézem meg				
39. Azért, hogy új szavakat tanuljak, a filmeket angolul nézem meg				
40. Olvasáskor a szövegkörnyezetből következtetem ki a szavak jelentését				
41. Angol szöveg hallgatásakor szövegkörnyezetből következtetem ki a szavak jelentését				
42. Nyomtatott szótárat viszek magammal, hogy az új szó jelentését kikereshessem.				
43. Elektronikus szótárat viszek magammal, hogy az új szó jelentését kikereshessem.				
44. Úgy tanulom az új szavakat, hogy megjegyzem a tankönyv oldalát, ahol tanultam azokat.				
45. A szavak részeit elemzem, hogy kitaláljam a jelentésüket.				
46. Az új szavakat angol-magyar szótárból nézem ki.				
47. Az új szavakat egynyelvű angol szótárból nézem ki.				
48. Próbálom az új angol szavak magyar megfelelőit is megjegyezni.				
49. A tanárt kérdezem meg, mit jelent az új szó.				
50. Osztálytárssal tanulom a szavakat.				
51. Órán, a társam kérdezem meg, mit jelent az új szó.				

	Soha	Hetente	Havonta	Mindig
1. Az új szavakat mondatban használom.				
52. Összejövünk páran órán kívül, hogy a szavakat tanuljuk.				
53. A szüleim kikérdezik a szavak jelentéséről.				
54. Órán csoportmunkában együtt tanuljuk a szavakat együtt.				
55. Angol anyanyelvű barátot keresek a közösségi oldalakon, hogy tanuljam a szavakat.				
56. A Facebookot azért is használom, hogy angol szavakat tanuljak.				
57. Twitterezek, hogy angol szavakat tanuljak.				

Appendix D. The online questionnaire

Jelöld meg azt az értéket, amelyikhez tartozó állítás a leginkább illik rád.
1: soha
2: havonta
3: hetente
4: mindig

Szólistát csinálok, hogy emlékezzek a szóra.	1 2 3 4
Angol-magyar szókártyákat készítek.	1 2 3 4
Aláhúzom a fontos szót a szövegben.	1 2 3 4
Bekarikázom azt a szót a szövegben, amit fontosnak tartok.	1 2 3 4
Angol nyelvű újságot olvasok a szavak tanulása céljából.	1 2 3 4
Megjegyzem hol láttam az új szót a tankönyv oldalán.	1 2 3 4
Azért használok beszédemben új szót, hogy emlékezzek arra.	1 2 3 4
Az új szót mondatban használom.	1 2 3 4
Angolul használom a Facebookot, hogy angol szavakat tanuljak.	1 2 3 4
Szójátékokat játszok.	1 2 3 4
Hasonló jelentésű szóhoz kötöm a megtanulandó szót.	1 2 3 4
Elektronikus szótárból keresem ki a szó jelentését.	1 2 3 4
Az új szót egynyelvű angol szótárból nézem ki.	1 2 3 4
Órán, a társam kérdezem meg, mit jelent az új szó.	1 2 3 4
Angolul Skypeolok, hogy angol szavakat tanuljak.	1 2 3 4
Az új szót ismert szóhoz kapcsolom.	1 2 3 4
Felmérem, hogy megtanultam-e az új szót.	1 2 3 4
Elemzem egy új szó részeit, hogy rájöjjek a jelentésére.	1 2 3 4
Angol nyelvű beszédből következtetem ki a szó jelentését.	1 2 3 4
Próbálom az új angol szó magyar megfelelőjét is megjegyezni.	1 2 3 4
Szavakat azért tanulok meg, hogy könnyebben kommunikáljak.	1 2 3 4
Angol nyelvű filmeket nézek magyar felirattal, hogy szavakat tanuljak meg.	1 2 3 4
Angol nyelvű zenét hallgatok, hogy új szót tanuljak.	1 2 3 4
Angol nyelvű filmeket nézek felirat nélkül.	1 2 3 4
Angolul olvasok könyvet.	1 2 3 4
Angol nyelvű számítógépes játékokat játszok.	1 2 3 4
Elolvasom az angol nyelvű feliratokat mindenféle termékeken.	1 2 3 4
Olvasáskor a szövegkörnyezetből következtetem ki a szó jelentését.	1 2 3 4
Angolul tudó barátot keresek a közösségi oldalakon.	1 2 3 4
Az újonnan megtanult szót írásban használom.	1 2 3 4
Mikor angol nyelvű műsort nézek/hallgatok jegyzetelem a szavakat.	1 2 3 4
Az újonnan megtanult szót beszédben használom.	1 2 3 4

Képes szókártyákat készítek.	1 2 3 4
Magamban elismétlem a szót.	1 2 3 4
Kétnyelvű szótárból nézem ki a szó jelentését.	1 2 3 4
Saját szótárfüzetből tanulom a szavakat.	1 2 3 4
Bemagolom a szavakat.	1 2 3 4

Appendix E. Teachers' questionnaire for the estimation student's test achievement

Instruction: Please look carefully at the six tasks and write your assumed score of an average student below the 'Assumed score heading.' The minimum amount of points is 0 and the maximum is 9. Thanks for your help and cooperation.	
Task	Assumed score of an average student
1	
2	
3	
4	
5	
6	

Appendix F. Teachers' questionnaire for the estimation of students' VLS

How often do you believe students use these strategies?

	never	once a month	once a week	always
Students repeat the new word to themselves				
Students use Skype to learn English words				
Students try to remember the Hungarian equivalent of the English words				
Students use Facebook to learn English words				
Students learn new words from their vocabulary				
Students listen to English music in order to learn words				
Students take notes of words when watching English programs				
Students evaluate if they have really learned the new words				
Students use a new word in speaking so as to remember it				
Students look up the meaning of new words in a bilingual dictionary				
Students play with word games				
Students underline the important words				
Students circle the word that is important				
Students look for English speaking friends in the social media				
Students ask their classmate in class what the new word means				