

UNIVERSITY OF TARTU
DEPARTMENT OF ENGLISH

VOCABULARY LEARNING STRATEGIES IN STUDYING ENGLISH
AS A FOREIGN LANGUAGE

Master's thesis

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PREFACE

The present thesis focuses on exploiting vocabulary learning strategies when studying English as a foreign language. It aims, on the basis of theoretical background, at studying Estonian students' (forms 3-6) preferences related to exploiting various vocabulary learning strategies – a hitherto neglected field.

The thesis falls into introduction, two chapters and conclusion.

The **introduction** of the thesis looks at various definitions of the term *vocabulary learning strategies*, summarises the importance of the strategies and briefly outlines factors influencing the strategy choice.

The **first chapter** has a closer look at research carried out in the field of vocabulary learning strategies. It summarises studies conducted on the topic and introduces the main classifications as well as types of vocabulary learning strategies.

The **second chapter** presents the findings of an empirical study conducted to investigate the preferences of Estonian school children (forms three to six) for using vocabulary learning strategies.

The **conclusion** draws together all the relevant theoretical considerations presented in the thesis and summarises the results of the empirical study.

The thesis also includes 11 appendices and the summary in Estonian.

The thesis is based on 105 sources.

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INTRODUCTION

The subject of language learning strategies, a sub-category of general learning strategies, has attracted the interest of scholars since the 1970s. The interest has led to a number of studies in the fields of both second language acquisition and cognitive psychology. Much of the research in either fields, however, has been carried out without reference to the other field and by exploiting different methodologies (O'Malley and Chamot 1990: 2). Initially, the interest in learning strategies in second language acquisition was geared towards detecting the strategies 'good language learners' employed (e.g., Naiman et al. 1978, Rubin 1975, both referred to in O'Malley and Chamot 1990: 3) while cognitive psychologists attempted to find out the influence of strategy training to learners (ibid.: 7). Over the years several definitions and classifications of language learning strategies have been proposed. The works most often quoted are those of Oxford (1990) and O'Malley and Chamot (1990), which represent two distinct schools in the field.

Oxford (1990) views learning strategies as "specific actions taken by the learner to make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferable to new situations" (p. 8). Her classification scheme differentiates between two broad categories of learning strategies (see Figure 1). Direct strategies (incl. memory, cognitive, compensation strategies) are the ones directly involved in the mental manipulation of the language (op. cit.: 37), while indirect strategies (incl. metacognitive, affective, social strategies) are not directly involved in language learning but support it (op. cit.: 135).

O'Malley and Chamot (1990) regard learning strategies as "complex cognitive skills" (p. 42) and define them as "the special thoughts or behaviours that individuals use to help them comprehend, learn or retain new information" (p. 1). Their framework of learning strategies is

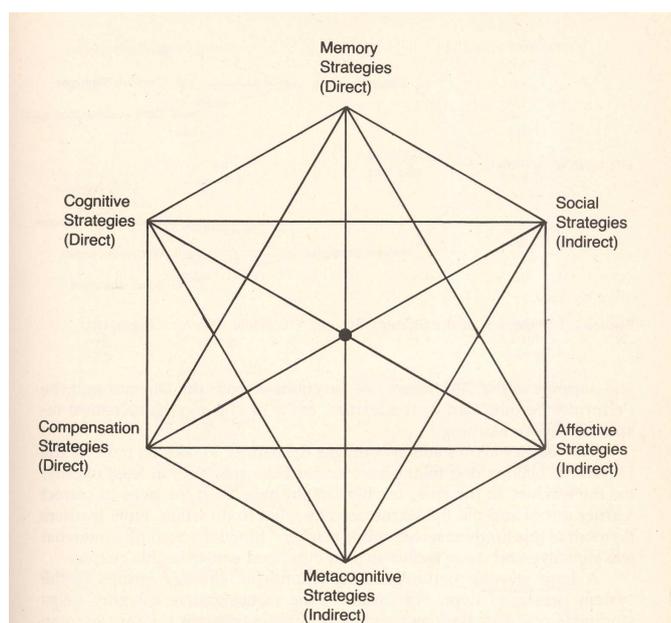


Figure 1. *The classification of language learning strategies by Oxford (1990: 15)*

based on the information-processing model and makes a distinction between metacognitive, cognitive and social/affective strategies (pp. 44-45).

Definitions of the term *vocabulary learning strategies*

Vocabulary learning strategies form a subcategory in the framework of language learning strategies. Although over the recent years a number of studies have been conducted on the topic of vocabulary learning strategies (see pp. 12-29 below), not many researchers have attempted to define or clarify the term.

Despite the fact that Ahmed's (1989) article is entitled "Vocabulary learning strategies", he does not explicitly state what he means by them. According to him (ibid.: 4), it is possible to view vocabulary learning strategies on two levels. He uses Scholfield's (forthcoming/1991, cited in Ahmed 1989: 4) term 'macro-strategies' and complements them with 'micro-strategies'. The former are related to "general approaches to learning" whereas the latter refer to "more detailed, specific learner behaviours" (Ahmed 1989: 4). As can be seen, the

definitions provided are of a very general nature and no overt indication to vocabulary learning strategies is made. The terms suggested could also be applied to any other aspect of foreign language learning, i.e. to language learning strategies in general.

Brown and Payne (1994, cited in Hatch & Brown 1995: 373) identify five steps in the process of learning vocabulary in a foreign language: (a) having sources for encountering new words, (b) getting a clear image, either visual or auditory or both, of the forms of the new words, (c) learning the meaning of the words, (d) making a strong memory connection between the forms and the meanings of the words, and (e) using the words. Consequently, all vocabulary learning strategies, to a greater or lesser extent, should be related to these five steps (Fan 2003: 223).

Schmitt's (1997) definition of vocabulary learning strategies reflects Rubin's (1987) understanding of learning. Rubin (*ibid.*) views learning as "the process by which information is obtained, stored, retrieved, and used" (p. 29), thus, according to Schmitt (1997), "vocabulary learning strategies could be any which affect this rather broadly-defined process" (p. 203).

Another general definition of vocabulary learning strategies comes from Cameron (2001), who states that vocabulary learning strategies are "actions that learners take to help themselves understand and remember vocabulary" (p. 92).

Although Catalan's (2003) research is largely based on Schmitt (1997), she aims at a more concrete and detailed definition of vocabulary learning strategies. Taking into consideration the ideas of different researchers (Oxford 1990, Rubin 1987, Schmitt 1997, Wenden 1987), she suggests the following working definition of vocabulary learning strategies:

knowledge about the mechanisms (processes, strategies) used in order to learn vocabulary as well as steps or actions taken by students (a) to find out the meaning of unknown words, (b) to retain them in long-term memory, (c) to recall them at will, and (d) to use them in oral or written mode (p. 56).

Nation (2001: 217), instead of providing a clear-cut definition of vocabulary learning strategies, has opted for listing the characteristics of a strategy. These are partly related to language learning strategies in general and partly to vocabulary learning. According to him, a strategy must:

1. involve choice, i.e. there should be several strategies to choose from;
2. be complex, i.e. there should be several steps to learn;
3. require knowledge and benefit from training;
4. increase the efficiency of vocabulary learning and vocabulary use (ibid.).

Proceeding from the ideas above it is possible to view a vocabulary learning strategy from at least three different angles. First, a vocabulary learning strategy, very broadly speaking, could be any action taken by the learner to aid the learning process of new vocabulary. Whenever a learner needs to study words, he/she uses a strategy/strategies to do it. Second, a vocabulary learning strategy could be related to only such actions which improve the efficiency of vocabulary learning. Hence, there are actions which learners might employ but which do not enhance the learning process – a perfectly possible scenario with poor learners. Third, a vocabulary learning strategy might be connected to conscious (as opposed to unconscious) actions taken by the learner in order to study new words. Ideally, learners should be made aware of ‘good’, efficient strategies, so that they could freely and consciously choose the one(s) suitable for them. It should be borne in mind, though, that a strategy that works well for one student may completely fail with another and that for a concrete learning situation one strategy may work better than another.

The importance of vocabulary learning strategies

The main benefit gained from all learning strategies, including strategies for vocabulary learning, is the fact that they enable learners to take more control of their own learning so that students can take more responsibility for their studies (Nation 2001: 222, Scharle & Szabó 2000: 8). Consequently, the strategies foster “learner autonomy, independence, and self-direction” (Oxford & Nyikos 1989: 291). Equipped with a range of different vocabulary learning strategies students can decide upon how exactly they would like to deal with unknown words. A good knowledge of the strategies and the ability to apply them in suitable situations might considerably simplify the learning process of new vocabulary for students. For instance, as shown in Atkinson (1972, referred to in Ranalli 2003: 9), independence in selecting which words to study results in better recall of the words than when the words are chosen by someone else.

Nation (2001: 222) believes that a large amount of vocabulary could be acquired with the help of vocabulary learning strategies and that the strategies prove useful for students of different language levels. As learning strategies are “readily teachable” (Oxford & Nyikos 1989: 291), the time teachers spend on introducing different ways of vocabulary learning and practising to students cannot be considered as wasted. Cameron (2001: 93) believes that children may not implement vocabulary learning strategies on their own and they should be trained to use the strategies.

Although *The National Curriculum of Basic and Gymnasium Education of Estonia* (2002) makes no mention of language or vocabulary learning strategies, it has clearly recognised the importance of general learning strategies: it aims at developing students’ learning competence (*õpipädevus*), one of four general competences, at all four school stages (§ 16, 18), 20); § 19, 18); § 22, 9); § 25, 15)). Also *The Common European Framework of Reference for*

Languages: Learning, Teaching, Assessment (CEF) acknowledges the role of learning strategies (study skills) (2001: 107-108).

Factors influencing the choice of vocabulary learning strategies

There is a range of factors that affect learners' choice of strategies, including vocabulary learning strategies. Ellis (1994: 540-545) makes a distinction between the following two broad categories of factors:

1. individual learner differences, including age, learning style, motivation, personality type;
2. situational and social factors, such as the learning setting, the type of the task, sex.

In the following part only the factors most essential from the viewpoint of the present thesis - age and sex - will be dealt with.

Age has been singled out as one of the clear factors affecting strategy choice (Ellis 1994: 541, Oxford 1990: 13). Brown et al. (1983, referred to in O'Malley & Chamot 1990: 105) claim that rehearsal means rote repetition for young learners whereas for older ones it involves more complicated procedures. Chesterfield and Chesterfield (1985, referred to in Schmitt 1997: 223 and Harris et al. 2001: 21) discovered that beginner students had an inclination to use basic strategies often related to the receptive skills, while more mature learners employed strategies requiring interaction or reflection of one's learning. Schmitt (1997: 223-224) reached a similar conclusion while studying the use of vocabulary learning strategies of different age groups: the younger the learners, the simpler the strategies used (see also p. 19 below). Ahmed's study (1989: 11) also revealed that the preferences of younger and older learners differed.

Among social factors, learners' sex has been the variable to receive most attention, though, the number of studies conducted on the topic is relatively small (Catalan 2003: 56). The results

of the research on language learning strategies in general indicate that females tend to use more strategies than males or the choice of strategies varies with the sex (Catalan 2003: 56, Ehrman & Oxford 1988: 258, Lan & Oxford 2003: 360, Oxford 1990: 13, Oxford & Nyikos 1989: 296). With regard to vocabulary learning strategies, Gu (2002, referred to in Ranalli 2003: 12) states that sex plays a crucial role in determining the use of vocabulary learning strategies as well as general success in learning English. His study revealed that women employed more frequently the vocabulary learning strategies found to lead to successful learning. Catalan's study (2003) showed "clear differential patterns" (p. 64) between the two sexes. Females used a greater number of vocabulary learning strategies and they used several strategies more frequently than males (op. cit.: 61-62). On the other hand, for some strategies men showed higher frequencies of strategy use than women (op. cit.: 65).

In addition to the factors mentioned above, the choice of vocabulary learning strategies may also depend on the frequency of the words students need to learn. Schmitt (2000: 133), relying on Nation (1990), hypothesises that high-frequency words might predominantly require the use of review and consolidation strategies whereas low-frequency words the use of determination strategies such as guessing words from context. Fan's (2003) research discovered, on the other hand, that some strategies such as dictionary use and known words prove useful both for learning high- and low-frequency words. On the other hand, it was found that guessing, in contrast to Schmitt (1997), could be more fruitful for learning high-frequency words than for low-frequency ones. Fan's (2003) finding seems reasonable: low-frequency words generally appear in more complicated texts and are also generally less information-wise redundant, which makes them harder to guess.

VOCABULARY LEARNING STRATEGIES: HISTORY, TAXONOMIES, TYPES

Previous research in the field and taxonomies of vocabulary learning strategies

Interest in language learning strategies has brought along a range of studies conducted on individual vocabulary learning strategies as well as on vocabulary learning strategies in general. As the main topic of the thesis is related to investigating vocabulary learning strategies as a group, the following part does not deal with studies carried out on individual vocabulary strategies (e.g. the keyword method, semantic elaboration techniques). Instead, it tries to give an overview of research focusing on various vocabulary learning strategies as a whole.

Although the history of research into vocabulary learning strategies is relatively short, several classifications of vocabulary learning strategies have already been proposed. Some of the taxonomies (e.g., Sanaoui 1995) are so general in nature that one might even wonder whether to call them taxonomies at all. Others (e.g., Schmitt 1997), on the other hand, have aimed at providing a detailed account of the various strategies at students' disposal. As a rule the taxonomies have been created on the basis of the results of empirical research.

Ahmed's (1989: 3-14) work could be considered the first major study on the topic. He introduced the notion of 'good' learners from the study of general language learning strategies to the study of vocabulary learning strategies and added the dimension of 'poor' learners. He investigated 300 Sudanese learners of English to find out the micro-strategies they used and how frequently the strategies were exploited. In addition, he aimed at detecting whether there were any differences in the strategies exploited by 'good' and 'poor' learners. The sample

ranged from intermediate school students to university students, who had studied English from three to seven years. By using three research instruments – a think-aloud task, direct observation, and an interview – he arrived at 38 micro-strategies, which were organised into six macro-strategies: information sources, dictionary use, memorisation, practice, preferred source of information and note-taking. In order to categorise the subjects according to the micro-strategies used, he performed cluster analysis. The analysis, used for the first time in the history of the studies of vocabulary acquisition, revealed five clusters, three of which had ‘good’ learner domination and two had underachieving students in the majority. Generally, the ‘good’ learners differed greatly from the ‘poor’ ones as to strategy use. The former not only used more strategies but also different ones. They preferred learning words in context, using a dictionary as a resource and clarifying meaning by asking questions. The ‘poor’ students, however, showed no interest in learning words in context and were generally less aware of what they could learn about new words. The analysis also showed that the groups of ‘good’ and ‘poor’ learners were not homogenous, that different sub-groups existed within them. It was found that learner differences are best revealed when students’ strategy use is investigated on the micro-strategy level. The study also detected that “there might be a progression in strategy use according to language learning experience” (op. cit.: 11).

Prior to Ahmed, the problem of vocabulary learning strategies used by under-achieving students was researched by **Porte** (1998: 167-168). In a small-scale study of 15 adolescent students it was revealed that some of the vocabulary learning strategies employed by the students were similar to the ones ‘good’ learners are usually associated with. Among such strategies were, for instance, noting down the translations of new words and looking up meanings of words in a dictionary. The study, however, revealed an important difference between the behaviours of ‘good’ and ‘poor’ learners: the latter “demonstrated less

sophistication and a less suitable response to a particular activity” (op. cit.: 168), for example, by instantly turning to a dictionary when faced with an unknown word or by only analysing the immediate context of a new word (ibid.).

Sanaoui (1995: 15-27) conducted three consecutive studies in 1990, 1992, 1993, where she explored how adult second language learners deal with vocabulary learning generally and, specifically, the mnemonic techniques used. In all her studies she resorted to ethnographic interviewing. First, she investigated 50 beginning and advanced level students, where the subjects were asked to observe their vocabulary learning daily and report on their approaches once weekly. The students’ responses suggested that there were two main ways of approaching vocabulary learning: doing it in a structured way or in an unstructured way. The learners who organised their vocabulary studies differed from the ones who did not do it in five aspects (see Appendix 1). The case studies that Sanaoui subsequently conducted – one with four English as a Second Language (ESL) learners and the other with eight French as a Second Language (FSL) students – corroborated the findings of the first study. As to the mnemonic procedures, the range exploited by the subjects of the case studies was relatively wide, including writing, immediate and spaced repetition, using the lexical item, contextual and linguistic associations, imagery as well as talking about the lexical item with somebody.

The strength as well as the weakness of the classification of vocabulary learning strategies by Sanaoui lies in its very nature. She does not overtly speak about specific strategies but about approaches, which are much more general. Kojic-Sabo and Lightbown (1999) claim that “the dichotomous classification might conceal a range of differences among learners” (p. 181) and they also demonstrate in their study that the system offered by Sanaoui lacks the small nuances necessary for understanding the individuality of different learners.

Moir (1996, referred to in Nation 2001: 228-229) investigated the vocabulary learning habits of ten hard-working adult learners of English. Only one of the students was clearly aware of the nature of vocabulary learning, the rest, who Moir labelled as less effective learners, used a limited range of vocabulary learning strategies and in general showed a lower level of responsibility for their learning.

Stoffer (1995, referred to in Kudo 1999: 6, Segler et al. 2002: 3) devised a Vocabulary Learning Strategy Inventory (VOLSI) consisting of 53 strategies. Through factor analysis it was found that the strategies clustered into nine categories as follows:

1. strategies involving authentic language use;
2. strategies used for self-motivation;
3. strategies used to organise words;
4. strategies used to create mental linkages;
5. memory strategies;
6. strategies involving creative activities;
7. strategies involving physical action;
8. strategies used to overcome anxiety;
9. auditory strategies.

Gu and Johnson (1996: 643-679) studied the vocabulary learning strategies of 850 second-year Chinese university students by means of a vocabulary learning questionnaire, vocabulary size tests and proficiency measures. Their questionnaire included a section about beliefs concerning vocabulary learning and a total of 91 vocabulary learning strategies, which were classified into two: metacognitive regulation and cognitive strategies. The latter contained six sub-categories, which were all further divided into smaller units (see Appendix 2).

The researchers were interested in the students' beliefs about vocabulary learning, the strategies favoured by the learners as well as the relationship between the strategy use and learning outcomes in English. Descriptive statistics revealed that most of the Chinese learners did not rely on rote learning of words, a characteristic commonly associated with Asian learners. They claimed to be using a wide range of strategies, among which the meaning-oriented ones were preferred. Correlational analyses showed that the metacognitive strategies (self-initiation and selective attention) emerged as positive predictors of general proficiency. A number of cognitive strategies, e.g. contextual guessing, skilful dictionary use and note-taking, also positively correlated with vocabulary size and general proficiency. Visual repetition was found to be the strongest negative predictor of the two variables mentioned above. As a result of cluster analysis five groups of learners were detected, labelled as follows:

1. readers – a small group of high-achieving students, who strongly believed in learning vocabulary through reading, guessing and contextual encoding;
2. active strategy users – another small and successful group of learners, who were open to using a wide range of vocabulary learning strategies;
3. encoders and
4. non-encoders – the vast majority of students, whose use of strategies was average¹;
5. passive strategy users – a small number of underachieving students, who believed in memorising vocabulary and exploited the strategy of visual repetition of word lists most frequently.

Lawson and Hogben (1996: 101-135) examined vocabulary learning strategies by means of a think-aloud procedure, which enabled them to look at which strategies learners actually used (as opposed to what students claim to use). Due to the obvious time-consuming nature of

¹ The two types of encoders and non-encoders differed only in respect of encoding strategies, i.e. encoders exploited more deliberate memorisation strategies like association or imagery.

the procedure the sample under investigation was small – 15 female advanced-level university students in Australia studying Italian as a foreign language. The researchers focused on the issue of deliberate acquisition of vocabulary: their subjects were faced with the task of learning 12 Italian words given on index cards. The front side of the card had both the new word written separately and in the context of a sentence whereas the reverse side of the card explained the word in English and offered related words. Shortly after the think-aloud session (i.e. the learning process) the students were given a word test. Based on the analysis of the tapescripts Lawson and Hogben classified the vocabulary learning strategies into four broader categories with a total of 15 strategies (see Appendix 3). The results of the study revealed the popularity of repetition strategies and a neglect of word feature analysis. All the students, for instance, read the related words (category: repetition) presented to them. Moreover, most of the students used the strategy for learning most of the 12 words. In contrast, knowledge of suffixes (category: word feature analysis) was not used on any occasion. Lawson and Hogben, however, were more concerned with whether and to which extent the students used complex learning strategies. Compared to simple elaboration, the strategies of complex elaboration received far less attention from the students. Positively, though, the majority of the students employed some form of the latter. Still, Lawson and Hogben concluded that most of the strategies used were not concerned with transforming new information “in a way that would set up relationships of the new material with existing memory structures” (p. 121).

The correlational analysis indicated that the students who made use of a greater number of strategies recalled more words in a vocabulary test than the students who used a smaller number of strategies. Also, a closer analysis of the results of the four top-scoring students and these of the four low-scoring students revealed the same finding. The number of vocabulary learning strategies exploited by successful students was twice as large as that of unsuccessful

learners. The finding is in line with that of Ahmed (1989; see p. 13 above), who also discovered that 'good' learners exploited more strategies than 'poor' ones. Meanwhile, the strategy use of top-scoring students varied, i.e. the learners could not be characterised by a single profile of strategies. The fact has also been demonstrated by other researchers (Ahmed 1989, Gu & Johnson 1996, Kojic-Sabo & Lightbown 1999).

As Lawson and Hogben investigated the strategies students used when learning new words during a think-aloud session, their classification cannot give an overview of all vocabulary learning strategies at learners' disposal. Instead, it reflects the strategies actually exploited during one particular word-learning task.

Schmitt (1997: 217-226) studied a representative sample of 600 Japanese students comprising four different levels of learners: junior high school and high school students, university and adult students. In each of the four groups the subjects came from three different kinds of schools – lower, medium and higher prestige level ones. He used an early version of the taxonomy of vocabulary learning strategies created by himself as a research instrument (see Appendix 4). The study was targeted at finding answers as to which strategies the students used and which they considered helpful even if they did not use them. The comparison of the two sets of data (most used vs. most helpful) revealed some overlap. Namely, using a bilingual dictionary ranked clearly first both in the category of the strategies exploited most frequently (preferred by 85% of the students) and that of the most helpful strategies (reported by 95% of the students). In addition, there were five other strategies the students used often and also regarded helpful: written repetition, verbal repetition, say a new word aloud, study a word's spelling and take notes in class. As Schmitt (op. cit.: 220) notes, the Japanese students place high importance on studying a word's form, which most probably has its origins in the study style promoted in Japanese schools. Meanwhile, the data also

showed that there were some strategies that students considered helpful but nevertheless used moderately. For instance, 88% of the students saw value in connecting a word with its synonyms or antonyms but only 41% of them actually used the strategy. In addition, Schmitt asked the subjects to rate five most helpful strategies both in the group of discovery strategies and that of consolidation strategies. The results he got were very similar to the ones described above.

As the subjects belonged to four different groups, Schmitt was able to observe trends in the use of the vocabulary strategies. He found that the patterns of strategy use seem to change from 'shallower' to 'deeper' ones as the learners mature. For example, 91% of the junior high school students examined reported using written repetition in comparison to 50% of the adult students under investigation. Of the strategies requiring 'deeper' mental processing the strategy of imaging the word's meaning was exploited by 58% of the adult learners as against 37% of the junior high schools students.

Schmitt's taxonomy (op cit.: 207-208; see Appendix 4) is the most elaborate and extensive classification of vocabulary learning strategies to date. In his own words the taxonomy should be viewed "as a dynamic working inventory which suggests the major strategies" (op. cit.: 204). The 58 strategies in his taxonomy have been organised in the framework of two systems. First, he based his classification on Oxford's (1990) work and included four of her categories: social, memory, cognitive and metacognitive. Second, he used a distinction between discovery and consolidation strategies offered by Cook and Mayer (1983) and Nation (1990, both referred to in Schmitt 1997: 206). The former help students to find out the meaning of a word when encountered for the first time and the latter aid memorisation of the word after it has been introduced (Schmitt 1997: 206). Originally, the strategies were divided into the categories tentatively as factor analysis was not run to validate the questionnaire.

When working out the classification Schmitt was confronted with several problems. First, as Oxford's (1990) classification did not describe the "strategies used by an individual when faced with discovering a new word's meaning without resource to another person's expertise" (Schmitt 1997: 205), he needed to add the category of determination strategies. In Schmitt's opinion, another shortcoming of Oxford's (1990) classification lies in the fact that some strategies could be organised into two or more categories, thus, making the classification difficult. The line between memory and cognitive strategies is especially hazy. In order to solve the problem he relied on Purpura (1994, referred to in Schmitt 1997: 205), who divided storing and memory strategies into six groups:

1. repeating;
2. using mechanical means;
3. associating;
4. linking with prior knowledge;
5. using imagery;
6. summarising.

In Schmitt's taxonomy, strategies similar to 1. and 2. are considered cognitive strategies and strategies close to 3., 4. and 5. as memory strategies. Finally, a number of strategies can be used both as discovery and consolidation strategies. In fact, as Schmitt (1997: 206) claims, nearly all discovery strategies could be exploited as consolidation ones. Still, he listed only the most evident ones in both sections of the classification.

Despite the problems mentioned above, Schmitt's taxonomy has been used by other scholars (e.g. Catalan 2003, Kudo 1999) in their research. Catalan (2003: 60) has found several advantages to using the taxonomy as a research instrument:

- it can be standardised as a test;

- it can be used to collect the answers from students easily;
- it is based on the theory of learning strategies as well as on theories of memory;
- it is technologically simple;
- it can be used with learners of different ages, educational backgrounds and target languages;
- it is rich and sensitive to the variety of learning strategies;
- it allows comparison with other studies, among them Schmitt's own survey.

One has to agree with most of the points put forward by Catalan (*ibid.*). However, it is questionable if the same questionnaire is equally suitable for all age groups, ranging from 11-year-old children to 56-year-old adults Catalan studied. Even if couched in a simple wording, the true meaning of some strategies (e.g. strategies related to the peg method, keyword method, methods requiring analysis skills) may just remain unclear to younger learners. Most probably the students have not even heard of the strategies let alone used them.

In his study **Kudo** (1999: 1-46) aimed to describe the vocabulary learning strategies exploited by Japanese senior high school students. He investigated altogether 504 students, 15 to 18 years of age, from six different schools, all top-level. Despite the fact that all the schools were prestigious, the English proficiency of the participating students varied. First, Kudo carried out a pilot study for which he devised a questionnaire largely based on Schmitt's (1997) taxonomy but adding also his original items. He did not, however, make a distinction between the strategies for the discovery and consolidation of meaning considering it too difficult for the students to comprehend. As a result, the questionnaire included four categories: social, cognitive, memory and metacognitive strategies. The category of determination strategies was discarded. The same questionnaire, in a revised form, was also used during the main study. The results of the study showed very low means for all the

categories implying that the students were not very aware of different vocabulary learning strategies. Social strategies ranked the lowest suggesting that the students were not particularly eager to collaborate with anybody when learning vocabulary. The results (especially those of the pilot study) also revealed that the students preferred 'shallower' vocabulary learning strategies such as rote learning and use of a bilingual dictionary to the strategies that needed 'deeper' cognitive processing (e.g. the keyword method, semantic mapping). So, the findings of Kudo's research, to a large extent, corroborated the results obtained by Schmitt (1997). Factor analysis performed on the questionnaire revealed the four categories mentioned above, thus, the questionnaire was found reasonably reliable.

Kudo also made an interesting remark suggesting that strategy use may not be culture specific: his Japanese subjects and the students Oxford (1990) investigated in Alabama seemed to prefer the same strategies.

Kojic-Sabo's and Lightbown's (1999: 176-192) research was inspired by Sanaoui's (1995) work, but instead of focusing on the binary classification – structured vs. unstructured approach to vocabulary learning – they strove to detect smaller homogenous subgroups within the sample under investigation. They examined two groups of learners (47 undergraduate ESL students and 43 pre-university English as a Foreign Language (EFL) students): their vocabulary learning strategies (by means of a questionnaire) as well as their vocabulary knowledge (a Yes/No test) and overall English proficiency (a cloze test). The questionnaire included items in five different categories: time, independence, note-taking, review and dictionary use. The variable of dictionary use received the highest scores in both groups whereas the lowest scores were related to the variables of review and time in ESL and EFL groups respectively. The groups were similar in their note-taking habits. Statistically significant differences revealed in the case of two variables: ESL group scored higher for

learner independence and EFL group for review. With the help of cluster analysis the researchers were able to identify eight different profile clusters: some clusters consisted of students who either used all of the strategies or none of them, “the majority of the learners, however, fell into the more saw-toothed profile clusters, exhibiting clear preferences for certain types of strategic behaviour” (p. 176). Thus, Kojic-Sabo and Lightbown clearly showed that Sanaoui’s (1995) dichotomous taxonomy was not sufficient for describing the variety among learners and a more detailed system was needed to understand learner differences.

With regard to the strategy use and achievement level of the students, the results revealed a strong relationship between the two variables: the students who engaged in various strategies, performed also strongly in the vocabulary as well as the general proficiency tests and vice versa. Independence and time turned out to be the most crucial strategies for the success in language learning. The study corroborated the findings of Gu and Johnson (1996: 659; see also p. 16 above), who also found that self-initiation, skilful use of a dictionary and spending extra-curricular time on practising new words, among other factors, predicted vocabulary size and general proficiency.

Differently from other classifications of vocabulary learning strategies, **Nation’s** (2001: 218) taxonomy does not derive from any research results but is purely based on theory. It is organised around three broad categories, where aspects of vocabulary knowledge have been separated from sources of vocabulary knowledge and learning processes (see Appendix 5).

When the meanings of the strategies in the categories of ‘planning’ and ‘sources’ become quite clear from the wordings of the strategies, the category of ‘processes’ needs further clarification. According to Nation (op. cit.: 221-222), noticing is to a large extent related to recording strategies, e.g. writing a word down in a notebook or a word card, orally or visually

repeating the word. Retrieval is superior to noticing as learners are required to recall items learnt earlier. Among generation strategies he includes, for instance, word analysis, semantic mapping, creating contexts, the keyword technique.

Lin (2001, referred to in Lan & Oxford 2003: 348-349), using several research instruments (classroom observation, written records, oral interviews, think-aloud protocols), studied the vocabulary learning strategies of seven Taiwanese elementary school students. Despite the small sample, 73 strategies were identified, which were categorised into metacognitive, cognitive and social-affective strategies. The research revealed that the subjects relied mostly on rote memorisation of words, did not have good dictionary use and note-taking skills. To the knowledge of the author of the thesis, Lin's (op. cit.) study is the only one solely dedicated to investigating the vocabulary learning strategies of children.

Catalan's (2003: 54-77) research was the first attempt to introduce the sex variable into the studies of vocabulary learning strategies. She based her study on the questionnaire (i.e. the taxonomy) proposed by Schmitt (1997; see Appendix 4) complementing it with two additional strategies: "I learn the word by using free associations from the new word (e.g. from *snow*: *winter, cold, coat*)" and "I use other strategies that do not appear in the list, for example ...". She also added illustrative examples to some of the strategies in order to aid subjects' comprehension of the questionnaire. The sample under investigation was broad including 581 Spanish-speaking students of either English or Basque as a second language. The participants were distributed roughly equally between the two sexes (279 males and 302 females), their age ranged from 11 to 56 and their second language proficiency from beginner to proficiency. When examining the sample, Catalan was mainly interested in finding out whether the students differed in the number as well as the range of vocabulary learning strategies they claimed to use. Catalan's choice of the research instrument (i.e. questionnaire) enabled her to

study the learners' perceptions of their vocabulary learning behaviours, not their actual learning behaviours. The same applies to other studies making use of a questionnaire as a research instrument (Fan 2003, Gu & Johnson 1996, Kojic-Sabo & Lightbown 1999, Kudo 1999, Schmitt 1997). The results of the research showed both similarity and difference in the learners' preferences of vocabulary learning strategies. On the one hand, the average percentage of strategies employed by males and females was low for both groups: 20.7% and 22.0% respectively (21.4% for both). On the other hand, the difference was found to be statistically significant. As for the rankings of the ten most and ten least exploited strategies, they were "shared for the most part by male and female students" (Catalan 2003: 65) but they also showed "the coexistence of different patterns and percentages of usage by the two sexes" (ibid.). Thus, female students, as against their male counterparts, tended to have a higher overall percentage of usage of vocabulary learning strategies. The result corroborated earlier findings in the field of general language learning strategies (e.g., Oxford and Nyikos 1989).

Catalan suggests two main sources for the differences between the sexes in strategy use: the variation may be due to 1) the degree of motivation both towards language learning and vocabulary learning and/or 2) different learning styles and learning preferences. However, as the particular study was a descriptive one, it was not possible for Catalan to establish any correlations between the use of vocabulary learning strategies and the variables given above.

Fan (2003: 222-241) investigated the vocabulary learning strategies of another group of Asian learners: 1,067 first-year university students in Hong Kong. Her aims were fourfold: a) to determine the strategies exploited most/least frequently and the ones considered most/least useful by the students; b) to detect any differences between the frequency of use and usefulness of the strategies; c) to find out the strategies used by proficient students and d) to find out strategies suitable for learning high- and low-frequency words. The research

instruments chosen included a vocabulary test (to determine the proficiency of the students in English vocabulary) and a questionnaire (for examining vocabulary learning strategies). The latter, differently from several other researchers (e.g. Catalan 2003, Kudo 1999), was not based directly on Schmitt's (1997) taxonomy. Instead, Fan relied on the findings of Gu and Johnson (1996), O'Malley and Chamot (1990), Oxford (1990), etc. and organised 56 vocabulary learning strategies into nine categories as follows: management, sources, guessing, dictionary, repetition, association, grouping, analysis and known words. In general, the results of the study showed that the students perceived vocabulary learning strategies as useful but did not resort to them very often. Regarding the strategies employed most often as well as perceived useful, it turned out that the students tended to prefer dictionary strategies and the ones related to known words. The findings also revealed a strong dislike towards the keyword technique: it was seldom used and considered useless. In addition, the results showed that Hong Kong students were not particularly keen on rote memorisation and using imagery in learning vocabulary.

Fan's results were mostly in line with some of the earlier findings. For instance, the popularity of dictionary strategies was also shown by Ahmed (1989), Gu and Johnson (1996), Kudo (1999) and Schmitt (1997). Both the subjects of Schmitt (1997) and Gu and Johnson (1996) expressed little enthusiasm towards association strategies. As to mechanical strategies, the results of Fan and Gu and Johnson (1996: 654) revealed that the students did not believe in the memorisation of words whereas the results of Schmitt (1997) indicated the opposite. The fact led Fan to hypothesise that differences in strategy preferences between various groups of Asian learners may exist, although much more evidence is needed to make valid generalisations. A close examination of the frequency of use of the strategies and perceived usefulness of the strategies revealed differences between these two. For instance, management

strategies were seldom exploited by the students though regarded quite useful. As concerns proficient learners, the results of the study were quite similar to the findings of the earlier research (e.g. Ahmed 1989, Lawson & Hogben 1996, Sanaoui 1995): 'good' learners used a greater number of strategies more frequently than 'poor' ones. Although the research showed that some strategies (dictionary, known words) are equally useful for learning high- and low-frequency words, certain strategies may be more appropriate for studying either high- or low-frequency words. For example, guessing was found to be more suitable for learning high-frequency words and using various sources for studying low-frequency words.

At the University of Tartu several bachelor's theses have been written on the topic of language learning strategies (Hallistvee 1997, Kährrik 1994, Luik 2001) as well as one master's thesis with a partial focus on the field (Vaasa 2003). The only student paper specifically about vocabulary learning strategies is by Truus (1997). The study, however, does not focus on researching the vocabulary learning strategies of students. Instead, it analyses vocabulary exercises in one Estonian and one Swedish low-level course book in order to find out which strategies are fostered by means of the exercises. The paper was written at the time when the whole field of vocabulary learning strategies was still in its infancy. Therefore, Truus's analysis was based only on Oxford's (1990) direct strategies (memory, cognitive and compensation strategies), ignoring social and metacognitive strategies, which have later been classified under vocabulary learning strategies as well.

To summarise the studies conducted earlier, the following points could be put forward:

- the bulk of the studies conducted so far has focused on examining the vocabulary learning strategies of adult university-level students. Lin (2001) is the only researcher

to investigate the vocabulary learning strategies of children. Some authors have, among other participants, included younger learners (aged 11 and upwards), in their samples (Ahmed 1989, Catalan 2003, Kudo 1999, Schmitt 1997);

- Asian (Chinese, Japanese, Hong Kong, Taiwanese) learners have been the main target group in investigating vocabulary learning strategies;
- the researchers have generally been interested in the two following areas: 1) students' use of strategies and their perception of useful strategies; 2) the relationship between strategy use and success in language learning (i.e. which strategies are exploited by 'good' learners and which by 'poor' learners);
- several research instruments (think-aloud tasks, interviews, questionnaires, observation, vocabulary and proficiency tests) have been used for collecting the necessary data and the data have been analysed by means of descriptive statistics, correlational, cluster and factor analyses.

When looking at the various classifications of vocabulary learning strategies listed above, one has to agree with Chamot (1987: 71), who, commenting on the classifications of general learning strategies, has stated that learning strategies have been classified differently by different researchers, therefore, comparisons between various classifications are not easy to make. The same applies to the taxonomies of vocabulary learning strategies. First and foremost, as mentioned above, the classifications differ greatly in their level of abstractness/concreteness. In addition, although the taxonomies share some common features, the fact does not make it any easier to compare the various systems. For instance, most of the scholars have included the strategies of dictionary use in their taxonomies but some of them (Ahmed 1989, Gu & Johnson 1996, Kojic-Sabo & Lightbown 1999) treat them as a separate broad category, others (Nation 2001, Schmitt 1997), in contrast, as a micro-strategy within a

macro-strategy. Fan (2003) argues that “no classification is perfect, and any individual strategy may fall into one category or another, depending on the aspect in focus” (p. 223).

Despite these shortcomings, the classifications proposed reflect the different viewpoints and approaches of the scholars to categorising vocabulary learning strategies, which prove fruitful when planning and conducting a study on the topic.

Types of vocabulary learning strategies

As demonstrated by the classifications of vocabulary learning strategies proposed by different researchers, the range of different vocabulary learning strategies is wide. The following part aims to take a closer look at the most important categories of the strategies. The general organisation of the strategies below is based on Schmitt’s (1997) taxonomy, i.e. the names of the broad categories of the strategies derive from his classification. Differently from Schmitt (op. cit.), though, no distinction will be made between discovery and consolidation strategies as a number of individual strategies may belong to both categories. Hence, there is no category of determination strategies and the strategies related to the category will be dealt with under other categories.

Memory strategies

Memory strategies (also known as mnemonics) have a long history dating back to ancient times (Oxford 1990: 38). In the context of foreign language learning they help learners associate a new item of vocabulary with something already familiar to students (Oxford 2001: 167, Schmitt 1997: 211) functioning as aids to memory (Sökmen 1997: 247). According to Thompson (Irene, 1987), such “memory tricks” are based on the following principles: “a retrieval plan is developed during encoding, and mental imagery, both visual and verbal, is used” (p. 43). The strategies exist in the two major classifications of general language learning

strategies mentioned above. O'Malley and Chamot (1990: 45) include them among cognitive strategies, while in Oxford's classification (1990: 38) memory strategies appear as a sub-category of direct strategies, separately from the cognitive ones. Examples of both mechanical memory strategies (e.g. rehearsal) and strategies requiring 'deeper' level of processing (e.g. imagery) can be found.

The different classifications of vocabulary learning strategies present a more varied picture. Ahmed (1989: 10) sees memorisation as purely mechanical in nature (repeating, writing). Gu and Johnson (1996: 653) talk about rehearsal strategies (incl. oral and visual repetition) and encoding strategies (incl. imagery, visual and auditory associations). The former obviously relate to the rote learning of words whereas the latter could be labelled as 'deep' strategies. Schmitt (1997: 207-208), in creating his taxonomy of vocabulary learning strategies, has decided to list strategies requiring "elaborative mental processing" (op. cit.: 212) in the category of memory strategies. Mechanical strategies (verbal and written repetition) have been included among cognitive strategies as they do not focus "specifically on manipulative mental processing" (op. cit.: 215) (see also Appendix 4). Fan (2003: 226) has four groups of memorisation strategies: repetition, association, grouping and analysis. She labels the first group as mechanical techniques and the rest as 'deep' strategies. Based on the shared core of differing viewpoints of the researchers, it could be concluded that two kinds of memory strategies exist – mechanical and 'deep'. Despite the fact that *The Depth of Processing Hypothesis* (Craik & Lockhart 1972, Craik & Tulving 1975, both referred to in Schmitt 1997: 201) suggests that a 'deeper' level of information manipulation leads to better learning, several studies have shown that such memory strategies are not very popular among learners (Fan 2003, Gu and Johnson 1996, Kudo 1999, Schmitt 1997). Schmitt (op. cit.: 201), based on the opinions of Cohen and Apeh (1981), argues that 'shallower', i.e. mechanical, activities might

be more suitable for beginners and ‘deeper’ ones could prove to be more beneficial for higher level students.

Among mechanical memory strategies oral and written repetition emerge as the two most common ways, which learners have employed for years (Gairns & Redman 1986: 93, Schmitt 1997: 215). Gairns and Redman (1986: 93) see the main value of repetition in the fact that it enables beginner students to use the language easily, which in its turn gives them a feeling of achievement.

Thompson (Irene, 1987: 44-48) divides memory strategies into six subcategories: linguistic, spatial and visual mnemonics, the physical response method, verbal elaboration methods and other memory-enhancing techniques. All of her sub-categories seem to be linked with a deeper level of word processing. Although different classifications are possible, Thompson’s one (ibid.) is followed here to provide the overview below with a framework.

Linguistic mnemonics

The keyword method was developed by Atkinson (1975: 821-828) and is by far the most researched vocabulary learning strategy to date. Here, a keyword denotes a mother tongue word that sounds like some part of the foreign word (op cit.: 821). When employing the method, the memorisation has to pass through two stages. First, students need to find a suitable keyword (i.e. create an acoustic link) and then form a mental image linking the two words (i.e. create an imagery link) (ibid., Schmitt 1997: 214). For instance, the English word ‘hippo’ can be studied by associating it acoustically with the Estonian word ‘hüppab’ (jumps). Then, an image can be created of a jumping hippo. Later the stimulus of the foreign language (L2) word should activate the sound-alike keyword, this, in its turn, should conjure up the image created and result in the retrieval of the real meaning (Gu 2003: para. 55). The afore-

mentioned example is based on a visual image. Another version of the keyword method is based on sentence formation.

A number of studies have proved the method to be highly effective for students of different ages at different levels of achievement, mostly for immediate recall of words (e.g., Atkinson 1975: 823-824, Avila & Sadoski 1996: 379; see e.g., Hulstijn 1997: 206-209 and Nation 2001: 312-314 for overviews). Some researchers argue that the method works well only with a small number of words, i.e. concrete words (e.g., Avila & Sadoski 1996: 392, Hulstijn 1997: 210), others claim that it is also efficient with abstract words (e.g., van Hell & Mahn 1997: 508). Beaton, Gruneberg and Ellis (1995, referred to in Nation 2001: 299) describe an amazing instance where a learner, after ten years of not using the knowledge, was still able to spell correctly 35% of the 350 Italian words once learnt by means of the keyword technique and had minor spelling errors in 50% of the words. Moreover, the learner was able to recall nearly 100% of the words after revising them for an hour and a half.

Not all studies, however, have proved the superiority of the keyword method and several limitations have been found to it. Van Hell and Mahn (1997: 507-508), researchers who compared the efficiency of the keyword method with that of rote repetition, found that experienced learners gained more from rote rehearsal whereas no major difference was found for inexperienced students. Ellis and Beaton (1993, referred to in McDonough 1999: 10) discovered that the keyword method worked well for translating words into the mother tongue whereas rote repetition gave much better results for translating into the foreign language; the best results were achieved with a combined strategy. Levin et al. (1984, referred to in Avila & Sadoski 1996: 381) state that children may find it difficult to create images on their own, i.e. pictures need to be provided for them. Sternberg (1987, referred to in Sökmen 1997: 247) considers the method too limited and difficult to be used over longer periods of time or

independently. The method has also been criticised for mainly focusing on receptive vocabulary (Meara 1980, referred to in Fan 2003, Hulstijn 1997: 210). Although Avila and Sadoski (1996: 391) proved the efficacy of the keyword method in real classroom environment, the majority of the positive results have still been achieved in experiment situations. In order to become skilful users of the technique students need extended training in it (Nation 2001: 314).

The peg method is especially useful for memorising lists of unrelated words, where new words are linked with a set of ‘pegs’ or ‘hooks’. Students are, first of all, required to remember a rhyme, e.g. ‘one is a bun, two is a shoe, three is a tree, etc.’ Then, new words need to be linked with the ‘peg’ words and images created. For example, if the first word to be studied is ‘cat’, the image could be of a cat eating a bun. When the rhyme is later recited, the images drawn up prompt the target words. (Schmitt 1997: 213, Thompson, I. 1987: 44)

Spatial mnemonics

The loci method was employed already by Roman orators (Oxford 1990: 38, 240) and is another useful method for remembering unrelated words. The technique requires learners to picture a familiar place and mentally locate the first item to be memorised in the first place, the second in the next place, etc. To recall the items students need to “take a tour” around the landmarks. (Thompson, I. 1987: 45) Learners can also arrange words on a sheet of paper in patterns (triangles, squares, etc.), a technique called **spatial grouping**, or associate new items with fingers (**the finger method**) (ibid.).

Visual mnemonics

Word/picture activities for creating mental links are especially useful at the early stages of learning vocabulary (Sökmen 1997: 246-247). Research has shown that word-picture pairs lead to better recall than L2 and mother tongue (L1) word pairs (Thompson, I. 1987: 45).

Instead of using pictures students can visualise words or sentences (ibid.) or even the orthographical forms of words (Schmitt 1997: 214). Other options recommended by Schmitt (ibid.) include underlining the initial letter of a word or outlining a word with lines, a technique called **configuration**. Schmitt also suggests linking new words with vivid personal experiences (op. cit.: 212).

The Physical Response Method (or Physical mnemonics)

Responding physically to teacher's commands is central in James Asher's Total Physical Response methodology claimed to be equally suitable for both adults and children, especially at the beginning level (Krashen 1998: 82). The method does not force learners to speak right from the very beginning and it enables a lot of movement and action, features appealing to very young learners (Brewster et al. 2002: 44, Vale & Feunteun 1995: 52). In order to practise or recycle vocabulary, the teacher can have a range of 'listen and do' activities with children (for a selection of such activities see Vale and Feunteun 1995: 244-246) or use action songs, rhymes and stories (Brewster et al. 2002: 44). (For more information on the method see e.g., Larsen-Freeman 2000: 105-119.)

Verbal elaboration methods

It is claimed that if the material to be remembered is organised in a certain system in memory, it is also easier to retrieve it (Thompson, I. 1987: 46). Developments in lexical semantics have led to the emergence of the semantic field, semantic network/map, or semantic grid strategies (Gu and Johnson 1996: 645, Gu 2003: para. 60) or, as Thompson (Irene, 1987: 46) calls it, 'grouping'. **Semantic mapping** consists in brainstorming associations about a word and presenting them diagrammatically (Sökmen 1997: 250). It enables learners to represent different sense relationships (e.g. synonymy, antonymy, coordination) schematically (Schmitt 1997: 121). The technique is claimed to work better with low than with high

frequency vocabulary (Sökmen 1997: 251) and is, therefore, suitable for more advanced learners. Meanwhile, Phillips (1993: 70-71) recommends the technique of vocabulary networks for presenting groups of words to children aged 5-12 and Cameron (2001: 87-89) offers several variants of creating vocabulary networks for practising and recycling words with students of the same age group. According to McCarthy (1990: 93) “**grids** [emphasis added] usually consist of a list of features or properties on the horizontal axis and a set of words related by some common component of meaning on the vertical axis”. Their main objective is to differentiate between words similar in meaning (Sökmen 1997: 252). Also various scales or clines, Venn diagrams, and tree diagrams belong among verbal elaboration methods (ibid.). (For more information on different ways of grouping words see Gairns & Redman 1986: 69-71.) Some researchers (Gu & Johnson 1996: 645, McCarthy 1990: 97) have expressed their suspicion whether such methods make vocabulary retention easier. Moreover, Higa (1963, referred to in Nation & Newton 1997: 251) claims that learning unrelated items is much easier than learning items related to each other. Nation (1990, referred to in Sökmen 1997: 253) agrees with the afore-mentioned thought and accordingly recommends semantic techniques for the review of words. On the other hand, such techniques offer a good alternative for more traditional ways of organising words in a notebook (e.g. a wordlist) (McCarthy 1990: 97).

In addition to grouping (semantic mapping), Thompson (Irene, 1987: 46-47) recommends the techniques of the **word chain** and **narrative chain**. In the case of the former, students are asked to remember words so that every word is associated with the previous and the next one. For the latter, also called the story mnemonic, words are connected with a storyline.

Other Memory-Enhancing Techniques

Spaced practice (or repetition; also called ‘expanding rehearsal’ by Pimsleur (1967) and Baddeley (1990, both referred to in Schmitt & Schmitt 1995: 136)) is claimed to lead to more

secure learning of words than massed repetition (Nation 2001: 76). Thus, instead of repeating words for 15 minutes continuously, it would be wiser to spend the same amount of time repeating them at intervals, with intervals getting increasingly longer (ibid.). Schmitt (1997: 208) classifies the technique among metacognitive strategies. Students can also **self-test** their knowledge of words and engage themselves in **real-life communicative situations** in the classroom (Thompson, I. 1987: 47).

Cognitive strategies

Cognitive strategies appear both in O'Malley and Chamot's (1990: 44-45) and Oxford's (1990: 43-47) classifications of language learning strategies and the definitions of the strategies put forward by the researchers overlap to a large extent. Oxford (1990) defines cognitive strategies as "manipulation or transformation of the target language by the learner" (p. 43). O'Malley and Chamot (1990) also talk about manipulating information (p. 44) and include the following among cognitive strategies: rehearsal, organisation, inferencing, summarising, deduction, imagery, transfer, and elaboration (p. 45).

As to the classifications of vocabulary learning strategies, cognitive strategies as a separate category appear in two of them (Gu & Johnson 1996: 648, Schmitt 1997: 208; see Appendix 2 and Appendix 4 respectively). However, various strategies typically labelled as cognitive ones are present in most of the classifications of vocabulary learning strategies (for more information see below).

Dictionary use strategies

Dictionary strategies are commonly used among learners in order to determine the meaning of unknown words. According to Nation (2001: 263), using a dictionary is related to the intentional approach to vocabulary learning as opposed to, for instance, guessing, which is

generally associated with incidental learning of vocabulary. The strategies appear as a separate entity in several studies on vocabulary learning strategies (e.g., Ahmed 1989: 10, Fan 2003: 226, Gu & Johnson 1996: 650, Kojic-Sabo & Lightbown 1999: 180). In addition, some taxonomies of vocabulary learning strategies include dictionary use within larger categories. For instance, Schmitt (1997: 207) classifies dictionary use among determination strategies, which, in their turn, are a part of discovery strategies (see also Appendix 4). Nation (2001: 218, 220) talks about consulting a reference source making a difference between formal sources (usually written, e.g. a dictionary) and more spontaneous sources (usually oral, e.g. asking a teacher) (see also Appendix 5). As for the latter, such strategies also appear in Schmitt's (1997: 207) taxonomy but among social strategies for discovering the meaning of a new word.

The findings of the studies on vocabulary learning strategies in general have proved the popularity of dictionary strategies, especially the use of bilingual dictionaries (e.g., Catalan 2003: 74, Schmitt 1997: 219). Research into dictionary use, however, has yielded contradictory results. Hulstijn's (1993: 145) experiments showed that there was no major difference in the English vocabulary knowledge and inferring abilities of the subjects who looked up many words as opposed to the ones who did not. Luppescu and Day (1993: 271), on the other hand, found that the use of a dictionary considerably improved students' performance on the vocabulary test. The result led them to suggest that the use of a bilingual dictionary while reading may aid students' incidental vocabulary learning (*ibid.*). Gu and Johnson's (1996: 654, 668) study showed a wide use of dictionary strategies by the students and positive correlation between skilful use of a dictionary for learning purposes and vocabulary size and English proficiency.

Dictionaries could be used for several reasons. Nation (2001: 281-282) distinguishes between three major purposes for dictionary use:

1. comprehension (decoding), e.g. looking up new words met while listening, reading or translating;
2. production (encoding), e.g. looking up new words for speaking, writing or translating;
3. learning, e.g. choosing new words to study.

In relation to the above, students need different skills in order to effectively handle dictionaries (for more information see Nation 2001: 284-288).

There has been considerable debate as to what kind of dictionary is the best for a learner to use: monolingual, bilingual or bilingualised (semibilingual). Although monolingual dictionaries have generally be praised in English Language Teaching (ELT) methodology and considered superior to the other two types, mainly because they contain a lot more information, there might be limitations to using them. Thompson (Geoff, 1987: 283-284) has found two major drawbacks of using monolingual dictionaries: students might be in trouble with looking up the right word and with understanding the definitions. Even in case a controlled vocabulary is used in the dictionary, it might still be too difficult for low-level learners of English, especially for children. Bilingual dictionaries have been criticised for a number of reasons, e.g. for encouraging the use of translation and for giving too little information on how words are used (Nation 2001: 290). However, on condition that certain requirements are met (see e.g., Thompson, G. 1987: 284-285), they could be regarded a useful source of reference. The two types of dictionaries could be viewed as serving different purposes: bilingual dictionaries are good for quick reference and monolingual ones give a more detailed overview of the lexical system of a foreign language (Bejoint & Moulin 1987, referred to in Laufer & Hadar 1997: 189). Bilingualised dictionaries are hybrids combining the

features of both mono- and bilingual dictionaries (e.g., *Essential English-Estonian Semi-Bilingual Dictionary for Speakers of Estonian* 2000). According to Laufer and Hadar (1997: 195-196), bilingualised dictionaries are user-friendly and, as their study showed, beneficial to all types of learners, from unskilled to good dictionary-users, both for comprehension and production tasks.

Note-taking strategies

Taking notes is a traditional way of recording newly-learnt vocabulary, which is suitable for learners of different age groups and language levels. Note-taking strategies as a separate entity appear in three studies of vocabulary learning strategies (Ahmed 1989: 11, Gu & Johnson 1996: 650, Kojic-Sabo & Lightbown 1999: 179-180). In addition, Schmitt's (1997: 208) taxonomy has strategies related to using a notebook and flash cards under cognitive strategies.

The two most common forms of note-taking are by means of vocabulary notebooks and word cards (flash cards). The use of vocabulary notebooks is advocated by several authors (e.g., Gairns & Redman 1986: 95-100, Lewis 1997: 75-85, McCarthy 1990: 127-129). Moreover, some resource books (e.g., by McCarthy & O'Dell 1999) offer guidance and practical advice on how to record items in a notebook.

Despite the keen interest in the topic of vocabulary notebooks, practically no research has been conducted in the area of note-taking and how it influences vocabulary learning (Gu 2003: para. 43). Ahmed (1989: 11), investigating vocabulary learning strategies in general, discovered that note-taking strategies were common among learners and that there was no major difference between 'good' and 'poor' students in this respect. In his article Fowle (2002: 380-388) reviews the process and outcomes of introducing vocabulary notebooks in a secondary school language programme in Thailand. He concludes that notebooks proved to be

an effective tool not only for aiding students' vocabulary learning but also for promoting the use of several other vocabulary learning strategies as well as learner independence (op. cit.: 387).

There are different ways of noting down words in a vocabulary notebook. Storing vocabulary in long lists of foreign language words with their mother tongue equivalents is generally not recommended. First, list learning encourages learning words in a fixed order and discourages the independent recall of every word (Nation 2001: 307). As a result, students memorise words in a certain order and are unable to recall their meanings if the order is changed. Second, list learning arrangement is highly inflexible (i.e. it does not allow the re-ordering of words or adding more space when needed), which makes it very impractical. Third, a traditional two-column notebook (e.g. an English word vs. an Estonian word) does not cater for the needs of students (Lewis 1997: 78). Namely, learning vocabulary does not consist only in learning foreign language words with their translations. It also includes knowledge of several other aspects linked with vocabulary such as collocation, word derivation, etc.

Schmitt and Schmitt (1995), in search of "a pedagogically-sound notebook" (p. 133), offer the following procedure when working with vocabulary notebooks: initially word pairs are written down and learnt, later the translation pairs are enriched by, for instance, semantic maps, example sentences, illustrations and derivative information (p. 137). Vocabulary notebooks may come in various formats with a different organisation (e.g. organised by the alphabet, by a topic) to suit learners' needs and it is the teacher's task to expose students to as many different ways of organising their vocabulary learning notebooks as possible. (For more information on how to organise a vocabulary notebook see e.g., Cant & Superfine 1997: 40-42, Gairns & Redman 1986: 95-100, Lewis 1997: 75-85.)

The second widely-known note-taking strategy is related to using word cards. These have a foreign language word on one side and the mother tongue equivalent on the other side. Instead of the translation (or in addition to it), the card may include a foreign language definition of the word or a visual depiction of it. (Nation 2001: 303-304)

According to Nation (op. cit.: 301-303, 316), one of the most ardent advocates of the strategy, using word cards has several benefits. For instance, the strategy is suitable for learning both high- and low-frequency words, it takes less time than incidental vocabulary learning and “it is focused, efficient and certain” (p. 300). In addition to using the strategy for learning words individually, it can effectively be exploited in classroom conditions, too. The cards lend themselves to various activities such as categorising words, creating oral or written stories using certain word cards, peer-testing, etc. (Lee 2005: 48-49).

Meanwhile, the strategy - and direct vocabulary learning on the whole - has been disapproved of for various reasons. Nation (2001: 297, 299, 301) summarises the criticism of the opponents as follows: first, word cards lack wider context, as a result, memorisation of words is difficult; second, using word cards for studying does not aid using the words in communication and, third, the strategy is not efficient for vocabulary growth. Although Nation (op. cit.) does not agree with all of the afore-mentioned shortcomings, he clearly stresses that the strategy should be viewed as a complement to other ways of learning vocabulary (pp. 301-302).

In order to make an effective use of word cards Nation (op. cit.: 305-310) puts forward the following recommendations:

- use recall, i.e. look at the word and retrieve its meaning and vice versa (cf. in lists words and their meanings are both visible, if not partly covered up);

- first learn receptively (look at the word, recall its meaning), then productively (look at the meaning, recall the word);
- change the order of the cards constantly and have more difficult words near the beginning to give them more attention (cf. in lists words are always in the same order, often the words at the beginning and end of a list are remembered better);
- repeat the words aloud (especially for productive use) or to yourself;
- use the word in a phrase or sentence as the context gives extra information about the word;
- process the word deeply and thoughtfully (e.g. by using a mnemonic aid) to ensure long-term retention.

In addition to the two note-taking strategies described above, words can also be stored in various other forms such as creating collages or in word boxes, envelopes and bags (Brewster et al. 2002: 90).

Word guessing strategies

Several researchers have included word guessing strategies in their classifications of vocabulary learning strategies. Ahmed (1989: 10) has the micro-strategy of 'guessing' under the macro-strategy of 'information sources'. Gu and Johnson (1996: 650) distinguish between two types of guessing among cognitive strategies: guessing by using background knowledge (or wider context) and guessing by using linguistic clues (or immediate context). Schmitt (1997: 207) has classified guessing strategies in the category of determination strategies, which belong to the broad group of discovery strategies.

Students can guess the meanings of words by analysing the new word's part of speech or its root and affixes, by thinking of a mother tongue cognate, and by guessing a new word's meaning from context (Schmitt 1997: 208-209).

Word part analysis, unfortunately, does not always lead to successful guessing because of the “words with a deceptive morphological structure” (Laufer 1997: 25). In such words the meaning of a whole word is not the sum of the meanings of its components (e.g. *shortcomings* does not mean *short visits* but *faults*) (ibid.). Associating an unknown word with a mother tongue cognate is equally hazardous because of the existence of false cognates (false friends) (ibid.). For instance, *sympathetic* in English does not mean *sümpaatne* but *kaastundlik* in Estonian. (For more information on the false friends in English and Estonian see Allas et al. 2005). In addition to the words with a deceptive morphological structure and false friends, there are other “deceptively transparent” (Laufer 1997: 25) words, which might hinder the comprehension of a text, such as idioms (e.g. *kick the bucket*), words with multiple meanings and ‘synforms’ (i.e. similar lexical forms) (e.g. *economic/economical, price/prize*) (ibid.).

Guessing (inferencing) a word from context is mostly related to incidental learning of vocabulary, which Nation (2001: 232) considers the most important way of learning vocabulary, especially for native speakers but also for foreign language learners. However, a distinction should be made here between understanding the meaning of a word in context and learning a word meaning from context. The latter requires a degree of deliberate mental action from the student’s part, and, thus, is more intentional in nature. (Lawson & Hogben 1996: 105) Haastrup (1991, cited in Lawson & Hogben 1996: 105) is of the opinion that “it [inferencing] is a comprehension procedure that does not automatically lead to learning, although it has the potential for doing so” (p. 23). Although guessing is highly promoted by some researchers (Nation 2001: 232, Read 2000: 53), incidental vocabulary learning should not be viewed as opposed to the intentional way of learning words but complementary to it (Gu & Johnson 1996: 646, Nation 2001: 232). Some research findings also support the idea. For example, Paribakht and Wesche (1997: 188) found that reading comprehension along with

vocabulary enhancement activities gave better results in the case of ESL university students than reading comprehension alone.

According to Nation (2001), incidental learning (i.e. learning from context) means learning from reading, speaking and listening. Consequently, there are different types of contextual clues available for students: pictures, gestures or intonation and surrounding words in a written text (Schmitt 1997: 209).

For a successful guessing of words students should have three kinds of knowledge: linguistic, world, and strategic knowledge (Nagy 1997: 76). As for linguistic knowledge, the higher the language level of students, the more effectively they are able to guess unknown words (Schmitt 1997: 209). Keeping young learners in mind, Brewster et al. (2002: 91), based on Nagy (1997), suggest that linguistic knowledge includes the awareness and use of grammatical as well as textual clues. The former are related to prior knowledge of the foreign language and similarities to the mother tongue, the latter, for instance, to the knowledge of punctuation and use of capital letters. A large vocabulary size is the prerequisite for successful guessing (Laufer 1997: 29, Nation 2001: 233). It has been claimed that at least 95% text coverage is necessary for learners to be able to use the clues for guessing unknown words (Liu & Nation 1985, referred to in Nation 2001: 233). Even a higher percentage (98%) is needed for reading for pleasure (Hirsh & Nation 1992, referred to in Laufer 1997: 29). In order to understand 95% of a text the vocabulary threshold level of at least 3,000 word families or 5,000 lexical items is required (Laufer 1997: 24). According to Laufer (op. cit.: 28-30), there are four kinds of factors that complicate the guessing process of unknown words for students:

- nonexistent contextual clues, i.e. the clues for understanding unknown words are completely missing;

- unusable contextual clues, i.e. the clues are related to the words which are also unknown to students;
- misleading or partial clues, i.e. the clues promote wrong guesses or guessing a very general word meaning;
- suppressed clues, i.e. the clues do not match with the reader's background knowledge of the subject matter.

The latter is connected with world knowledge, i.e. prior knowledge of the topic or the situation in general. Research evidence has shown that it is much more difficult to learn a word about a new concept than to learn a new word for a known phenomenon (Nagy 1997: 79). Brewster et al. (2002: 91) have complemented world knowledge with extra-linguistic knowledge including visual clues (e.g. illustrations) and audio clues (e.g. word and sentence stress). They claim that for children extra-linguistic/world knowledge plays a much greater role than linguistic knowledge in guessing unknown words (ibid.).

The final type of knowledge, strategic knowledge, has been defined by Nagy (1997) as “involv[ing] conscious control over cognitive resources” (p. 81). The definition implies that students may become better guessers if they are taught how to guess (ibid.).

Guessing strategies have been at the centre of several studies (for a comprehensive overview see Nation 2001: 217-262). The findings of the research show that the number of words successfully guessed or learnt is generally small (op. cit.: 236, 238) and that the main factor promoting the success of guessing from context is foreign language proficiency (op. cit.: 247). In studies of vocabulary learning strategies, students have reported an extensive use of guessing strategies on several occasions (Fan 2003: 229, Gu & Johnson 1996: 654, Schmitt 1997: 219).

Although incidental learning of words should generally be viewed favourably, Sökmen (1997: 237-238) has found several potential problems with it:

- guessing from context is a very slow process which may result in errors;
- students' limited vocabulary makes comprehension low;
- some students may prefer other ways of learning vocabulary;
- guessing from context does not guarantee that the word is stored in the long-term memory.

The list of drawbacks by Sökmen (*ibid.*) along with the potential problems pointed out above clearly emphasise that students should be exposed to both incidental and intentional ways of learning vocabulary.

Social strategies

Social strategies help students improve their learning by communicating with other people (O'Malley & Chamot 1990: 45, Oxford 1990: 135, Schmitt 1997: 205). Oxford's classification of language learning strategies (1990: 15) includes separate categories for social and affective strategies whereas O'Malley and Chamot (1990: 45) have grouped both strategies into one. Schmitt's (*op. cit.*: 207-208) taxonomy, which is based on Oxford's (1990) classification, is the only classification of vocabulary learning strategies to have a separate category of social strategies, both under discovery and consolidation strategies (see Appendix 4). However, single strategies related to interacting with other people can be found in other classifications as well. Ahmed (1989: 10) has included such strategies in the macro-strategies of 'information sources' (e.g. ask classmates), 'practice' (e.g. ask others to verify knowledge) and 'preferred source of information' (e.g. group work). Also Fan (2003: 226) has not treated social/affective strategies separately but integrated them into the other categories. Surprisingly, though, social

strategies are completely missing from some classifications (e.g., Gu & Johnson 1996: 650-651, Kojic-Sabo & Lightbown 1999: 179). This leaves an impression that the role of social strategies is not regarded as essential as the role of other strategies in learning vocabulary. The lack of affective strategies from the classifications of vocabulary learning strategies may also be explained by the fact that the use of such strategies seems to influence language learning in general.

Students can employ social strategies both for discovering the meaning of a new word and for practising or recycling vocabulary. Mostly teachers are the ones to provide information about new words by, for instance, giving the mother tongue translation or a synonym, defining the word or using it in a sentence. Similar information, however, could also be obtained from classmates or friends (Schmitt 1997: 210). As for practising new words, various group and pair work tasks, such as role-plays, interviews, surveys, appear to be the most suitable ones.

Metacognitive strategies

Metacognitive strategies, in their broadest meaning, “provide a way for learners to coordinate their own learning process” (Oxford 1990: 136). More specifically, the strategies enable learners to plan, observe and assess the best ways of learning vocabulary in order to achieve better results (Schmitt 1997: 205, 216). In Oxford’s classification (1990: 15) metacognitive strategies appear as one of three indirect language learning strategies. As for the taxonomies of vocabulary learning strategies, the category exists in two of them (Gu & Johnson 1996: 650, Schmitt 1997: 208). Instead of the term ‘metacognitive strategies’ Gu and Johnson (1996: 650) use the term ‘metacognitive regulation’, which involves the strategies of selective attention and self-initiation. Although other scholars have not explicitly used the wording ‘metacognitive strategies’, their classifications often include strategies related to

controlling one's learning process. For instance, Ahmed's (1989: 10) micro-strategies of 'overlook', 'ask for a test' and 'self-test' clearly link with the idea of metacognitive strategies defined above. The same applies to the categories of 'independence' and 'review' in Kojic-Sabo and Lightbown's (1999: 179-180) study, the category of 'planning' in Nation's (2001: 218-219) classification and the category of 'management' in Fan's (2003: 226) research.

According to Schmitt (1997: 216-217), there are several ways how learners can direct their vocabulary learning process. First, learners could seek for maximum exposure to the foreign language through various mediums (e.g., books, the Internet, films) as well as communicating with native speakers. Second, students can test themselves, which also helps to assess the suitability of the vocabulary learning strategies one employs. Third, students can pay conscious attention to organising the practice time of words (see p. 36 above). Finally, being aware of the distinction between high- and low-frequency words, students can exploit different strategies for learning them. (ibid.) As for the latter, Nation (2001: 16, 20) gives the following recommendation: high-frequency words should receive as much attention as possible both from teachers and learners in the form of direct teaching, direct learning or incidental learning. In the case of low-frequency words it is the teacher's task to train students to use suitable strategies, such as guessing from context, to help learners discover the meaning of the words. Using Schmitt's (2000: 133) terminology, high-frequency words require more the use of consolidation strategies whereas low-frequency words call for the use of determination strategies. Students could also be encouraged to ignore low-frequency words (Schmitt 1997: 216) if the unknown words do not interfere with comprehending the text. The easiest way for students to learn about the frequency of words is by using the information in a recent learner's dictionary (e.g., *Macmillan English Dictionary for Advanced Learners* 2002).

Although metacognitive strategies are considered of great importance in language learning (Ellis 1999: 108, O'Malley & Chamot 1990: 8, Oxford 1990: 136), research into vocabulary learning strategies has yielded conflicting results. Fan's study (2003: 229-230), for example, revealed that the students considered management strategies relatively important but nevertheless the category received one of the lowest mean scores (along with association strategies). Inactive use of metacognitive strategies was also reported by Kudo (1999: 18). Gu and Johnson (1996: 654-655), on the other hand, found that both variables of metacognitive regulation were relatively popular among the students and that the variables correlated positively both with general English proficiency and vocabulary size. In Schmitt's (1997: 221) study the respondents ranked the strategy of 'continue to study over time' among the most helpful strategies whereas the strategy of 'skip or pass a new word' was rated among the least helpful ones. Kojic-Sabo and Lightbown (1999: 182-183), investigating differences between the strategy use of EFL and ESL learners, discovered that the former preferred using 'review' strategies and the latter 'independence' strategies.

PREFERENCES OF THE ESTONIAN LEARNERS (FORMS 3-6): AN EMPIRICAL STUDY

The aim of the research

Proceeding from the findings of previous research, the empirical study set out to test the following hypotheses:

1. The range of vocabulary learning strategies actively employed by Estonian students of the age group under study is limited.
2. The preferences of boys and girls as regards using vocabulary learning strategies differ; girls exploit a wider range of vocabulary learning strategies.
3. The use of vocabulary learning strategies of form five students is more limited than that of form six students.
4. There are discrepancies between the frequency of using vocabulary learning strategies and their perceived usefulness.
5. Students prefer 'shallow' vocabulary learning strategies to 'deep' ones.

Method

Data elicitation instruments

Two instruments were selected in order to elicit data about vocabulary learning strategies exploited by students: a semi-structured interview for students of the third and fourth forms (see Appendix 6 for the guide) and a questionnaire for students of the fifth and sixth forms (see Appendices 7a and 7b).

The interview format was considered suitable for younger students as face-to-face communication enables to reformulate questions that have remained unclear to students or clarify any other problems students may have with answering. In addition, filling in a lengthy questionnaire requires good reading skills and concentration from the students' part, abilities that nine- to ten-year-olds are still developing. Students of forms five and six were generally regarded of suitable age to manage with completing the questionnaire.

Both the interviews and the questionnaire aimed at finding answers to the following main questions:

- How do students deal with new words at home, including the different ways of conducting self-check?
- How is (new) vocabulary studied in the classroom?
- What are the various sources of obtaining new vocabulary for children?
- How do students handle unknown words in the classroom and at home?

Some questions in the interview and items in the questionnaire (e.g. items 44, 46, 49, 50, etc.) regarding classroom work reflected strategies closely dependent on the teacher's work during the lesson, strategies that students do not employ without teachers asking them to do so. For instance, in item 44 'I repeat new words in chorus with the tape' students cannot use the strategy if the teacher has not decided to use the particular way of dealing with vocabulary. Still, the questions were asked during the interviews and items included in the questionnaire to get a glimpse of the strategies teachers promote, which can be hypothesised to shape the strategies of students on the subconscious level. The majority of the strategies related to the home context, however, were ones that students could exploit at their own will.

In order to conduct the **interviews** an interview guide was compiled. In addition to seeking answers to the above-mentioned questions, it also included questions about how new words are presented to students and which mode of learning (visual, auditory) students prefer.

Although the interviews gave valuable insights into the ways nine- and ten-year-old children learn words, their main purpose was to get an overall picture of the strategies used by the particular age group, which, in its turn, could help to compile the questionnaire for slightly older students.

As a result, the questionnaire was not based on a single taxonomy. Instead, several sources were consulted and the results of the research carried out earlier were taken into consideration (Brewster et al. 2002, Catalan 2003, Kudo 1999, Lightbown, personal correspondence 2.11.2004, Schmitt 1997). The reasons for not selecting any available questionnaire were twofold:

- none of the questionnaires had specifically been devised for the learners under examination in the present research (students aged 10-13), therefore, the questionnaires available were found to be more appropriate for relatively mature learners, i.e. students at the upper-secondary level and upwards;
- it was considered necessary to adapt the content of the questionnaire to the Estonian learners of English as the questionnaires available had been designed keeping different target groups (Japanese, Spanish, Canadian) in mind.

The questionnaire consists of two parts. The first part contains items pertaining to sex, age and form. The main part of the questionnaire lists in a table format altogether 64 items concerning different ways of learning vocabulary. As mentioned above, a distinction was made between learning words at home and learning them at school. The decision was inspired by Kudo's work (1999: 31): his questionnaire did not define the context and he claimed after

conducting the research that this might have confused the participants. Because of the 'home' and 'school' division, some of the items (3/51, 10/52, 23/60, 11/48, 1/45, 21/55, 26/56, 24/61, 29/58) appear in both sections. This was considered necessary for finding out if any differences exist in students' preferences related to the context of studying. It was not possible to duplicate all the options in both sections for two reasons: 1) students can exploit some strategies either at home or at school; 2) duplicating too many variants in both sections would have made the questionnaire too long. Initially, the strategies included in the questionnaire were not allocated into broader categories such as cognitive, memory, etc. strategies. The main reason lay in the fact that a number of strategies could fall into several categories. For example, items 1 and 45 'I look up the meaning of an unknown word in an English-Estonian dictionary' could be labelled as a 'cognitive strategy' according to Gu and Johnson (1996: 650), as a 'determination strategy' based on Schmitt (1997: 207) and as a strategy related to 'sources' according to Nation (2001: 218). The questionnaire does not include such memory strategies as the keyword, peg or loci methods. This was a conscious decision: it was presumed that the methods are unknown to students. The questionnaire, however, contains some simpler memory strategies related to association and imagery (e.g. items 35, 36, 54) that students were considered to be familiar with.

In the main part of the questionnaire the students have three tasks. First, they are asked to cross the right columns depending on how frequently they use the strategies presented. Second, the students are required to select five most useful options both from 'home' and 'school' sections and circle them. Third, the students have a possibility to write down their own ways of learning vocabulary in case they did not find the particular variant from the table.

In order to process and interpret the data obtained from the questionnaire, a 4-point Likert scale was used as follows: 0 – ‘never’, 1 – ‘seldom’, 2 – ‘sometimes’, 3 – ‘often’ and 4 – ‘very often’.

Sample

Altogether 7 students, aged 9-10, **were interviewed**. The children were studying in forms three and four in three different schools of Tartu. Although all the students had four English lessons per week, five of them were from an English-biased class and two from an ordinary one. The interviewees were selected by their English teachers, who were asked to follow the general rules below:

- to choose students equally from both sexes;
- to choose fairly communicative students;
- not to choose only ‘good’ students.

The characteristics of the students are given in Table 1.

Table 1. *Characteristics of the students of the third and fourth forms*

| | School 1 | School 2 | School 3 |
|------------------------------|---------------------|--------------------|--------------------|
| No of students | 2 | 3 | 2 |
| Sex | 1 boy 1 girl | 1 boy 2 girls | 1 boy 1 girl |
| Form 3 | - | 1 student | 2 students |
| Form 4 | 2 students | 2 students | - |
| English-biased class | no | yes | yes |
| No of lessons per week | 4 | 4 | 4 |
| Beginning of English studies | beginning of form 3 | 2nd term of form 2 | 2nd term of form 2 |

The **questionnaire** was completed by 230 students: 117 (50.9%) were students of the fifth form and 113 (49.1%) of the sixth form. Participants included 108 (47.0%) girls and 122 (53.0%) boys. The students came from seven different schools, six out of which were schools of Tartu, among them one basic school, and one from Tartu county. 54 students (23.5%)

studied in an English-biased class and the rest – 176 (76.5%) – in an ordinary class.

Characteristics of the students are provided in Table 2.

Table 2. Characteristics of the students of the fifths and sixth forms

| | Number | Percentage |
|----------------------------------|--------|------------|
| Form 5 | 117 | 50.9 |
| Form 6 | 113 | 49.1 |
| <i>Sex</i> | | |
| Male | 122 | 53.0 |
| Female | 108 | 47.0 |
| <i>Age</i> | | |
| 10 years old | 1 | 0.4 |
| 11 years old | 109 | 47.4 |
| 12 years old | 101 | 43.9 |
| 13 years old | 17 | 7.4 |
| 14 years old | 2 | 0.9 |
| <i>Type of school</i> | | |
| Secondary school in Tartu | 166 | 72.2 |
| Basic school in Tartu | 27 | 11.7 |
| Secondary school in Tartu county | 37 | 16.1 |
| <i>Type of class</i> | | |
| English-biased class | 54 | 23.5 |
| Ordinary class | 176 | 76.5 |

Data collection procedures

The **interviews** were conducted individually with all the students between October 13th and November 2nd, 2004, on the school premises during their English lessons. Before the interviews the students were informed about the nature of the interview: that there were no right or wrong answers, that they should try to answer all the questions as well and honestly as they could, that their names and schools would not be disclosed and that the interview would be recorded. During the interviews a friendly and relaxed atmosphere was aimed at and mostly achieved too. All the interviews were conducted in Estonian and lasted approximately 15-20 minutes each. Although a guide was compiled for holding the interviews, no strict order of questions was followed during the interviews.

The **survey** was carried out between November 10th and December 3rd, 2004. The questionnaires were distributed to the students by the author and they were completed during an English class. Despite the fact that the questionnaire had an introductory part, the students were orally informed of the following prior to handing out the questionnaires:

- the questionnaire is not a test; thus, there are no right or wrong answers;
- the students should make their decisions depending on their opinions;
- the students should try to answer as honestly as they can and not consult with their desk mates or class mates as they might be learning words completely differently;
- the students should try to give responses according to how they actually learn words, not to how they might be learning them.

In addition, the students were given detailed instructions on how to complete the questionnaire. They were also free to ask for clarification at any point during filling it in. It took approximately 20-25 minutes for the students to complete the questionnaire. Estonian was used in the questionnaire as well as in giving the instructions. The questionnaire was pre-tested with a group of five students, after which the wording of some strategies was improved and the layout slightly changed.

Data analysis procedures

Both qualitative and quantitative data analyses were carried out in the study. As to the former, for the purpose of the present study, it was not considered necessary to fully transcribe the recorded interviews. Instead, notes were taken of the interviewees' main ideas, which were later summarised into a text. Quantitative data analysis was performed with the help of SPSS 11.5 for Windows and included the following statistical procedures:

1. descriptive statistics, including means, standard deviations and frequencies, were computed to summarise the students' responses to using the 64 strategies listed in the questionnaire; t-tests were run to determine any statistically significant differences between the responses of the boys and girls as well as the students of forms five and six;
2. factor analysis was performed to discern the underlying factors for the strategy items.

In addition, the students' responses to the final part of the questionnaire, which asked them to note down any other vocabulary learning strategies they made use of, were analysed and summarised.

Results

Interviews

The part below summarises the personal preferences of the students when learning and picking up new words at home.

Student No. 1. She is a ten-year-old fourth form student of an ordinary class (school 1). At home she mostly spends five to ten minutes studying new words and she prefers to do it as follows: she covers the pronunciation and words in English with a piece of paper and, based on words in Estonian, she writes the words in English on the paper. She also pronounces the words aloud or silently and often lets somebody check the new words. She studies the words in the evening and sometimes revises them in the morning. While watching cartoons or playing computer games in English, she mostly tries to understand the meaning of unknown words by guessing. She does not read any books or magazines in English and she uses only the Estonian-based Internet.

Student No. 2. He is ten years old and studies in form four of an ordinary class (school 1). He claims to remember most of the new words from English lessons, so at home he just needs to have a quick look at them to check the spelling. He repeats the words in his mind, spending approximately five to ten minutes on the activity. He thinks that he does not need to revise the new words for a second time and usually does not let anybody check the new words. He watches cartoons and films in English as well as plays computer games in English. In the case of new words, he tries to understand the meaning by himself or turns to his elder brother. Like the previous student, he also uses only the Estonian-based Internet.

Student No. 3. She is nine and studies in the third form of an English-biased class (school 2). At home she mostly uses the textbook glossary for studying new words: she covers the words in Estonian, reads the words in English and thinks of their meanings. As spelling is different from pronunciation in English, she feels that it is necessary to practise writing new words. She spends several hours on studying new words (sic!) and it takes her 15 minutes to revise previously learnt vocabulary. She does not watch cartoons in English (they have German channels at home) and she sometimes plays a computer game at home, which has relatively difficult words. If she has trouble understanding, she turns to her brother or tries to manage on her own. She sometimes uses a website where she can study different subjects, either in English or Estonian.

Student No. 4. He is a 10-year-old student of form four in an English-biased class (school 2). For studying new words orally at home, he covers words in English and by looking at words in Estonian, says the words in English aloud. If he has to learn the spelling of the words, he writes all the words in Estonian on a separate sheet of paper. Then he revises all the words orally, after which he writes the words in English down on a piece of paper, and finally he checks everything. Sometimes he asks his mother to do the final check. Usually he

remembers the new words quite quickly but it can also take more time depending on how difficult the words are. In the morning he revises the words studied in the evening, as according to him, *“during the night the brain “digests” the new words”*. Due to long school days he does not watch cartoons in English as often as he used to. Mostly he understands the meaning of unknown words based on the action going on on the screen and he thinks he has picked up some new words from the cartoons. He does not have a computer at home, so he cannot play any computer games or surf the Internet.

Student No. 5. She is 10 years old and studies in the fourth form of an English-biased class (school 2). She prefers to study new words at home in the following way: first, she revises the words, second, she writes them down and, third, her mother asks her to translate the words into English. She claims to spend five minutes on studying the words. Sometimes, though, she needs to revise the words for the second time during the same evening. She watches cartoons and horror films as well as plays computer games in English. She tries to make sense of the new words by using visual clues. She reads Internet websites that are in Estonian.

Student No. 6. She is a nine-year-old studying in the third form of an English-biased school (school 3). She prefers to learn new words by reading them through quietly and asking her sister to check them. The whole procedure takes her very little time, about 5 minutes. She does not watch cartoons in English very often but in case there is a word she does not understand, she sometimes looks it up in a dictionary. She does not play any computer games in English and she cannot use the Internet as their family does not have the connection. She claims to have read a book in English and she did not find it difficult to understand the content.

Student No. 7. He is nine years old and a form three student of an English-biased class (school 3). When studying words at home, he, first, writes the words and their pronunciation

from the textbook glossary into his notebook. He then repeats the words, either aloud or in his mind, with the notebook first open and then closed. He does not do any written repetition. He thinks that he is good at memorising words, so he just needs to go through the words once or twice and he can remember them. He often watches cartoons and plays computer games in English as well as surfs websites in English on the Internet. In the case of unknown words he either does not pay attention to them or tries to guess the meanings. He has learnt a couple of new words from the computer games (e.g. *sword*). He has not read any books in English.

As the interviews resulted in a great amount of data, only the most important general findings will be drawn together in the following part.

The majority of the students when asked whether they try to associate new English words with Estonian words (based on pronunciation) claimed that they were not doing it. The only positive answer from one of the students sounded rather hesitant. Associating new words in English with the words already known to them and picturing a new word's meaning were also unpopular among the students.

When confronted with an unknown word at home or at school, most of the students asked somebody (parents, siblings, the teacher) for the meaning of the word. The use of a dictionary was not common: only one student reported a dictionary as his first choice in finding out a new meaning; the others used it seldom or did not use it at all. One student said that the main purpose of a dictionary for him was to look up the pronunciation of new words and write them in the personal vocabulary book. On the other hand, textbook glossaries turned out to be relatively popular (mentioned by four students) both for looking up meanings of words and for studying new words. Three students thought that if pictures were available they would help the learners understand the meanings of unknown words. Three students occasionally tried

guessing the meanings of new words with the help of a context while one student could not see any point in the activity by saying “*Well, why should I do that?*”

As expected, the traditional three-column variant (English word – pronunciation – Estonian word) turned out to be the most typical way of recording new vocabulary (mentioned by five students). Two students noted new words down mostly in two columns (English word – Estonian word) adding the pronunciation only in some cases. Five students occasionally drew pictures to accompany the new words.

As to the preferences for learning new words at school, the opinions of the students seemed to differ depending on their personal learning styles and their teachers’ teaching styles. Although four of the students clearly stated that they preferred learning words based on topics, it could have been because their teachers had chosen to present and practise new words this way. The rest did not see much difference between the two options: “*Words are words*”, as one of the students said adding, though, that it was easier to form associations between words if they were topic-related. Regarding the visual or aural modes of learning, three groups of students emerged: those with a clear visual preference (2 students), those with a clear aural preference (3) and those who liked both modes (2).

Not surprisingly, choral repetition of words with the teacher emerged as a common way of practising new words. Occasionally, though, pair or group work based on new vocabulary was done (e.g. role-plays, dialogues). When dealing with new words, three students preferred to work individually, two in pairs, one with the whole class and one student had no preference here. The vast majority of the variants for practising words prompted to the students – word games, crosswords, songs, poems, action rhymes, miming – were actively exploited in the English lessons. Quite expectedly, the use of videos was not popular: none of the interviewees gave a positive answer here.

Questionnaire

Descriptive statistics

As the results show, the vocabulary learning strategies, as rated by the students, were not used very frequently (see Table 3). This is proved by the relatively low means for all the strategies: none of the strategies was used ‘very often’ on average and only one strategy – item 30 in the questionnaire – received a mean over three (3.29). On average, 23 strategies out of 64 were exploited ‘sometimes’, 28 ‘seldom’ and the rest (12) were practically not employed by the students. Item 18 ‘I tape new words and listen to them’ (at home) received the lowest mean (0.06).

Table 3. *Descriptive statistics for the questionnaire*

| No | Item No | Item in the questionnaire | <i>M</i> | <i>SD</i> | <i>N</i> |
|----|---------|---|----------|-----------|----------|
| 1 | 30 | I cover the words in English (and their pronunciation), by looking at the words in Estonian I try to remember the words English. (home) | 3.29 | 1.14 | 230 |
| 2 | 51 | I write new words in the (vocabulary) notebook. (lesson) | 2.87 | 1.31 | 230 |
| 3 | 14 | I study new words alone. (home) | 2.73 | 1.20 | 228 |
| 4 | 50 | I repeat new words in chorus after the teacher. (lesson) | 2.71 | 1.20 | 229 |
| 5 | 22 | I write new words in the notebook in three columns (words in English - their pronunciation - words in Estonian). (home) | 2.65 | 1.56 | 231 |
| 6 | 27 | I find out the meaning of an unknown word if it hinders understanding the text. (home) | 2.61 | 1.20 | 231 |
| 7 | 8 | I use the textbook glossary for studying words. (home) | 2.59 | 1.31 | 230 |
| 8 | 33 | I repeat new words in my mind. (home) | 2.59 | 1.21 | 231 |
| 9 | 40 | I write new words down at least once. (home) | 2.56 | 1.34 | 231 |
| 10 | 3 | I write new words in the (vocabulary) notebook. (home) | 2.54 | 1.42 | 229 |
| 11 | 52 | I look up the meaning of an unknown word in the textbook glossary. (lesson) | 2.51 | 1.23 | 229 |
| 12 | 43 | I ask the meaning of an unknown word from the teacher. (lesson) | 2.40 | 1.04 | 230 |
| 13 | 10 | I look up the meaning of an unknown word in the textbook glossary. (home) | 2.35 | 1.24 | 231 |

| | | | | | |
|----|----|---|------|------|-----|
| 14 | 13 | I pick up new words when watching TV programmes, films, commercials, etc. in English. (home) | 2.32 | 1.29 | 231 |
| 15 | 23 | I pay attention to unknown words. (home) | 2.31 | 1.20 | 229 |
| 16 | 11 | I try to understand the meaning of an unknown word on the basis of the text. (home) | 2.30 | 0.93 | 231 |
| 17 | 16 | I pick up new words when playing computer games in English. (home) | 2.29 | 1.36 | 231 |
| 18 | 32 | I repeat new words aloud or in a whisper. (home) | 2.28 | 1.27 | 229 |
| 19 | 48 | I try to understand the meaning of an unknown word on the basis of the text. (lesson) | 2.25 | 1.05 | 231 |
| 20 | 60 | I pay attention to unknown words. (lesson) | 2.21 | 1.25 | 222 |
| 21 | 17 | I use the (vocabulary) notebook for studying new words. (home) | 2.19 | 1.38 | 229 |
| 22 | 39 | I revise the new words ticked (crossed) as long as I can remember them. (home) | 2.17 | 1.55 | 230 |
| 23 | 47 | I ask the meaning of an unknown word from my desk or class mate. (lesson) | 2.10 | 1.19 | 231 |
| 24 | 6 | I ask the meaning of an unknown word from my mother or father, brother or sister. (home) | 2.00 | 1.30 | 229 |
| 25 | 38 | I look through the new words which I have ticked (crossed). (home) | 1.98 | 1.59 | 229 |
| 26 | 31 | I cover the words in Estonian, by looking at the words in English (and their pronunciation) I try to remember the words in Estonian. (home) | 1.97 | 1.46 | 229 |
| 27 | 45 | I look up the meaning of an unknown word in an English-Estonian dictionary. (lesson) | 1.72 | 1.30 | 230 |
| 28 | 44 | I repeat new words in chorus with the tape. (lesson) | 1.70 | 1.36 | 228 |
| 29 | 2 | I let my mother or father, brother or sister check new words. (home) | 1.69 | 1.22 | 230 |
| 30 | 1 | I look up the meaning of an unknown word in an English-Estonian dictionary. (home) | 1.68 | 0.97 | 231 |
| 31 | 53 | I check the knowledge of new words with my desk or class mate. (lesson) | 1.67 | 1.14 | 230 |
| 32 | 42 | I simply look new words through without covering the columns. (home) | 1.65 | 1.20 | 230 |
| 33 | 55 | I try to understand the meaning of an unknown word by looking at the accompanying picture. (lesson) | 1.64 | 1.07 | 230 |
| 34 | 63 | I study the words of an expression together as if they were just one word (e.g. <i>What a shame!</i>). (lesson) | 1.63 | 1.14 | 229 |
| 35 | 21 | I try to understand the meaning of an unknown word by looking at the accompanying picture. (home) | 1.62 | 0.98 | 229 |

| | | | | | |
|----|----|--|------|------|-----|
| 36 | 19 | I pick up new words when reading the Internet in English. (home) | 1.56 | 1.35 | 228 |
| 37 | 37 | I put a tick (a cross) in front of a new word I could not remember. (home) | 1.56 | 1.42 | 230 |
| 38 | 25 | I revise new words several times during a day. (home) | 1.53 | 1.14 | 231 |
| 39 | 4 | I constantly revise words studied before. (home) | 1.49 | 0.88 | 228 |
| 40 | 54 | I associate new words with the words studied before. (lesson) | 1.45 | 1.06 | 229 |
| 41 | 49 | I study new words by playing word games (e.g. bingo, hangman, guessing game, etc.). (lesson) | 1.44 | 1.12 | 231 |
| 42 | 59 | I associate English words with Estonian words based on the pronunciation or spelling. (lesson) | 1.42 | 1.09 | 229 |
| 43 | 62 | I associate new words with their synonyms (e.g. <i>huge</i> = <i>very big</i>) or antonyms (e.g. <i>tall</i> - <i>short</i>). (lesson) | 1.38 | 1.08 | 231 |
| 44 | 5 | I pick up new words when reading books, magazines, etc. in English. (home) | 1.34 | 1.22 | 230 |
| 45 | 56 | I make up sentences with new words. (lesson) | 1.31 | 1.12 | 231 |
| 46 | 20 | I teach new words to my mother or father, brother or sister, friends. (home) | 1.30 | 1.04 | 230 |
| 47 | 35 | I look at a new word, close my eyes and picture the spelling of the word. (home) | 1.21 | 1.22 | 230 |
| 48 | 64 | I study words by singing songs and reading poems. (lesson) | 1.20 | 1.18 | 227 |
| 49 | 28 | I write new words in the notebook in two columns (words in English - words in Estonian). (home) | 1.18 | 1.48 | 230 |
| 50 | 7 | I study new words with a mate (e.g. class mate, friend). (home) | 1.14 | 0.94 | 231 |
| 51 | 57 | I study words by solving crosswords. (lesson) | 1.13 | 1.13 | 230 |
| 52 | 26 | I make up sentences with new words. (home) | 1.10 | 0.98 | 228 |
| 53 | 36 | I look at a new word, close my eyes and picture the meaning of the word. (home) | 0.90 | 1.07 | 230 |
| 54 | 34 | I repeat new words by spelling them. (home) | 0.84 | 1.04 | 230 |
| 55 | 46 | I study new words from a video in English. (lesson) | 0.82 | 1.10 | 228 |
| 56 | 24 | I group words in the notebook based on a topic or I do a mind map. (home) | 0.70 | 0.93 | 229 |
| 57 | 61 | I group words in the notebook based on a topic or I do a mind map. (lesson) | 0.66 | 0.88 | 231 |
| 58 | 12 | I use flash cards for studying new words. (home) | 0.65 | 0.98 | 231 |
| 59 | 9 | I write down the new words I pick up when watching TV, using the Internet, etc. (home) | 0.43 | 0.78 | 231 |
| 60 | 41 | I act out (mime) new words. (home) | 0.34 | 0.72 | 226 |
| 61 | 58 | I draw a picture of a new word. (lesson) | 0.31 | 0.64 | 227 |

| | | | | | |
|----|----|---|------|------|-----|
| | | When studying new words I put labels on the | | | |
| 62 | 15 | objects or the wall. (home) | 0.28 | 0.74 | 230 |
| 63 | 29 | I draw a picture of a new word. (home) | 0.24 | 0.53 | 230 |
| 64 | 18 | I tape new words and listen to them. (home) | 0.06 | 0.32 | 231 |

Note: *M* - mean, *SD* - standard deviation, *N* - number of respondents

Most of the strategies listed twice in the questionnaire (home vs. lesson) were used slightly more often in lesson (e.g. items 51 and 3, means 2.87 and 2.54 respectively; items 56 and 26, means 1.31 and 1.10 respectively), although in some cases the difference between the means was practically non-existent (e.g. items 45 and 1, means 1.72 and 1.68 respectively). Two strategies were exploited more often at home than in lesson on average (items 23 and 60, 24 and 61) but the difference between the means was again extremely small.

When looking at the results of items 30 and 31 (ranking numbers 1 and 26 respectively), an interesting tendency could be observed. The option where new words were learnt or revised by translating them from Estonian into English (item 30) was clearly favoured (mean 3.29). The reverse variant (item 31) was far less popular (mean 1.97).

In order to find out if the responses given by the girls differed in any respect from the answers given by the boys, a t-test was run. The test revealed that the girls had average scores higher for 38 strategies and the boys for 25 strategies. The mean was equally low for one strategy (item 29) (see Appendix 8 for a complete overview of the differences). As expected, this shows that the girls employed a greater number of strategies more frequently than the boys. On the other hand, the differences between the means were relatively small. The difference was statistically significant on 15 instances (see Table 4). Among them there were only three where the boys received higher means (items 11, 16, 19) and 12 with higher averages for the girls.

Table 4. *Statistically significant differences in the preferences of the boys and girls*

| Item No | Item in the questionnaire | Boys | | Girls | | <i>p</i> |
|---------|---|----------|-----------|----------|-----------|----------|
| | | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | |
| 1 | I look up the meaning of an unknown word in an English-Estonian dictionary. (home) | 1.56 | 1.05 | 1.83 | .86 | .04 |
| 10 | I look up the meaning of an unknown word in the textbook glossary. (home) | 2.19 | 1.30 | 2.52 | 1.16 | .04 |
| 11 | I try to understand the meaning of an unknown word on the basis of the text. (home) | 2.45 | .94 | 2.13 | .90 | .01 |
| 16 | I pick up new words when playing computer games in English. (home) | 2.74 | 1.31 | 1.78 | 1.24 | .00 |
| 19 | I pick up new words when reading the Internet in English. (home) | 1.78 | 1.47 | 1.32 | 1.17 | .01 |
| 27 | I find out the meaning of an unknown word if it hinders understanding the text. (home) | 2.46 | 1.31 | 2.79 | 1.05 | .04 |
| 30 | I cover the words in English (and their pronunciation), by looking at the words in Estonian I try to remember the words in English. (home) | 3.05 | 1.31 | 3.56 | .85 | .00 |
| 31 | I cover the words in Estonian, by looking at the words in English (and their pronunciation) I try to remember the words in Estonian. (home) | 1.78 | 1.45 | 2.17 | 1.45 | .05 |
| 32 | I repeat new words aloud or in a whisper. (home) | 2.07 | 1.23 | 2.51 | 1.28 | .01 |
| 37 | I put a tick (a cross) in front of a new word I could not remember. (home) | 1.17 | 1.39 | 2.00 | 1.34 | .00 |
| 38 | I look through the new words which I have ticked (crossed). (home) | 1.54 | 1.57 | 2.46 | 1.47 | .00 |
| 39 | I revise the new words ticked (crossed) as long as I can remember them. (home) | 1.70 | 1.56 | 2.71 | 1.35 | .00 |
| 40 | I write new words down at least once. (home) | 2.17 | 1.39 | 2.99 | 1.13 | .00 |
| 52 | I look up the meaning of an unknown word in the textbook glossary. (lesson) | 2.35 | 1.28 | 2.69 | 1.16 | .03 |
| 53 | I check the knowledge of new words with my desk or class mate. (lesson) | 1.51 | 1.16 | 1.85 | 1.10 | .02 |

Note: *M* - mean, *SD* - standard deviation, *p* - level of significance

The boys turned out to be more eager to guess the meaning of an unknown word based on the text and more open for learning new words when playing computer games as well as when

using the Internet. The result was, to some extent, not surprising: boys generally show more interest towards technology, including information technology, and most of them are probably keen on playing computer games. While the boys tended to rely on discovering the meaning of a new word by guessing, the girls clearly showed preference for dictionaries and other reference material (items 1, 10, 27, 52). In addition, the girls employed some strategies related to aiding memorisation of words more frequently than the boys. For instance, items 37, 38 and 39 received much higher means from the girls than the boys. This could be explained by the fact that girls take studying (here: memorising) words more seriously than boys. As a result, they try out a greater variety of vocabulary memorisation strategies.

A t-test was also run to detect differences in the preferences of the students of forms 5 and 6 (see Appendix 9 for a complete overview). Small differences were found in the case of 62 strategies, two strategies had exactly the same average scores for both forms (items 8 and 18). 43 strategies out of 62 got higher means in the case of the sixth form and the rest – 19 strategies – received higher average scores in the fifth form. The means of 16 strategies revealed a significant statistical difference (see Table 5).

Table 5. *Statistically significant differences in the preferences of the students of the fifth and sixth forms*

| Item No | Item in the questionnaire | Form 5 | | Form 6 | | <i>p</i> |
|---------|--|----------|-----------|----------|-----------|----------|
| | | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | |
| 5 | I pick up new words when reading books, magazines, etc. in English. (home) | 1.11 | 1.26 | 1.58 | 1.14 | .00 |
| 6 | I ask the meaning of an unknown word from my mother or father, brother or sister. (home) | 2.26 | 1.27 | 1.73 | 1.29 | .00 |
| 10 | I look up the meaning of an unknown word in the textbook glossary. (home) | 2.13 | 1.26 | 2.57 | 1.19 | .01 |
| 13 | I pick up new words when watching TV programmes, films, commercials, etc. in English. (home) | 2.02 | 1.27 | 2.63 | 1.25 | .00 |
| 14 | I study new words alone. (home) | 2.49 | 1.19 | 2.98 | 1.17 | .00 |

| | | | | | | |
|----|--|------|------|------|------|-----|
| 16 | I pick up new words when playing computer games in English. (home) | 2.09 | 1.37 | 2.49 | 1.33 | .02 |
| 19 | I pick up new words when reading the Internet in English. (home) | 1.36 | 1.29 | 1.77 | 1.39 | .02 |
| 22 | I write new words in the notebook in three columns (words in English - their pronunciation - words in Estonian). (home) | 2.35 | 1.62 | 2.96 | 1.44 | .00 |
| 28 | I write new words in the notebook in two columns (words in English - words in Estonian). (home) | 1.56 | 1.57 | .78 | 1.27 | .00 |
| 41 | I act out (mime) new words. (home) | .47 | .82 | .21 | .57 | .01 |
| 46 | I study new words from a video in English. (lesson) | .61 | .90 | 1.03 | 1.25 | .00 |
| 47 | I ask the meaning of an unknown word from my desk or class mate. (lesson) | 1.91 | 1.16 | 2.28 | 1.20 | .02 |
| 51 | I write new words in the (vocabulary) notebook. (lesson) | 2.69 | 1.39 | 3.06 | 1.19 | .03 |
| 52 | I look up the meaning of an unknown word in the textbook glossary. (lesson) | 2.30 | 1.27 | 2.73 | 1.16 | .01 |
| 54 | I associate new words with the words studied before. (lesson) | 1.26 | 1.00 | 1.65 | 1.09 | .01 |
| 62 | I associate new words with their synonyms (e.g. <i>huge</i> = <i>very big</i>) or antonyms (e.g. <i>tall</i> - <i>short</i>). (lesson) | 1.20 | .94 | 1.56 | 1.19 | .01 |

Note: *M* - mean, *SD* - standard deviation, *p* - level of significance

The same trend also emerged here: only three strategies got higher means in the case of the fifth form, the remainder – 13 strategies – scored higher for form 6. The tendency might be indicating the possibility that students' awareness of various strategies increases with age: the more mature they become, the more frequently they start using different strategies. An additional explanation might be that as the study of English gets progressively more demanding, more of the strategies potentially known but hitherto deemed unnecessary need to be resorted to.

As the groups of students learning in an ordinary class and in an English-biased class were of different sizes, the differences in their opinions were not studied.

As the second task of the questionnaire, the students were asked to circle five strategies they considered useful both from ‘home’ and ‘school’ sections. The five most and least useful strategies for both categories are listed in Table 6. (For a complete overview see Appendices 10a and 10b.)

Table 6. *Students’ perceptions of the five most and least useful strategies at home and school*

| No | Item No | Item in the questionnaire | Frequency |
|---|---------|---|-----------|
| Home: five most useful strategies | | | |
| 1 | 30 | I cover the words in English (and their pronunciation), by looking at the words in Estonian I try to remember the words in English. | 102 |
| 2 | 1 | I look up the meaning of an unknown word in an English-Estonian dictionary. | 75 |
| 3 | 22 | I write new words in the notebook in three columns (words in English – their pronunciation – words in Estonian). | 75 |
| 4 | 16 | I pick up new words when playing computer games in English. | 53 |
| 5 | 2 | I let my mother or father, brother or sister check new words. | 51 |
| Home: five least useful strategies | | | |
| 1 | 41 | I act out (mime) new words. | 1 |
| 2 | 29 | I draw a picture of a new word. | 2 |
| 3 | 18 | I tape new words and listen to them. | 3 |
| 4 | 24 | I group new words in the notebook based on a topic or I do a mind map. | 5 |
| 5 | 9 | I write down the new words I pick up when watching TV, using the Internet, etc. | 5 |
| School: five most useful strategies | | | |
| 1 | 43 | I ask the meaning of an unknown word from the teacher. | 130 |
| 2 | 51 | I write new words in the (vocabulary) notebook. | 118 |
| 3 | 50 | I repeat new words in chorus after the teacher. | 85 |
| 4 | 60 | I pay attention to unknown words. | 82 |
| 5 | 45 | I look up the meaning of an unknown word in an English-Estonian dictionary. | 77 |
| School: five least useful strategies | | | |
| 1 | 58 | I draw a picture of a new word. | 12 |
| 2 | 61 | I group words in the notebook based on a topic or I do a mind map. | 14 |
| 3 | 54 | I associate new words with the words studied before. | 14 |
| 4 | 46 | I study new words from a video in English | 23 |
| 5 | 55 | I try to understand the meaning of an unknown word by looking at the accompanying picture. | 25 |

As the number of vocabulary learning strategies in the 'home' category was much larger than that of the 'school' section, the frequencies of the strategies are not directly comparable. However, the table above gives a general idea of the students' preferences. The comments below apply only to the top five and bottom five strategies at home and school.

Not surprisingly, the same strategy – item 30 – tops two lists: it is the strategy generally exploited most frequently (see Table 3 above) as well as the one considered most useful in the home context. Somewhat unexpectedly, the students regarded consulting an English-Estonian dictionary for unknown words (items 1 and 45) very useful. The usefulness, however, was not matched with the frequency of using a dictionary (means 1.68 and 1.72 for home and school respectively). Some strategies (item 22 for home, items 50 and 51 for school) were regarded useful and also exploited relatively frequently. Others (items 2 and 16 for home, items 43 and 60 for school), although considered very useful, were employed less frequently.

All the five least useful strategies in the 'home' category and three strategies (items 58, 61 and 46) in the 'school' section ranked extremely low also in the frequency of using them. Two items in the 'school' section (54 and 55) were regarded useless and received means below 2 (1.45 and 1.6 respectively).

Factor analysis

In order to find out what groupings existed among the questionnaire items, an exploratory factor analysis was run. The number of factors was specified at eight based on the result of a parallel analysis. Consequently, a number of strategies did not fit into the categories where they loaded. Thus, all in all, 23 strategies were eliminated from the further analysis. The second factor analysis with a total of 41 strategies resulted in a much clearer picture (see Table 7). The eight factors accounted for 52% of the total variance.

Table 7. *Factor analysis summary of strategy items. Cronbach's coefficient alpha reliability estimates*

| Items* | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 | Factor 6 | Factor 7 | Factor 8 |
|---------|------------|------------|------------|------------|------------|------------|-------------|------------|
| Item 30 | .41 | -.07 | .01 | .15 | .40 | .12 | .04 | .09 |
| Item 37 | .87 | .11 | .07 | -.05 | .04 | .04 | .07 | .12 |
| Item 38 | .88 | .04 | .10 | .00 | .07 | .09 | .09 | .10 |
| Item 39 | .85 | .11 | .09 | -.04 | .14 | .11 | .05 | .10 |
| Item 40 | .51 | .06 | -.10 | .16 | .32 | .08 | .13 | .14 |
| Item 12 | .18 | .47 | -.02 | .08 | .04 | .22 | .09 | .06 |
| Item 15 | .09 | .68 | .07 | .07 | -.17 | .04 | .05 | -.13 |
| Item 18 | -.14 | .50 | .07 | -.05 | .08 | .01 | -.08 | .02 |
| Item 26 | .28 | .48 | -.07 | .01 | .20 | -.02 | -.10 | .16 |
| Item 29 | .01 | .68 | -.09 | -.04 | .12 | -.09 | .01 | .26 |
| Item 56 | .11 | .37 | -.16 | .27 | .19 | -.11 | -.18 | .25 |
| Item 58 | .06 | .56 | -.06 | .04 | -.01 | -.14 | -.18 | .29 |
| Item 22 | .00 | .01 | .83 | .10 | -.03 | -.21 | -.03 | .05 |
| Item 24 | .12 | .33 | .35 | -.08 | .14 | .15 | -.01 | .21 |
| Item 3 | .07 | -.09 | .76 | .10 | .05 | .04 | .05 | .06 |
| Item 51 | .07 | -.03 | .76 | .08 | -.05 | -.08 | -.03 | .10 |
| Item 11 | .02 | -.16 | .01 | .55 | -.03 | -.05 | -.15 | .10 |
| Item 21 | -.04 | .24 | .12 | .68 | .03 | .13 | .10 | .01 |
| Item 48 | .10 | -.04 | .06 | .71 | .10 | -.07 | -.21 | .03 |
| Item 55 | -.04 | .08 | .11 | .74 | .06 | .10 | .06 | .16 |
| Item 1 | .34 | .19 | .27 | -.09 | .34 | .26 | -.03 | .02 |
| Item 10 | .14 | .16 | -.05 | -.04 | .78 | .08 | .04 | .12 |
| Item 27 | .25 | -.08 | .00 | .19 | .56 | .18 | -.10 | .10 |
| Item 52 | .08 | .09 | .10 | .02 | .80 | .01 | .03 | .07 |
| Item 8 | .02 | .06 | -.03 | .03 | .78 | .01 | .18 | .04 |
| Item 2 | .18 | .23 | -.05 | .13 | .15 | .29 | .04 | .07 |
| Item 23 | .07 | -.07 | -.03 | -.01 | .02 | .81 | -.14 | .02 |
| Item 28 | .08 | -.02 | -.25 | -.08 | -.02 | .49 | .07 | .07 |
| Item 43 | -.09 | .22 | .23 | .12 | .17 | .41 | .08 | .22 |
| Item 60 | .17 | -.09 | -.06 | .04 | .11 | .77 | -.04 | -.03 |
| Item 63 | -.01 | .16 | .27 | .22 | .16 | .43 | .10 | .31 |
| Item 13 | -.09 | .08 | -.01 | .08 | -.04 | -.03 | -.80 | .00 |
| Item 19 | -.16 | -.05 | -.12 | .14 | -.03 | .04 | -.70 | .09 |
| Item 46 | -.10 | .22 | .11 | .19 | -.08 | -.15 | -.39 | .17 |
| Item 5 | .02 | .02 | .07 | -.09 | -.07 | .08 | -.70 | -.10 |
| Item 35 | .02 | .03 | -.05 | .09 | .03 | -.05 | .05 | .80 |
| Item 36 | .10 | .11 | .08 | .05 | .04 | -.06 | .05 | .69 |
| Item 54 | .09 | .13 | .07 | .07 | .06 | .09 | -.29 | .50 |

| | | | | | | | | |
|-------------------|------|------|------|------|------|------|------|------------|
| Item 59 | .13 | .06 | .04 | .30 | .20 | .22 | .00 | .51 |
| Item 61 | .18 | .22 | .18 | -.15 | .10 | .20 | -.05 | .42 |
| Item 62 | .13 | .11 | .16 | .10 | .11 | .17 | -.01 | .48 |
| Eigenvalues | 3.29 | 2.69 | 2.49 | 2.34 | 2.90 | 2.43 | 2.16 | 2.70 |
| Factor variance** | 8.00 | 7.00 | 6.00 | 6.00 | 7.00 | 6.00 | 5.00 | 7.00 |
| alpha*** | .84 | .65 | .72 | .68 | .76 | .62 | .65 | .70 |

Note. Suggested factor names: Factor 1 - Rote rehearsal; Factor 2 - Creative rehearsal; Factor 3 – Taking notes; Factor 4 – Guessing; Factor 5 – Dictionary use; Factor 6 – Miscellaneous; Factor 7 – Sources of words; Factor 8 – Association and imagery.

* See Appendix 11 for corresponding items.

** Percentage of variance accounted for by a factor

***Cronbach's coefficient alpha reliability estimates

Factor 1 receives loadings from five variables, which are all related to repeating words mechanically either in oral or written form. All of the strategies are generally notebook-based and most of them involve “a look-cover-test check” (Neuburg and Harris 2003: 57). Rote repetition strategies appear in several classifications of vocabulary learning strategies, though different researchers have labelled them differently (see pp. 30-31). In this study the factor will be called ‘rote rehearsal’.

The seven variables loading on **Factor 2** share a common feature of memorising words by employing strategies perhaps more “inventive” in nature. Some of the strategies (Items 12, 15, 18) obviously include elements of rote repetition but involving means other than a notebook (flash cards, labels, a tape recorder). Schmitt (1997: 208) classifies the strategies as cognitive ones. The other strategies aid memorisation through asking students to form a sentence using the word (Items 26, 56) or draw a picture about the word (Items 29, 58). Schmitt (op. cit.: 207) labels the strategies as memory ones. In addition to the fact that Schmitt’s cognitive strategies are more mechanical in nature whereas his memory strategies involve ‘deeper’ mental processing, it has to be agreed that the strategies included in Factor 2, if exploited, require a certain amount of creativity and/or fantasy from students. Consequently, the factor could be named ‘creative rehearsal’.

Factor 3 is defined by four variables, all of which are concerned with writing words down in a notebook. In the classifications of several researchers (Ahmed 1989, Gu & Johnson 1996, Kojic-Sabo & Lightbown 1999) note-taking appears as a separate category of strategies (for the overview of note-taking strategies see pp. 39-42). The strategy of ‘I group words in the notebook based on a topic or I do a mind map’ (home) (Item 24), although generally considered facilitative to memorisation, can also be exploited as a form of note-taking. Thus, the whole factor is labelled ‘note-taking’.

Four strategies loaded on **Factor 4**: two of them are related to inferring the meaning of an unknown word on the basis of the context either at home or school (Items 11, 48) and the other two (Items 21, 55) to inferring the meaning from the accompanying picture at home or school. In previous studies Gu and Johnson (1996) and Fan (2003) classify guessing as a separate category of vocabulary learning strategies. Schmitt (1997) includes inferring strategies in the group of various ‘determination strategies’ and Nation (2001) in the category of ‘sources’ (for the overview of guessing strategies see pp. 42-46). For the purpose of this study, the factor will be called ‘guessing’.

Factor 5 receives loadings from five variables. Out of these, three (Items 1, 10, 52) are directly linked to looking up meanings of new words either in a dictionary or a textbook glossary. Item 27 (‘I find out the meaning of an unknown word if it hinders understanding the text. (home)’) is only partly related to the aforementioned strategies as using a dictionary here is one way (out of several) for detecting the meaning of a new word. The fifth variable – ‘I use the textbook glossary for studying words. (home)’ (Item 8) – reflects a completely different variant of a dictionary (here: textbook glossary) use, namely, that of using a dictionary for learning purposes, not for reference. Schmitt (1997) has a similar strategy - ‘Use the vocabulary section in your textbook’ – among cognitive strategies. If the broad sense of the

term 'dictionary use' is taken into consideration, it could be explained why the item loaded in the factor. 'Dictionary use' appears in several classifications of vocabulary learning strategies (for the overview of dictionary use strategies see pp. 37-39). In this study the factor will also be labelled 'dictionary use'.

Six strategies – most of them quite different in nature – loaded in **Factor 6**. Item 28 is clearly related to note-taking strategies. As the questionnaire included a similar strategy (Item 22, Factor 3), the two items (Items 28 and 22) might have confused the students, who consequently might have given inadequate responses to Item 28. Item 43 is connected with consulting a spontaneous reference source, i.e. asking a teacher for information (Nation 2001: 220; see also p. 37 above), thus, it is to some extent related to Factor 5. Based on Schmitt's (1997: 207-208) taxonomy of vocabulary learning strategies (see Appendix 4), Items 2, 23 and 60 could be labelled as metacognitive strategies, where students have a chance to control their learning process. Item 63 has been classified by Schmitt (ibid.) as a memory strategy. As the strategies mentioned above do not share one common characteristic, the factor will be called 'miscellaneous'.

Factor 7 includes three strategies (Items 13, 19, 5) that, to a certain extent, are related to incidental learning of words, i.e. students picking up new words from different sources (e.g. the internet, TV, books). The fourth variable - 'I study new words from a video in English. (lesson)' (Item 46) - received a much lower loading and differs from the others because of its teacher-centred nature: if the teacher does not use a video in English classes, students cannot apply the strategy. Despite the shortcoming, if the right conditions are provided, the strategy resembles the other three ones for focusing on one of the sources of new words, i.e. a video. Therefore, the factor will be named 'sources of words'.

Factor 8 receives loadings from six items, three of which (Items 54, 59, 62) are clearly association-related strategies and two (Items 35, 36) imagery-based ones. Item 61 ('I group words in the notebook based on a topic or I do a mind map. (lesson)') may also be viewed as an association strategy, especially as regards creating a mind map (semantic mapping), a technique which is truly associative in nature. The 'home' counterpart of the same item (Item 24), however, loaded in Factor 3 'note-taking' (see above for the explanation). Association- and imagery-based strategies are generally viewed as memory strategies involving students more deeply, i.e. requiring 'deeper' level of processing. Fan (2003) has the category of 'association' as one of three 'deep' memory categories alongside with 'grouping' and 'analysis'. The strategies also appear in Gu and Johnson's (1996) classification among 'encoding strategies' and in Schmitt's (1997) taxonomy among 'memory strategies'. As the categories suggested by Gu and Johnson and Schmitt do not convey the meaning of the factor quite clearly, in this study the factor will be called 'association and imagery'.

Reliability estimates were calculated using Cronbach alpha and they were relatively high ranging from .84 for 'rote rehearsal' to .62 for 'miscellaneous' indicating that the categories established are reasonably reliable.

Rank ordering of the strategy factors (see Table 8) revealed the popularity of dictionary use and rote rehearsal strategies. The strategies of association and imagery as well as creative rehearsal, on the other hand, were the least frequently used ones by the students.

Table 8. *Rank ordering of the strategy factors according to the frequency of use*

| Rank order | Factor name | <i>M</i> | <i>SD</i> | Factor number |
|------------|-------------------------|----------|-----------|---------------|
| I | Dictionary use | 2.35 | .86 | 5 |
| II | Rote rehearsal | 2.31 | 1.10 | 1 |
| III | Taking notes | 2.19 | .98 | 3 |
| IV | Guessing | 1.95 | .72 | 4 |
| V | Miscellaneous | 1.91 | .72 | 6 |
| VI | Sources of words | 1.51 | .87 | 7 |
| VII | Association and imagery | 1.17 | .68 | 8 |

| | | | | |
|------|--------------------|-----|-----|---|
| VIII | Creative rehearsal | .57 | .46 | 2 |
|------|--------------------|-----|-----|---|

Note. *M* – mean, *SD* – standard deviation

Regarding the preferences of the boys and girls, statistically significant differences appeared in the case of four factors (see Table 9). As expected, the girls believed more strongly in the strategies of rote rehearsal and dictionary use whereas the boys tended to favour guessing strategies and picking up words via various sources more than the girls.

Table 9. *Differences in the preferences of the boys and girls (factor analysis)*

| Factor Number | Factor name | Boys | | Girls | | <i>p</i> |
|---------------|-------------------------|----------|-----------|----------|-----------|-------------|
| | | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | |
| 1 | Rote rehearsal | 1.93 | 1.09 | 2.75 | .95 | .00* |
| 2 | Creative rehearsal | .54 | .46 | .59 | .46 | .43 |
| 3 | Taking notes | 2.09 | 1.03 | 2.29 | .91 | .12 |
| 4 | Guessing | 2.04 | .73 | 1.82 | .69 | .04* |
| 5 | Dictionary use | 2.21 | .91 | 2.50 | .77 | .01* |
| 6 | Miscellaneous | 1.93 | .70 | 1.88 | .74 | .63 |
| 7 | Sources of words | 1.63 | .92 | 1.38 | .79 | .03* |
| 8 | Association and imagery | 1.13 | .70 | 1.22 | .65 | .35 |

Note. *M* – mean, *SD* – standard deviation, *p* – level of significance, * - statistically significant difference

Table 10 below shows that the preferences of the learners of the fifth and sixth forms were statistically significant on three instances. The strategies of note-taking, dictionary use and sources of words received much higher means from the students of form six than those of form five. Again, the explanation suggests itself that the strategies become more necessary as learning gets harder.

Table 10. *Differences in the preferences of the students of the fifth and sixth forms (factor analysis)*

| Factor Number | Factor name | Form 5 | | Form 6 | | <i>p</i> |
|---------------|-------------------------|----------|-----------|----------|-----------|-------------|
| | | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | |
| 1 | Rote rehearsal | 2.35 | 1.05 | 2.27 | 1.16 | .57 |
| 2 | Creative rehearsal | .57 | .49 | .56 | .43 | .88 |
| 3 | Taking notes | 2.04 | 1.01 | 2.34 | .92 | .02* |
| 4 | Guessing | 1.90 | .65 | 2.00 | .78 | .29 |
| 5 | Dictionary use | 2.23 | .83 | 2.47 | .87 | .04* |
| 6 | Miscellaneous | 1.94 | .68 | 1.87 | .75 | .42 |
| 7 | Sources of words | 1.28 | .84 | 1.75 | .84 | .00* |
| 8 | Association and imagery | 1.11 | .63 | 1.24 | .73 | .14 |

Note. *M* – mean, *SD* – standard deviation, *p* – level of significance, * - statistically significant difference

As the final part of the questionnaire, the children were asked to add any ways of learning vocabulary they used. All in all, 54 students (23.5%) contributed here: 32 girls and 22 boys. Some students wrote about several options of learning words.

On the one hand, a number of variants were suggested which actually were related to some items in the questionnaire. 11 students (seven boys and four girls) wrote about a strategy related to item 2 ‘I let my mother or father, brother or sister check new words’. For instance:

- *“Sometimes my mother tells me words in Estonian and I translate them on paper. Later mother checks the words and gives an appropriate mark”* (11-year-old boy, form 5).
- *“My sister asks words from me and sometimes I write them down. NB! My sister is younger than me, but she looks them up in my textbook”* (11-year-old girl, form 5).

Six children (five girls and a boy) provided variants related to item 40 ‘I write new words down at least once’.

- *“I learn this way that I write English words down several times. At the same time I think of what the words mean”* (11-year-old girl, form 5).
- *“I write new words in the notebook and then write them all down once again”* (12-year-old girl, form 6).
- *“Sometimes I write words down 20 times. It depends on how difficult the words are”* (12-year-old girl, form 6).
- *“I write three lines of all words and if I still could not remember them, then I write three more lines of all the words”* (12-year-old girl, form 6).

- *“I write the words mechanically (tuimalt) until they stick in my mind”* (11-year-old boy, form 5).

Three children (two boys and a girl) added a variant connected to item 16 in the questionnaire ‘I pick up new words when playing computer games in English’ and two children (both boys) an option related to item 19 ‘I pick up new words when reading the Internet in English’.

The variant of three children (two girls and a boy) was about learning words when watching TV, related to item 13 in the questionnaire. For instance, a 12-year-old girl wrote *“I watch films with a more difficult text without translation. It helps to learn [new words] and if I don’t know a word, I ask from my brother or associate with the text”*. Three children (two girls and a boy) wrote about repeating new words either in a loud voice or mentally (items 32 and 33). The option is best characterised by a variant given by a 12-year-old boy who wrote that *“I repeat and repeat [the words]”*. One 12-year-old girl said that *“I read the words through once and that’s all”* (item 42). One 12-year-old girl “explores” (*uurib*) books in English (item 5).

On the other hand, the students also provided variants not present in the questionnaire or substantially modified variants. The variants completely missing from the questionnaire included:

- *“My mum goes to English lessons and sometimes I go and have a look at her homework, then I sometimes learn new words”* (11-year-old girl, form 5).
- *“I look at the words in the units and I remember them at once”* (11-year-old girl, form 5).

- *“I also learn English with the “Talk to Me” programme and it is a great help. The programme pronounces a word and you have to pronounce and write it down, you can also take a dictation”* (11-year-old girl, form 5).
- *“I sometimes write words on the board, then I can remember them more easily”* (11-year-old girl, form 5).
- *“I make a poem. I study for a longer time if there is a difficult test”* (11-year-old boy, form 5).
- *“At home I divide words into several parts, it is easier then to study. First I learn the first group of words, then the second and the first, etc.”* (two 11-year-old girls, form 5).
- *“I look up the meaning in the Internet dictionary”* (11-year-old boy, form 5 and 12-year-old boy, form 6).
- *“I learn from other people’s talk. For example, when the teacher speaks in Estonian, I try to put it into English”* (12-year-old boy, form 5).
- *“I put words into a tune”* (12-year-old boy, form 6).
- *“I sometimes leaf through a dictionary and I simply remember some words from there”* (11-year-old girl, form 5).
- *“We sometimes do word tests with my class mates and then we check them. Usually the marks are worse at the beginning and better later”* (13-year-old girl, form 6).

Although the number of the strategies proposed by the students was small, some of them showed the students’ creative attitude to learning words.

Several students (eight girls and three boys) wrote about strategies actually present in the questionnaire (mostly connected to items 30 and 40), but their variants were slightly different from the originals. For example:

- *“I cover the English words, I look at the words in Estonian and write the words in English after them. If the word is correct, I put ‘+’, if it is partly correct, I put ‘√’, if it is wrong, I put ‘-’ ”* (a 13-year-old girl, form 6).
- *“I write words in Estonian on the computer and after them words in English”* (a 12-year-old girl, form 6).
- *“At home I cover the words in English and their pronunciation with a slip of paper, I look at the words in Estonian and write the words in English on the paper. I check the words and if there is a wrong word, I put ‘-’. I write the wrong word as long as it is right and then I review all the words once again”* (an 11-year-old girl, form 5).
- *“My mother makes a Word table [of English words] and I write words in Estonian there. If the word is right, ‘Well done! Correct!’ appears and if the word is wrong, ‘Try again! Wrong!’ appears”* (an 11-year-old girl, form 5).

Discussion

The main aim of the study was to map the current situation as regards young Estonian students’ preferences in relation to vocabulary learning strategies. For the purpose, seven interviews were conducted with students of forms three and four and a 64-item questionnaire was compiled and administered to 230 students of forms five and six.

The results of both the interviews and the questionnaire showed that the use of various vocabulary learning strategies is not very wide spread among the students. This became especially clear from the relatively low means for the strategies listed in the questionnaire. All in all 40 strategies received a mean below 2.0, i.e. the students estimated that they used the strategies seldom or never (see Table 3 above). A limited use of vocabulary learning strategies has also been shown by Kudo’s research (1999: 11, 23). It seems that, despite the few students

who might actively use a number of vocabulary learning strategies, the average student is not very keen on exploiting the strategies. This could be due to several reasons. First, the students may have already discovered a small set of strategies they find suitable and that they actively use discarding the rest. Taking into account the age of the students (11-12 years, on average), however, it is highly unlikely that the students' learning habits are so fixed. Second, it is quite possible that the students are just not aware of the wide choice of the strategies available. When looking at the strategies at the top of the frequency list (with means above 2.0; see Table 3), it has to be admitted that the strategies, with few exceptions (e.g. items 13, 16), are rather traditional and have belonged to the students' repertoire for years. Third, the students might apply some vocabulary learning strategies subconsciously, which makes it virtually impossible to report the use of such strategies. For instance, the strategy related to picking up new words when using the Internet (item 19) ranked surprisingly low (36th out of 64 strategies) on the frequency list (see Table 3). On the one hand, this might imply that the students mostly use the Estonian-based Internet, as it appeared from the interviews. On the other hand, if the students use the Internet in English, they might not notice that they learn new words by means of the Internet.

The students' limited use of vocabulary learning strategies was also revealed from the additional variants of vocabulary learning strategies they provided in the last part of the questionnaire. First, only a small number of the students (23.5%) contributed here. Second, very often the variants given were directly related to certain items in the questionnaire or the items were only slightly modified. Only on 11 occasions did the students add ways of learning vocabulary completely missing from the questionnaire. Several studies conducted previously have also shown that some students (mostly less proficient ones) are satisfied with a very

narrow range of vocabulary learning strategies (e.g., Ahmed 1989, Gu & Johnson 1996, Sanaoui 1995).

One has to agree with Nation (2001: 229) that strategy training can prove very useful in broadening students' knowledge of the strategies. In addition to raising students' awareness of the different ways of managing their vocabulary studies, students should be informed about how best to exploit the strategies and how to make wise choices between the strategies on different learning occasions. As for the latter, the study revealed an interesting tendency: translating words from Estonian into English (item 30) was much more popular than the reverse variant (item 31). According to Nation (*ibid.*: 306), the two variants serve different purposes: L2-L1 translation is related to receptive knowledge of the word whereas L1-L2 translation to productive knowledge of the word. His recommendation (*ibid.*) is to learn words first receptively and then productively. The two processes, however, are not symmetrical: learning words productively automatically entails the receptive knowledge of a word. Therefore, to save time and effort learners might prefer to study words productively from the very beginning instead of going through the two-stage (receptive- and productive-use) process.

There is no doubt that teachers have an important role to play in training the strategy use of students. They are the ones to offer possibilities for students to learn about and practise the strategies. Useful practical information on the topic can be found from resource books such as *Learning to Learn English* by Ellis and Sinclair (1989a,b), *Learner Autonomy* by Scharle and Szabó (2000) and *How to Teach Vocabulary* by Thornbury (2002). Advice can also be obtained from Internet websites (e.g., *Vocabulary Learning Strategies* by Thompson at <http://www.public.asu.edu/~ickpl/learningvocab.htm>, *Vocabulary Strategies* at http://people.uncw.edu/sherrilld/edn356/notes/vocabulary_strategies.htm).

From the above, it can be concluded that the first hypothesis that the range of the strategies actively used by the students is limited proved to be correct.

Although the interviews conducted with the students did not reveal any major differences in the preferences of the boys and girls, the differences did emerge in the results of the questionnaire. While small differences appeared in the case of several strategies, the differences were statistically significant for 15 strategies, among which the girls had higher means for 12 strategies (see Table 4 above). This was an expected result and corroborated the findings of the studies in the field of language learning strategies in general (e.g., Oxford & Nyikos 1989) as well as in the area of vocabulary learning strategies (Catalan 2003).

On the basis of the factor analysis (see Table 7 above), it became clear that the preferences of the both sexes were different in nature. The girls seem to think that working hard on memorising words and checking the meanings of new words might lead to success (categories: rote rehearsal, dictionary use). The boys, on the other hand, try not to strain themselves too much and hope to manage with strategies requiring less effort (categories: guessing, sources of words). The result is not surprising: girls are often viewed as more conscientious, diligent students whereas boys approach learning in a more relaxed manner. Hence, different strategies might suit male and female students, a fact that teachers should be aware of.

The findings summarised above show that the second hypothesis proved to be correct to a certain extent. Although the boys and girls taking part in the survey shared some similarities concerning the use of vocabulary learning strategies, there were several statistically significant differences in the preferences of the strategies. It became also evident that the girls exploited a wider range of the strategies than the boys.

The study also aimed at finding out the differences in the preferences of the fifth and sixth graders. As the age gap between the students of the two forms was very small, it was assumed

that the differences could not be substantial. According to the results of the survey, small differences were observed on several occasions but statistically significant differences emerged in the case of 16 strategies (see Table 5 above). The results of the factor analysis shed some light on the general categories of the strategies the students of the two forms preferred. On the one hand, the likes and dislikes of both age groups matched. For instance, rote rehearsal appeared to be popular and creative rehearsal unpopular among the students in both forms. On the other hand, the older students employed certain strategies (note-taking, dictionary use, sources of words) much more frequently than the younger ones (see Table 9 above). The finding seems to support the idea expressed by some authors (Ahmed 1989: 11, Schmitt 1997: 224) that the older the students get, the more varied their repertoire of vocabulary learning strategies becomes. It should be borne in mind, though, that a more thorough study including a wider range of age groups is necessary to make any valid generalisations on the above-mentioned topic.

Schmitt (*ibid.*) also found that over the years a shift from mechanical strategies to ‘deeper’ ones is likely to happen. This, however, was not proved by the present study. The strategies related to association and imagery ranked among the lowest in the survey. Although some of the students interviewed claimed to be using association- and imagery-based strategies, mostly their positive answers sounded quite hesitant. The students examined in the present study seem to be too young to be able to use the ‘deep’ strategies, especially if they have not been trained to do so. The strategies might work better with secondary and university students.

From the analysis above it can be concluded that the third hypothesis also proved largely correct. The students of form six exploited a wider range of vocabulary learning strategies more frequently than the students of form five.

A couple of previous studies (Fan 2003, Schmitt 1997) have found a mismatch between the strategies actually used by students and the strategies they consider useful. The present research set out to investigate the same problem.

The survey resulted in two kinds of findings. On the one hand, there were certain strategies (items 22, 30, 50, 51; see Table 6 above) that the students regarded extremely useful. The same strategies also appeared at the top of the frequency list of the strategies (see Table 3 above). The best example here is the 'good old' strategy of trying to recall words in English by looking at words in Estonian (item 30), which was the strategy exploited most frequently as well as rated highest by the students. Despite the criticism about list-learning of words voiced by Nation (2001: 306, 307; see also p. 40 above), the tradition is rooted so deeply in the Estonian classrooms that it is difficult to change it. One might even ask whether it is necessary to get rid of the habit: the students seem to believe that the strategy leads to good results in vocabulary learning. It is not only the students who have faith in the strategy, with no doubt teachers and even parents have had their share in shaping the students' belief. Gairns and Redman (1986: 93) consider the strategy valuable at the initial stages of learning: it gives students a sense of achievement and works well in the case of direct mother tongue equivalents. Therefore, it seems acceptable if the strategy is actively used in forms five and six, but the older the students get, the more they should be encouraged to make use of other strategies when committing words to memory.

On the other hand, there were strategies that were ranked among the five most useful ones (items 1, 2, 16, 45, 60; see Table 6 above) but which were not exploited very frequently. The strategies related to using an English-Estonian dictionary (items 4, 45) exemplify the aspect best. The reason for the infrequent use of dictionaries at school could be explained by the fact that schools might not have enough copies available. As a result, dictionary skills are not

developed in lessons very often, which, in its turn, may influence the use of dictionaries at home. It could also be possible that teachers do not consider training students in the effective use of dictionary skills important or they do not know how exactly they should do it. Some practical advice on the topic is given by Nation (2001: 284-288), Sökmen (1997: 245), Thornbury (2002: 151-155) and Wright (1998). The results of the factor analysis showed, however, that the category of 'dictionary use' topped the ranking of the categories (see Table 7 above). It has to be remembered, though, that the category includes several other strategies related to using dictionaries or textbook glossaries (see p. 74 above).

As for the least useful strategies, they were also exploited infrequently by the students. In sum, it could be said that the fourth hypothesis proved to be partly correct: there were some but not many discrepancies between the preferences of the students and the perceived usefulness of the strategies.

Finally, the study aimed at determining whether 'shallow' vocabulary learning strategies were more widespread among the students than 'deep' strategies. The results of the factor analysis are the best means of providing an overview here (see Table 7 above). It is a telling result that the category of 'rote rehearsal' ranked second whereas the category of 'association and imagery' seventh. As pointed out above, a strategy related to rote rehearsal (item 30) ranked first on the frequency list of all the strategies. Also the interviews conducted with younger students revealed that the main way of learning words was using oral and/or written repetition.

The unpopularity of 'deeper' vocabulary learning strategies has been demonstrated by several studies conducted previously (e.g., Fan 2003, Gu & Johnson 1996, Kudo 1999, Schmitt 1997), thus, the finding is fully in accord with earlier results. As to rote rehearsal, previous research has produced two kinds of results. Some scholars (e.g., Fan 2003, Gu &

Johnson 1996) have found that rote memorisation is not extremely popular among learners, the others have discovered just the opposite (e.g., Kudo 1999, Lawson & Hogben 1996, Schmitt 1997). It has also been argued whether rote repetition might not be related to the learning and teaching styles promoted in certain countries, predominantly in Asia (Schmitt 1997: 220). Analysing the data obtained in the present study, the question arises whether the same learning style is not encouraged in Estonian schools by teachers of English.

From the data presented above, it can be concluded that the fifth hypothesis concerning the popularity of 'shallow' vocabulary learning strategies proved to be correct.

There are some limitations to the present study. The bulk of the data in the study derives from self-reports of the students. As pointed out by several researchers (Catalan 2003: 67, Fan 2003: 235, Gu & Johnson 1996: 669, Kudo 1999: 31), quite obviously, by means of a questionnaire (as well as an interview) one cannot observe the vocabulary learning strategies students actually use. Instead, the instruments enable a researcher to look at the perceptions (beliefs and thoughts) of the students about the strategies they are employing. Whether the latter correspond to the reality is moot. Other research instruments such as a think-aloud task and observation need to be implemented to gain more information about students' vocabulary learning behaviours.

In addition, the study did not aim at uncovering the reasons behind the differences in the preferences of the boys and girls as well as the students of different forms. Thus, the reasons pointed out are only hypothetical and further research is needed to clarify the field.

Due to the unequal size of the samples, it was not possible to examine the differences in the strategy use of the students of ordinary and English-biased classes. This could, however, be a topic of a further study along with observing the strategy use of a wider range of age groups including secondary school and university students. Further research is also needed to

determine the relationship between success in learning English and the use of vocabulary learning strategies as well as the correlation between different learning styles and strategy use.

Despite the limitations, it is hoped that the study gave valuable insights into the ways students of forms three to six in Estonia learn vocabulary.

CONCLUSION

In order to act as autonomous, independent learners, students need to be able to exploit (language) learning strategies. This also applies to dealing with unknown vocabulary in a foreign language. As the whole field of vocabulary learning strategies cannot boast a long history, not many scholars have attempted to define the term *vocabulary learning strategies*. Some of the definitions suggested (e.g., by Ahmed 1989, Cameron 2001, Schmitt 1997) are of a very general nature, others (e.g., Catalan 2003, Nation 2001) try to specify more exactly what the strategies are like. In its broadest sense, a vocabulary learning strategy is any action taken by learners to help them study words. More specifically, a vocabulary learning strategy is an action that leads to an efficient way of learning words. In addition, a vocabulary learning strategy can be employed consciously or unconsciously.

There are several factors affecting the choice of vocabulary learning strategies. Among them, age seems to be one of the clear variables to influence strategy choice. It has been found that older learners employ more complicated vocabulary learning strategies than younger ones (Schmitt 1997). The studies conducted have also indicated that the preferences of male and female students may differ and that female students may exploit a wider range of the strategies than male learners. In addition, the frequency of words can play a role in the strategy choice. Fan's study (2003), for instance, detected that guessing might be more appropriate for high-frequency words than for low-frequency ones.

Interest in the general field of (language) learning strategies in the mid-70's brought along enthusiasm about researching vocabulary learning strategies. The first comprehensive study on investigating the strategies as a group is by Ahmed and originates from the end of the 1980's. The following years have seen a number of studies conducted on the topic with different goals in mind and various research instruments used. Mostly the studies have focused on examining

the strategy use of adult learners, predominantly from Asian countries, and their perceptions of useful strategies. In addition, some research has been conducted on determining the relationship between strategy use and success in language learning.

As a result of the studies conducted, several classifications of vocabulary learning strategies have been proposed. The most comprehensive taxonomy to date has been compiled by Schmitt (1997: 207-208). He classifies the strategies into two: discovery and consolidation strategies, which, in their turn, fall into smaller sub-categories of determination, social, memory, cognitive and metacognitive strategies. Despite some shortcomings of the taxonomy, the classification in the form of a questionnaire has been implemented in conducting later studies (Catalan 2003, Kudo 1999).

Different authors have distinguished between various types of vocabulary learning strategies. For the purpose of the present study the strategies were grouped into four: memory, cognitive, social and metacognitive strategies. The main role of memory strategies is to help learners commit new words into memory. A distinction can be made between 'shallow' (mechanical) and 'deep' strategies. Cognitive strategies are quite similar to memory strategies but do not involve that much mental manipulation (Schmitt 1997: 215). Social strategies are related to learning words by interacting with other people and metacognitive strategies to planning one's learning. Research conducted on individual vocabulary learning strategies as well as on vocabulary learning strategies as a whole has pointed out the benefits and drawbacks of the strategies. Thus, statements about useful and less useful strategies cannot be made. Every strategy, if exploited wisely, has its time and place.

The results obtained in previous research formed the basis of the present study, which set out to explore the preferences of 9-14-year-old students as to using strategies for learning vocabulary in English. Prior to conducting the study, it was hypothesised that (1) vocabulary

learning strategies are not very popular among Estonian learners of English; (2) girls might use different strategies than boys and that girls' strategy choice is wider; (3) form six students might employ a greater range of the strategies than form five students; (4) there might be a mismatch between the actual use of the strategies by students and the perceived usefulness of the strategies; and (5) students in general prefer 'shallow' strategies to 'deep' ones. To test the hypotheses two research instruments were selected: a semi-structured interview for the students of forms three and four and a 64-item questionnaire for the students of forms five and six. Altogether, seven students were interviewed and 230 students took part in the survey. The main role of the interviews was to provide some background information for compiling the questionnaire. The data obtained from the survey was analysed by means of descriptive statistics and factor analysis. The results showed that all the five hypotheses proved to be fully (1, 5) or partly (2, 3, 4) correct.

It appeared that vocabulary learning strategies, with very few exceptions, were not employed frequently. The strategy related to the rote repetition of English words by looking at the words in Estonian (item 30) ranked first on the frequency list. A great number of the strategies, however, were used seldom or not at all. The relatively low ranking of some strategies was somewhat surprising. For instance, picking up new words while using the English-based Internet received a mean of 1.56, i.e. it was exploited seldom. Before the study it was assumed that in learning new words the role of media, especially that of the Internet, is considerably more significant.

The girls and boys participating in the survey quite clearly differed in their preferences in using vocabulary learning strategies. The girls believed more in rote rehearsal of new words and using dictionaries whereas the boys relied more on guessing and picking up words from various sources. Although form five and form six students shared some similarities in

exploiting vocabulary learning strategies, the study also revealed certain differences. It turned out that from six students made greater use of the strategies related to note-taking, dictionary use and sources of words.

Some discrepancies appeared between the frequency of using vocabulary learning strategies and the perceived usefulness of the strategies. For instance, despite the fact that English-Estonian dictionaries were considered highly useful by the students, dictionaries were not used very often.

As expected, the results of the survey revealed a strong preference of mechanical strategies and the unpopularity of association- and imagery-based strategies among the students.

Based on the results of the study, the implications for teachers of English could be the following:

- they should encourage learners to experiment with a greater variety of vocabulary learning strategies already at the early stages of language learning in order to enable students to find the best, most suitable ways of studying words;
- they should provide possibilities for strategy training for students, especially in connection with more complicated strategies such as those requiring ‘deeper’ mental processing;
- they should take into consideration the differences in the preferences between boys and girls; by offering various opportunities for learning words, they should cater for the needs of the both sexes.

In conclusion, it can be said that the present thesis hopes to have fulfilled the aims set to it and gained some valuable information about the ways children deal with learning vocabulary in English. However, a more wide-scale study involving students from primary school to university is necessary in order to get a more comprehensive overview of the vocabulary

learning strategies employed by different age groups. Further research also requires the implementation of different research methodology to get a more accurate idea of the actual situation in relation to the use of vocabulary learning strategies.

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RESÜMEE

TARTU ÜLIKOOL
INGLISE FILOLOOGIA ÕPPETOOL

Kristel Ruutmets
VOCABULARY LEARNING STRATEGIES IN STUDYING ENGLISH AS A FOREIGN
LANGUAGE

(Sõnavara õppimise strateegiad inglise keele kui võõrkeele õppimisel)

Magistritöö

2005

Lehekülgede arv: 108

Annotatsioon:

Käesolev magistritöö käsitleb sõnavara õppimise strateegiate kasutamist inglise keele kui võõrkeele õppimisel. Töös leiavad kajastamist nii antud temaatikaga seotud teoreetilised probleemid kui tehakse ka kokkuvõtte uurimistulemustest.

Töö koosneb sissejuhatusest, esimesest ja teisest peatükist ning kokkuvõttest.

Sissejuhatuses esitatakse erinevate autorite definitsioonid terminile 'sõnavara õppimise strateegia', arutletakse sõnavara õppimise strateegiate tähtsuse üle ning vaadeldakse mõningaid töö seisukohalt olulisi faktoreid, mis mõjutavad sõnavara õppimise strateegiate kasutamist.

Esimene peatükk koosneb kahest osast. Esimeses osas võetakse vaatluse alla eelnevad uurimused, mis on läbi viidud antud teemavaldkonnas ning sellega seoses ka erinevad sõnavara õppimise strateegiate klassifikatsioonid. Teine osa teeb kokkuvõtte peamistest sõnavara õppimise strateegiatest: nende olemusest, tähtsusest ning uurimistulemustest.

Teine peatükk annab ülevaate läbiviidud empiirilisest uurimusest, mis selgitas eesti koolide õpilaste (3.-6. klass) eelistusi sõnavara õppimise strateegiate kasutamisel.

Töö sisaldab ka kasutatud kirjanduse nimestikku ning 11 lisa.

Sõnavara õppimise strateegiad moodustavad alagrupi keeleõppimise strateegiate hulgas, mis on omakorda üheks osaks üldiste õppimisstrateegiade seas. Sõnavara õppimise strateegiaid võib defineerida mitmeti. Kõige üldisemalt on need tegevused, mille abil õpilased õpivad uusi sõnu. Kitsamas mõttes võib sõnavara õppimise strateegiate all vaadelda tegevusi, mille kaudu on võimalik efektiivselt sõnu õppida. Õpilased võivad sõnavara õppimise strateegiaid rakendada teadlikult või ebateadlikult. Strateegiate kasutamine sõnavara õppimisel, nagu keeleõppimisel üldisemalt, võimaldab õppijatel paremini koordineerida ning kontrollida oma õppeprotsessi, mis ühtlasi suurendab õppuri iseseisvust ning vabadust õppimisel. Strateegiate kasutamine sõnavara õppimisel sõltub mitmest tegurist, millest töös võetakse lähema vaatluse alla vanusest ning soost tingitud erinevused strateegiate kasutamisel.

Alates 1980-ndate aastate lõpust, mil suurenes huvi sõnavara õppimise strateegiate vastu, on läbi viidud mitmeid uurimusi antud valdkonnas. Sõnavara õppimise strateegiaid kui tervikut on uurinud Ahmed (1989), Sanaoui (1995), Gu ja Johnson (1996), Schmitt (1997), Kudo (1999) jpt. Peamiseks uurimisobjektiks on siiani olnud täiskasvanud üliõpilane ning keskendutud on üldjoontes kahele probleemile: 1) kui sageli õpilased kasutavad erinevaid sõnavara õppimise strateegiaid ning milliseks hindavad nad strateegiate kasutegurit; 2) milliseid sõnavara õppimise strateegiaid kasutavad nn head ja halvad õpilased. Mitmete uurimuste käigus on välja pakutud sõnavara õppimise strateegiate klassifikatsioone, mis erinevad suuresti üksteisest nii oma lähtealuselt kui ülesehituselt.

Kõige üldisemalt võib sõnavara õppimise strateegiaid jaotada neljaks: mälustrateegiaid, kognitiivsed, sotsiaalsed ning metakognitiivsed strateegiaid. Mälustrateegiate ülesandeks on õpilase abistamine uute sõnade meeldejätmisel. Kognitiivsed strateegiaid on lähedased eelnimetatutele, kuid keskenduvad rohkem uue informatsiooni manipuleerimisele. Sotsiaalsed

strateegiad võimaldavad uute sõnade õppimist läbi suhtluse ning metakognitiivsete strateegiate abil planeeritakse ning hinnatakse õppeprotsessi.

Kuna eelnevates uurimustes on vähe tähelepanu pööratud laste sõnavara õppimise strateegiate kasutamisele, oli antud töö eesmärgiks saada ülevaade 3.-6. klassi õpilaste eelistusest antud valdkonnas. Uurimuse läbiviimisel kasutati nii intervjuud (3.-4. klass) kui ka autori poolt koostatud küsimustikku (5.-6. klass). Ühtekokku intervjueriti seitset õpilast vanuses 9-10 aastat. Küsimustikule vastas 230 õpilast vanuses 10-14 aastat. Andmete töötlemisel kasutati nii kirjeldavat statistikat kui faktoranalüüsi.

Tulemustest selgus, et erinevate sõnavara õppimise strateegiate kasutamine pole õpilaste seas väga populaarne. Selle tõestuseks on küsimustikus toodud strateegiate madal keskmine, mis võib viidata õpilaste piiratud teadmistele erinevatest sõnavara õppimise võimalustest. Faktoranalüüsi põhjal grupeerusid strateegiad kaheksaks, millest sõnaraamatu kasutamine osutus õpilaste seas kõige populaarsemaks ning loominguline kordamine leidis kõige vähem kasutust.

Uurimuse käigus ilmnisid mõned erinevused poiste ja tüdrukute eelistustes. Tüdrukute eelistuste hulka kuulus sõnade mehhaaniline kordamine ning sõnaraamatu kasutamine, poisid seevastu kasutasid rohkem äraarvamist ning erinevate allikate abi sõnade õppimisel. Uurimus näitas ka teatud sarnasusi ning erinevusi 5. ja 6. klassi õpilaste eelistustes. Mõlemate klasside õpilaste hulgas oli populaarne mehhaaniline kordamine ning ebapopulaarne loominguline kordamine. 6. klassi õpilased kasutasid aga teatud strateegiaid (märkmete tegemine, sõnaraamatu kasutamine, allikad) märksa sagedamini kui 5. klassi õpilased. Uurimuse põhjal võib öelda ka, et mitte kõik strateegiad, mida õpilased pidasid kasulikuks ei leidnud aktiivset kasutust ning, et mehhaanilised strateegiad olid tunduvalt populaarsemad kui assotsiatiivsed strateegiad antud vanusegrupi puhul.

Õpilaste teadlikkuse tõstmiseks ning erinevate sõnavara õppimise strateegiate populariseerimiseks tuleks inglise keele õpetajatel suuremat tähelepanu pöörata võimalikult erinevate strateegiate tutvustamisele tunnis ning õpilaste treenimisele nende kasutamiseks.

Appendix 1

Structured and Unstructured Approach to Vocabulary Learning by

Sanaoui

(1995: 24)

| <i>Structured Approach</i> | <i>Unstructured Approach</i> |
|--|---|
| <i>Opportunities for learning vocabulary</i> self-created independent study | reliance on course minimal independent study |
| <i>Range of self-initiated activities</i> extensive | restricted |
| <i>Records of lexical items</i> extensive (tend to be systematic) | minimal (tend to be ad hoc) |
| <i>Review of lexical items</i> extensive | little or now review |
| <i>Practice of lexical items</i> self-created opportunities in and outside classroom | reliance on course |

Appendix 2

Classification of vocabulary learning strategies by Gu and Johnson

(1996: 650-651)

| <i>Dimensions and Categories</i> | |
|----------------------------------|---|
| 1. | Metacognitive regulation Selective attention Self-initiation |
| 2. | Guessing strategies Using background knowledge/wider context Using linguistic cues/immediate context |
| 3. | Dictionary strategies Dictionary strategies for comprehension Extended dictionary strategies Looking-up strategies |
| 4. | Note-taking strategies Meaning-oriented note-taking strategies Usage-oriented note-taking strategies |
| 5. | Rehearsal strategies Using word lists Oral repetition Visual repetition |
| 6. | Encoding strategies Association/Elaboration Imagery Visual encoding Auditory encoding Using word-structure Semantic encoding Contextual encoding |
| 7. | Activation strategies |

Appendix 3

Classification of vocabulary learning strategies by Lawson and Hogben

(1996: 118-119)

| Categories | Strategies |
|------------------------------|--|
| <i>Repetition</i> | Reading of related words Simple rehearsal Writing of word and meaning Cumulative rehearsal Testing |
| <i>Word feature analysis</i> | Spelling Word classification Suffix |
| <i>Simple elaboration</i> | Sentence translation Simple use of context Appearance similarity Sound link |
| <i>Complex elaboration</i> | Complex use of context Paraphrase Mnemonic |

The meanings of the strategies listed above:

- reading of related words – the student reads out at least once the related words of a new word given on the reverse side of the index cards;
- simple rehearsal – the student repeats a new word (with or without repeating its meaning) at least once;
- writing of word and meaning – the student takes notes of a new word and its meaning;
- cumulative rehearsal – the student repeats a new word and some/all of the previous words;
- spelling – the student makes a comment on the spelling of a word and/or spells it out;

- word classification – the student comments on a word’s grammar, e.g. its part of speech;
- use of suffixes – the student uses his/her knowledge of suffixes;
- sentence translation – the student translates or tries to translate the sentence with a new word;
- simple use of context – the student suggests a possible meaning for a word before looking at the reverse side of the index card;
- appearance similarity – the student links a new word to an English/another Italian word based on its spelling;
- sound link – the student links a new word to an English/another Italian word based on its pronunciation;
- complex use of context – the student makes several tries to guess a new word’s meaning from the context;
- paraphrase – the student comments the synonym or related word of a new word;
- mnemonic use – the student uses a mnemonic procedure by e.g. forming a picture of a new word’s meaning. (ibid.: 114-115)

Appendix 4

Taxonomy of vocabulary learning strategies by Schmitt

(1997: 207-208)

| <i>Strategies for the discovery of a new word's meaning</i> | |
|---|--|
| DET | Analyse part of speech |
| DET | Analyse affixes and roots |
| DET | Check for L1 cognate |
| DET | Analyse any available pictures or gestures |
| DET | Guess from the textual context |
| DET | Bilingual dictionary |
| DET | Monolingual dictionary |
| DET | Word lists* |
| DET | Flash cards* |

| | |
|-----|---|
| SOC | Ask teacher for an L1 translation |
| SOC | Ask teacher for paraphrase or synonym of new word |
| SOC | Ask teacher for a sentence including the new word |
| SOC | Ask classmates for meaning |
| SOC | Discover new meaning through group work activity |

| <i>Strategies for consolidating a word once it has been encountered</i> | |
|---|---|
| SOC | Study and practise meaning in a group |
| SOC | Teacher checks students' flash cards or word lists for accuracy |
| SOC | Interact with native speakers* |

| | |
|-----|--|
| MEM | Study word with a pictorial representation of its meaning* |
| MEM | Image word's meaning |
| MEM | Connect word to a personal experience |
| MEM | Associate the word with its coordinates |
| MEM | Connect the word to its synonyms and antonyms |
| MEM | Use semantic maps |
| MEM | Use „scales” for gradable adjectives |
| MEM | Peg method ^{2*} |
| MEM | Loci method ^{3*} |
| MEM | Group words together to study them* |
| MEM | Group words together spatially on a page* |
| MEM | Use new words in sentences |
| MEM | Group words together with a storyline* |
| MEM | Study the spelling of a word |
| MEM | Study the sound of a word |
| MEM | Say the word aloud when studying |
| MEM | Image word form |
| MEM | Underline initial letter of the word* |

² memorising lists of facts by linking them to familiar words (or numbers) by means of an image

³ remembering words by mentally placing them in specific locations

MEM Configuration^{4*}
MEM Use Keyword Method
MEM Affixes and roots (remembering)
MEM Part of speech (remembering)
MEM Paraphrase the word's meaning
MEM Use cognates in study
MEM Learn the words of an idiom together
MEM Use physical action when learning a word
MEM Use semantic feature grids*

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

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

Notes. DET=Determination strategies, SOC=Social Strategies, MEM=Memory Strategies, COG=Cognitive Strategies, MET=Metacognitive Strategies; *=strategy was not included on the initial list used in the survey

⁴ Remembering words by outlining them with lines

Appendix 5

Taxonomy of vocabulary learning strategies by Nation

(2001: 218)

| General class of strategies | Types of strategies |
|---|--|
| Planning: choosing what to focus on and when to focus on it | <ul style="list-style-type: none">• Choosing words• Choosing the aspects of word knowledge• Choosing strategies• Planning repetition |
| Sources: finding information about words | <ul style="list-style-type: none">• Analysing the word• Using context• Consulting a reference source in L1 and L2• Using parallels in L1 and L2 |
| Processes: establishing knowledge | <ul style="list-style-type: none">• Noticing• Retrieving• Generating |

Appendix 6

Interview guide

| | |
|-----------|---|
| 1. | Üldandmed |
| | <ul style="list-style-type: none">• Nimi• Vanus• Kool ja klass• Kui kaua õppinud inglise keelt• Mitu tundi nädalas õppinud inglise keelt• Intervjuu toimumise aeg |
| 2. | Sissejuhatus |
| | <ul style="list-style-type: none">• Kuidas sulle meeldib inglise keelt õppida?• Kas see on sulle kerge/raske? Miks?• Mis su inglise keele hinne on?• Kuidas sul koolis üldiselt läheb?• Mis su lemmikaine on? Miks? |
| 3. | Sõnavara õppimine kodus |
| | <ul style="list-style-type: none">• Kuidas sa ingliskeelseid sõnu kodus õpid? (variandid kui ei kirjelda, kuidas sõnu õpib) <p>Loed sõnad läbi Kirjutad sõnad läbi Kordad sõnu kõva häälega/sosinal Mõtled, kas sõna kõlab mõne eestikeelse sõna moodi Jätad sõna meelde mõne teise ingliskeelse sõna abil, mis kõlab umbes sama moodi Lased emal/isal/õel/vennal kontrollida, kas sõnad on selged Kujutad sõnade tähenduse endale ette Ei korda kodus sõnu, sest need jäid juba tunnis meelde jne</p> <ul style="list-style-type: none">• Kui kaua sul sõnade õppimine aega võtab?• Kas sa kordad uusi sõnu õhtu jooksul mitu korda või õpid vaid ühe korra?• Mida sa teed selleks, et sõna kirja pilti meelde jätta?• Kas sa kasutad kodus eesti-inglise/inglise-eesti sõnaraamatut? (pildisõnaraamatut?) Kui sageli?• Kas sa vaatad ingliskeelseid multikaid? Kas sulle on sealt mõned sõnad meelde jäänud? Oskad sa mõningaid sõnu nimetada?• Kas sa vaatad muid ingliskeelseid saateid? Milliseid? Kas sa üritad aru saada, millest seal jutt käib? Kuidas (mille abil) sa üritad aru saada?• Kas sa mängid kodus ingliskeelseid arvutimänge? Oled sa mängude abil õppinud uusi ingliskeelseid sõnu? Milliseid?• Kas sa kasutad ingliskeelset internetti? Mida sa sealt loed? Kuidas aru saad?• Kas sa loed ingliskeelseid koomikseid/raamatuid/ajakirju? Kas sa oled sealt uusi sõnu meelde jätanud?• Kui sageli sa varemõpitud sõnu üle vaatad? |
| 4. | Sõnavara õppimine tunnis |

| | |
|-----------|---|
| | <ul style="list-style-type: none"> • Kuidas õpetaja teile uusi sõnu õpetab? (variandid vajadusel) <p>Näitab pilti/eset? Kirjutab tahvlile? Kordab ise? Laseb lindi pealt? Laseb teil endil raamatust lugeda? jne</p> <ul style="list-style-type: none"> • Milline variant sulle kõige rohkem meeldib? Kas sulle jäävad uued sõnad paremini, kui sa neid kuuled või kui neid näed? • Kas sul on lihtsam õppida sõnu, mis on omavahel seotud (nt teemade kaupa – loomad, riided jne) või üksikuid sõnu erinevatest teemadest? • Kuidas te sõnu tunnis harjutate? <p>A Kogu grupiga koos (nt loete kooris) Paaristööna (grupitööna) (nt pinginaabrid kontrollivad üksteise teadmisi, teete rollimänge) Iseseisvalt (nt teed harjutusi) Millist varianti kõige rohkem kasutatakse? Milline variant sulle kõige rohkem meeldib? Miks?</p> <p>B Mängite sõnamänge? milliseid? Lahendate ristsõnu? Teete ise ristsõnu? Laulate laule? loete salme? Laulate/loete salme koos liigutustega? Näitlete sõnade tähendusi? vms. Milline variant sulle kõige rohkem meeldib? Miks?</p> <ul style="list-style-type: none"> • Kuhu sa uued sõnad kirjutad? Kas sa kirjutad need alati üles? • Kuidas sa sõnad vihikusse üles kirjutad? <p>Eraldi vihik või harjutuste vihik vms Sõnad õppetükkide kaupa Sõnad teemade kaupa Sõnad tähestikulises järjekorras Kolm tulpa (inglise keeles, hääldus, eesti keeles) Sõnad + Joonistused Laused uute sõnadega vms. Kas õpetaja kontrollib vihikusse kirjutatud sõnade õigsust?</p> <ul style="list-style-type: none"> • Kas te olete kirjutanud uusi sõnu peale sõnade vihiku veel kuhugi üles? Tööleht (nt <i>label the picture, mindmap</i>)? Poster (paaris- või grupitööna mingi teema kohta)? Sõnakaardid? • Kas õpetaja on tunnis näidanud ingliskeelset videot (millel pole eestikeelset tõlget ega tiitreid)? Kuidas sa tundmatutest sõnadest seal aru saad? Kas õpetaja abistab mõistmisel või üritad ise aru saada? |
| 5. | Sõnavara õppimine nii kodus kui tunnis |
| | <ul style="list-style-type: none"> • Kui tekstis (filmis, laulus jne.) on sulle tundmatu sõna, kuidas käitud? (variandid vajadusel) <p>Küsid õpetaja (kodus: ema-isa-õe-venna) käest Küsid pinginaabrit/klassikaaslaselt Vaatad õpiku tagant sõnastikust</p> |

| | |
|--|--|
| | Vaadad inglise-eesti sõnastikust Üritad mõista juuresoleva pildi abil Üritad mõista teksti abil Ei pööra tundmatule sõnale tähelepanu |
|--|--|

Appendix 7a

Students' questionnaire in Estonian

Hea õpilane!

Olen Kristel Ruutmets, Tartu Ülikooli üliõpilane. Oma magistritöö raames uurin Eesti õpilaste sõnavaraõppimise harjumusi inglise keeles. Vastates alljärgnevale küsimustikule annad ka sina oma panuse antud töösse. Vastamisel pea meeles, et küsimustikus ei ole õigeid ega valesid vastuseid. Loeb sinu isiklik arvamus selle kohta, kuidas sa ingliskeelseid sõnu õpid. Seetõttu püüa vastata nii ausalt kui võimalik. Ma soovin teada, kuidas sa tegelikult sõnu õpid, mitte seda, kuidas sa võiksid õppida.

I osa

1. Olen: poiss tüdruk
2. Olen: 10 aastane 11 aastane 12 aastane
3. Õpin: 5. klassis 6. klassis

II osa

Järgnev osa puudutab ainult sõnade õppimist inglise keeles. Tee rist sulle sobivasse lahtrisse.

| | | mitte kunagi | harva | mõnikord | sageli | väga sageli |
|----|---|--------------|-------|----------|--------|-------------|
| | <i>Mõttele sellele, mida teed kodus.</i> | | | | | |
| 1. | Vaatan tundmatu sõna tähendust inglise-eesti sõnaraamatust. | | | | | |
| 2. | Lasen emal-isal, õel-vennal uusi sõnu kontrollida. | | | | | |
| 3. | Kirjutan uued sõnad (sõnade) vihikusse. | | | | | |
| 4. | Kordan pidevalt varemõpitud sõnu. | | | | | |
| 5. | Õpin juurde uusi sõnu lugedes ingliskeelseid raamatuid, ajakirju jne. | | | | | |
| 6. | Küsin tundmatu sõna tähendust ema-isa, õevenna käest. | | | | | |
| 7. | Õpin uusi sõnu koos kaaslasega (nt klassikaaslasega, sõbraga). | | | | | |
| 8. | Kasutan õpiku sõnastikku sõnade õppimisel. | | | | | |
| 9. | Kirjutan üles ka need uued sõnad, mida õpin vaadates televiisorit, kasutades interneti jne. | | | | | |

| | | mitte kunagi | harva | mõni- kord | sageli | väga sageli |
|-----|--|-----------------|-------|---------------|--------|----------------|
| 10. | Vaatan tundmatu sõna tähendust õpiku sõnastikust. | | | | | |
| 11. | Üritan tundmatu sõna tähendusest aru saada teksti põhjal. | | | | | |
| 12. | Kasutan sõnakaarte (lipikuid) uute sõnade õppimisel. | | | | | |
| 13. | Õpin juurde uusi sõnu vaadates ingliskeelseid telesaateid, filme, reklaame jne. | | | | | |
| 14. | Õpin uusi sõnu üksinda. | | | | | |
| 15. | Uusi sõnu õppides panen sõnakaarte (lipikuid) esemete või seina külge. | | | | | |
| 16. | Õpin juurde uusi sõnu mängides ingliskeelseid arvutimänge. | | | | | |
| 17. | Kasutan isiklikku (sõnade) vihikut uute sõnade õppimiseks. | | | | | |
| 18. | Lindistan uued sõnad kassetile ja kuulan neid. | | | | | |
| 19. | Õpin juurde uusi sõnu lugedes ingliskeelset internetti. | | | | | |
| 20. | Õpetan uusi sõnu emale-isale, õele-vennale, sõpradele. | | | | | |
| 21. | Üritan tundmatu sõna tähendusest aru saada juuresoleva pildi abil. | | | | | |
| 22. | Kirjutan uued sõnad vihikusse kolme tulpa (ingliskeelne sõna – hääldus – eestikeelne sõna). | | | | | |
| 23. | Pööran tundmatule sõnale tähelepanu. | | | | | |
| 24. | Grupeerin sõnu vihikusse teema põhjal või teen teemakaardi. | | | | | |
| 25. | Kordan uusi sõnu mitu korda päeva jooksul. | | | | | |
| 26. | Teen uute sõnadega lauseid. | | | | | |
| 27. | Uurin tundmatu sõna tähenduse järgi, kui see takistab mul teksti mõistmist. | | | | | |
| 28. | Kirjutan uued sõnad vihikusse kahte tulpa (ingliskeelne sõna – eestikeelne sõna). | | | | | |
| 29. | Joonistan uue sõna kohta pildi. | | | | | |
| | | | | | | |
| | <i>Kodus uusi sõnu selgeks õppides:</i> | | | | | |
| 30. | katan kinni ingliskeelsed sõnad (ja häälduse), eestikeelsete sõnade põhjal tuletan ingliskeelsed sõnad meelde. | | | | | |

| | | mitte kunagi | harva | mõni- kord | sageli | väga sageli |
|-----|---|-----------------|-------|---------------|--------|----------------|
| 31. | katan kinni eestikeelsed sõnad, ingliskeelsete sõnade (ja häälduse) põhjal tuletan meelde eestikeelsed sõnad. | | | | | |
| 32. | kordan neid kõva häälega või sosinal. | | | | | |
| 33. | kordan neid mõttes. | | | | | |
| 34. | kordan neid tähthaaval. | | | | | |
| 35. | vaatan uut sõna, sulen silmad ja kujutan sõna kirja pildi endale ette. | | | | | |
| 36. | vaatan uut sõna, sulen silmad ja kujutan sõna tähenduse endale ette. | | | | | |
| 37. | teen „linnukese” (risti) selle sõna ette, mis ei jäänud meelde. | | | | | |
| 38. | vaatan üle need sõnad, millel on ees „linnuke” (rist). | | | | | |
| 39. | kordan „linnukestega” (ristiga) sõnu nii kaua, kui need meelde jäävad. | | | | | |
| 40. | kirjutan need vähemalt üks kord läbi. | | | | | |
| 41. | näitlen nende tähendusi (teen pantomiimi). | | | | | |
| 42. | loen need lihtsalt läbi katmata tulpasid kinni. | | | | | |

Nüüd tõmba ring ümber sinu arvates viiele kõige kasulikumale variandile (variandid 1-42).

| | <i>Mõttele sellele, mida teed inglise keele tunnis.</i> | | | | | |
|-----|--|--|--|--|--|--|
| 43. | Küsin tundmatu sõna tähendust õpetaja käest. | | | | | |
| 44. | Kordan uusi sõnu kooris lindi järel. | | | | | |
| 45. | Vaatan tundmatu sõna tähendust inglise-eesti sõnaraamatust. | | | | | |
| 46. | Õpin uusi sõnu ingliskeelsest videost. | | | | | |
| 47. | Küsin tundmatu sõna tähendust pinginaabri või klassikaaslase käest. | | | | | |
| 48. | Üritan tundmatu sõna tähendusest aru saada teksti põhjal. | | | | | |
| 49. | Õpin sõnu mängides sõnamänge (nt bingo, poomismäng, äraarvamismäng jne). | | | | | |
| 50. | Kordan uusi sõnu kooris õpetaja ütlemise järel. | | | | | |
| 51. | Kirjutan uued sõnad (sõnade) vihikusse. | | | | | |
| 52. | Vaatan tundmatu sõna tähendust õpiku sõnastikust. | | | | | |

| | | mitte kunagi | harva | mõni- kord | sageli | väga sageli |
|-----|--|-----------------|-------|---------------|--------|----------------|
| 53. | Kontrollin koos pinginaabri- või klassikaaslasega uute sõnade oskust. | | | | | |
| 54. | Seostan uusi sõnu varemõpitud sõnadega. | | | | | |
| 55. | Üritan tundmatu sõna tähendusest aru saada juuresoleva pildi abil. | | | | | |
| 56. | Teen uute sõnadega lauseid. | | | | | |
| 57. | Õpin sõnu lahendades ristsõnu. | | | | | |
| 58. | Joonistan uue sõna kohta pildi. | | | | | |
| 59. | Seostan ingliskeelseid sõnu eestikeelsetega kõla või kirja pildi põhjal. | | | | | |
| 60. | Pööran tundmatule sõnale tähelepanu. | | | | | |
| 61. | Grupeerin sõnu vihikusse teema põhjal või teen teemakaardi. | | | | | |
| 62. | Seostan uusi sõnu sünonüümidega (samatähenduslike sõnadega; nt <i>huge</i> = <i>very big</i>) või antonüümidega (vastandsõnadega) (nt <i>tall</i> - <i>short</i>). | | | | | |
| 63. | Õpin väljendites olevaid sõnu koos justkui oleks tegemist ühe sõnaga (nt. <i>What a shame!</i>) | | | | | |
| 64. | Õpin sõnu lauldes laule ja lugedes salme. | | | | | |

Nüüd tõmba ring ümber sinu arvates viiele kõige kasulikumale variandile (variandid 43-64).

Kui sa kasutad sõnade õppimiseks veel mingit moodust, siis kirjuta see siia:

.....

.....

.....

.....

Aitäh Sulle!

Appendix 7b

Students' questionnaire in English

Dear Student

I am Kristel Ruutmets, a student of the University of Tartu. I study the vocabulary learning habits of Estonian students for my master's thesis. Completing the questionnaire below you will also contribute to my work. When you fill in the questionnaire, remember that there are no right or wrong answers. What counts is your personal opinion about how you learn words in English. Therefore, try to answer as honestly as you can. I would like to know how you actually learn words, not how you might learn them.

Part I

1. I am: a boy a girl
2. I am: 10 11 12 13
3. I study: in form 5 in form 6

Part II

The next part is only about learning words in English. Put a cross in the suitable column.

| | | never | seldom | some- times | often | very often |
|-----|---|-------|--------|----------------|-------|---------------|
| | <i>Think what you do at home.</i> | | | | | |
| 1. | I look up the meaning of an unknown word in an English-Estonian dictionary. | | | | | |
| 2. | I let my mother or father, brother or sister check new words. | | | | | |
| 3. | I write new words in the (vocabulary) notebook. | | | | | |
| 4. | I constantly revise words studied before. | | | | | |
| 5. | I pick up new words when reading books, magazines, etc. in English. | | | | | |
| 6. | I ask the meaning of an unknown word from my mother or father, brother or sister. | | | | | |
| 7. | I study new words with a mate (e.g. class mate, friend). | | | | | |
| 8. | I use the textbook glossary for studying words. | | | | | |
| 9. | I write down the new words I pick up when watching TV, using the Internet, etc. | | | | | |
| 10. | I look up the meaning of an unknown word in the textbook glossary. | | | | | |

| | | never | seldom | some- times | often | very often |
|-----|---|-------|--------|----------------|-------|---------------|
| 11. | I try to understand the meaning of an unknown word on the basis of the text. | | | | | |
| 12. | I use flash cards for studying new words. | | | | | |
| 13. | I pick up new words when watching TV programmes, films, commercials, etc. in English. | | | | | |
| 14. | I study new words alone. | | | | | |
| 15. | When studying new words I put labels on the objects or the wall. | | | | | |
| 16. | I pick up new words when playing computer games in English. | | | | | |
| 17. | I use the (vocabulary) notebook for studying new words. | | | | | |
| 18. | I tape new words and listen to them. | | | | | |
| 19. | I pick up new words when reading the Internet in English. | | | | | |
| 20. | I teach new words to my mother or father, brother or sister, friends. | | | | | |
| 21. | I try to understand the meaning of an unknown word by looking at the accompanying picture. | | | | | |
| 22. | I write new words in the notebook in three columns (words in English - their pronunciation - words in Estonian). | | | | | |
| 23. | I pay attention to unknown words. | | | | | |
| 24. | I group words in the notebook based on a topic or I do a mind map. | | | | | |
| 25. | I revise new words several times during a day. | | | | | |
| 26. | I make up sentences with new words. | | | | | |
| 27. | I find out the meaning of an unknown word if it hinders understanding the text. | | | | | |
| 28. | I write new words in the notebook in two columns (words in English - words in Estonian). | | | | | |
| 29. | I draw a picture of a new word. | | | | | |
| | | | | | | |
| | <i>When studying new words:</i> | | | | | |
| 30. | I cover the words in English (and their pronunciation), by looking at the words in Estonian I try to remember the words in English. | | | | | |

| | | never | seldom | some- times | often | very often |
|-----|--|-------|--------|----------------|-------|---------------|
| 31. | I cover the words in Estonian, by looking at the words in English (and their pronunciation) I try to remember the words in Estonian. | | | | | |
| 32. | I repeat new words aloud or in a whisper. | | | | | |
| 33. | I repeat new words in my mind. | | | | | |
| 34. | I repeat new words by spelling them. | | | | | |
| 35. | I look at a new word, close my eyes and picture the spelling of the word. | | | | | |
| 36. | I look at a new word, close my eyes and picture the meaning of the word. | | | | | |
| 37. | I put a tick (a cross) in front of a new word I could not remember. | | | | | |
| 38. | I look through the new words which I have ticked (crossed). | | | | | |
| 39. | I revise the new words ticked (crossed) as long as I can remember them. | | | | | |
| 40. | I write new words down at least once. | | | | | |
| 41. | I act out (mime) new words. | | | | | |
| 42. | I simply look new words through without covering the columns. | | | | | |

Now circle five variants that you consider most useful (variants 1-42).

| | <i>Think what you do in English lessons.</i> | | | | | |
|-----|---|--|--|--|--|--|
| 43. | I ask the meaning of an unknown word from the teacher. | | | | | |
| 44. | I repeat new words in chorus with the tape. | | | | | |
| 45. | I look up the meaning of an unknown word in an English-Estonian dictionary. | | | | | |
| 46. | I study new words from a video in English. | | | | | |
| 47. | I ask the meaning of an unknown word from my desk or class mate. | | | | | |
| 48. | I try to understand the meaning of an unknown word on the basis of the text. | | | | | |
| 49. | I study new words by playing word games (e.g. bingo, hangman, guessing game, etc.). | | | | | |
| 50. | I repeat new words in chorus after the teacher. | | | | | |
| 51. | I write new words in the (vocabulary) notebook. | | | | | |
| 52. | I look up the meaning of an unknown word in the textbook glossary. | | | | | |

| | | never | seldom | some- times | often | very often |
|-----|---|-------|--------|----------------|-------|---------------|
| 53. | I check the knowledge of new words with my desk or class mate. | | | | | |
| 54. | I associate new words with the words studied before. | | | | | |
| 55. | I try to understand the meaning of an unknown word by looking at the accompanying picture. | | | | | |
| 56. | I make up sentences with new words. | | | | | |
| 57. | I study words by solving crosswords. | | | | | |
| 58. | I draw a picture of a new word. | | | | | |
| 59. | I associate English words with Estonian words based on the pronunciation or spelling. | | | | | |
| 60. | I pay attention to unknown words. | | | | | |
| 61. | I group words in the notebook based on a topic or I do a mind map. | | | | | |
| 62. | I associate new words with their synonyms (e.g. <i>huge</i> = <i>very big</i>) or antonyms (e.g. <i>tall</i> - <i>short</i>). | | | | | |
| 63. | I study the words of an expression together as if they were just one word (e.g. <i>What a shame!</i>). | | | | | |
| 64. | I study words by singing songs and reading poems. | | | | | |

Now circle five variants that you consider most useful (variants 43-64).

If you use any other way of learning words, write it here:

.....

.....

.....

.....

Thank you!

Appendix 8

Differences in the preferences of the boys and girls

| Item No | Item in the questionnaire | Boys | | Girls | | <i>p</i> |
|---------|--|----------|-----------|----------|-----------|-------------|
| | | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | |
| 1 | I look up the meaning of an unknown word in an English-Estonian dictionary. (home) | 1.56 | 1.05 | 1.83 | .86 | .04* |
| 2 | I let my mother or father, brother or sister check new words. (home) | 1.70 | 1.23 | 1.68 | 1.22 | .88 |
| 3 | I write new words in the (vocabulary) notebook. (home) | 2.39 | 1.46 | 2.70 | 1.37 | .09 |
| 4 | I constantly revise words studied before. (home) | 1.50 | .93 | 1.49 | .83 | .93 |
| 5 | I pick up new words when reading books, magazines, etc. in English. (home) | 1.38 | 1.27 | 1.30 | 1.17 | .63 |
| 6 | I ask the meaning of an unknown word from my mother or father, brother or sister. (home) | 1.93 | 1.32 | 2.07 | 1.28 | .39 |
| 7 | I study new words with a mate (e.g. class mate, friend). (home) | 1.06 | .95 | 1.24 | .92 | .14 |
| 8 | I use the textbook glossary for studying words. (home) | 2.48 | 1.35 | 2.71 | 1.26 | .19 |
| 9 | I write down the new words I pick up when watching TV, using the Internet, etc. (home) | .52 | .89 | .33 | .62 | .07 |
| 10 | I look up the meaning of an unknown word in the textbook glossary. (home) | 2.19 | 1.30 | 2.52 | 1.16 | .04* |
| 11 | I try to understand the meaning of an unknown word on the basis of the text. (home) | 2.45 | .94 | 2.13 | .90 | .01* |
| 12 | I use flash cards for studying new words. (home) | .55 | .93 | .76 | 1.04 | .10 |
| 13 | I pick up new words when watching TV programmes, films, commercials, etc. in English. (home) | 2.43 | 1.32 | 2.19 | 1.25 | .16 |
| 14 | I study new words alone. (home) | 2.67 | 1.28 | 2.81 | 1.11 | .39 |
| 15 | When studying new words I put labels on the objects or the wall. (home) | .24 | .64 | .32 | .84 | .38 |
| 16 | I pick up new words when playing computer games in English. (home) | 2.74 | 1.31 | 1.78 | 1.24 | .00* |

| | | | | | | |
|----|---|------|------|------|------|-------------|
| 17 | I use the (vocabulary) notebook for studying new words. (home) | 2.02 | 1.41 | 2.37 | 1.34 | .06 |
| 18 | I tape new words and listen to them. (home) | .05 | .25 | .07 | .38 | .56 |
| 19 | I pick up new words when reading the Internet in English. (home) | 1.78 | 1.47 | 1.32 | 1.17 | .01* |
| 20 | I teach new words to my mother or father, brother or sister, friends. (home) | 1.35 | 1.09 | 1.25 | .98 | .47 |
| 21 | I try to understand the meaning of an unknown word by looking at the accompanying picture. (home) | 1.68 | 1.05 | 1.55 | .90 | .34 |
| 22 | I write new words in the notebook in three columns (words in English - their pronunciation - words in Estonian). (home) | 2.57 | 1.60 | 2.74 | 1.52 | .39 |
| 23 | I pay attention to unknown words. (home) | 2.37 | 1.21 | 2.23 | 1.19 | .40 |
| 24 | I group words in the notebook based on a topic or I do a mind map. (home) | .66 | .94 | .74 | .92 | .55 |
| 25 | I revise new words several times during a day. (home) | 1.55 | 1.20 | 1.50 | 1.07 | .77 |
| 26 | I make up sentences with new words. (home) | 1.07 | 1.00 | 1.13 | 0.95 | .64 |
| 27 | I find out the meaning of an unknown word if it hinders understanding the text. (home) | 2.46 | 1.31 | 2.79 | 1.05 | .04* |
| 28 | I write new words in the notebook in two columns (words in English - words in Estonian). (home) | 1.24 | 1.52 | 1.11 | 1.44 | .51 |
| 29 | I draw a picture of a new word. (home) | .24 | .59 | .24 | .45 | .97 |
| 30 | I cover the words in English (and their pronunciation), by looking at the words in Estonian I try to remember the words in English. (home) | 3.05 | 1.31 | 3.56 | .85 | .00* |
| 31 | I cover the words in Estonian, by looking at the words in English (and their pronunciation) I try to remember the words in Estonian. (home) | 1.78 | 1.45 | 2.17 | 1.45 | .05* |
| 32 | I repeat new words aloud or in a whisper. (home) | 2.07 | 1.23 | 2.51 | 1.28 | .01* |
| 33 | I repeat new words in my mind. (home) | 2.65 | 1.19 | 2.52 | 1.24 | .44 |
| 34 | I repeat new words by spelling them. (home) | .81 | 1.07 | .88 | 1.01 | .61 |
| 35 | I look at a new word, close my eyes and picture the spelling of the word. (home) | 1.20 | 1.23 | 1.22 | 1.22 | .91 |
| 36 | I look at a new word, close my eyes and picture the meaning of the word. (home) | .84 | 1.06 | .97 | 1.08 | .36 |

| | | | | | | |
|----|---|------|------|------|------|-------------|
| 37 | I put a tick (a cross) in front of a new word I could not remember. (home) | 1.17 | 1.39 | 2.00 | 1.34 | .00* |
| 38 | I look through the new words which I have ticked (crossed). (home) | 1.54 | 1.57 | 2.46 | 1.47 | .00* |
| 39 | I revise the new words ticked (crossed) as long as I can remember them. (home) | 1.70 | 1.56 | 2.71 | 1.35 | .00* |
| 40 | I write new words down at least once. (home) | 2.17 | 1.39 | 2.99 | 1.13 | .00* |
| 41 | I act out (mime) new words. (home) | .36 | .74 | .32 | .70 | .70 |
| 42 | I simply look new words through without covering the columns. (home) | 1.80 | 1.22 | 1.49 | 1.17 | .06 |
| 43 | I ask the meaning of an unknown word from the teacher. (lesson) | 2.43 | 1.09 | 2.38 | .99 | .70 |
| 44 | I repeat new words in chorus with the tape. (lesson) | 1.64 | 1.40 | 1.76 | 1.33 | .50 |
| 45 | I look up the meaning of an unknown word in an English-Estonian dictionary. (lesson) | 1.69 | 1.31 | 1.76 | 1.28 | .68 |
| 46 | I study new words from a video in English. (lesson) | .90 | 1.18 | .72 | 1.01 | .23 |
| 47 | I ask the meaning of an unknown word from my desk or class mate. (lesson) | 2.02 | 1.28 | 2.17 | 1.09 | .34 |
| 48 | I try to understand the meaning of an unknown word on the basis of the text. (lesson) | 2.33 | 1.06 | 2.17 | 1.03 | .24 |
| 49 | I study new words by playing word games (e.g. bingo, hangman, guessing game, etc.). (lesson) | 1.46 | 1.19 | 1.42 | 1.06 | .80 |
| 50 | I repeat the new words in chorus after the teacher. (lesson) | 2.74 | 1.24 | 2.69 | 1.17 | .75 |
| 51 | I write new words in the (vocabulary) notebook. (lesson) | 2.75 | 1.42 | 3.01 | 1.16 | .14 |
| 52 | I look up the meaning of an unknown word in the textbook glossary. (lesson) | 2.35 | 1.28 | 2.69 | 1.16 | .03* |
| 53 | I check the knowledge of new words with my desk or class mate. (lesson) | 1.51 | 1.16 | 1.85 | 1.10 | .02* |
| 54 | I associate new words with the words studied before. (lesson) | 1.48 | 1.11 | 1.43 | 1.00 | .76 |
| 55 | I try to understand the meaning of an unknown word by looking at the accompanying picture. (lesson) | 1.70 | 1.18 | 1.56 | .93 | .32 |
| 56 | I make up sentences with new words. (lesson) | 1.31 | 1.10 | 1.30 | 1.15 | .95 |
| 57 | I study words by solving crosswords. (lesson) | 1.12 | 1.15 | 1.15 | 1.12 | .87 |

| | | | | | | |
|----|--|------|------|------|------|-----|
| 58 | I draw a picture of a new word. (lesson) | .29 | .66 | .32 | .62 | .73 |
| 59 | I associate English words with Estonian words based on the pronunciation or spelling. (lesson) | 1.29 | 1.11 | 1.56 | 1.06 | .06 |
| 60 | I pay attention to unknown words. (lesson) | 2.17 | 1.30 | 2.25 | 1.20 | .63 |
| 61 | I group words in the notebook based on a topic or I do a mind map. (lesson) | .58 | .86 | .75 | .90 | .14 |
| 62 | I associate new words with their synonyms (e.g. <i>huge</i> = <i>very big</i>) or antonyms (e.g. <i>tall</i> - <i>short</i>). (lesson) | 1.37 | 1.08 | 1.39 | 1.10 | .91 |
| 63 | I study the words of an expression together as if they were just one word (e.g. <i>What a shame!</i>). (lesson) | 1.66 | 1.21 | 1.61 | 1.06 | .75 |
| 64 | I study words by singing songs and reading poems. (lesson) | 1.17 | 1.21 | 1.24 | 1.15 | .63 |

Note: *M* - mean, *SD* - standard deviation, *p* - level of significance, * - statistically significant difference

Appendix 9

Differences in the preferences of the students of the fifth and sixth forms

| Item No | Item in the questionnaire | Form 5 | | Form 6 | | <i>p</i> |
|---------|--|----------|-----------|----------|-----------|-------------|
| | | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | |
| 1 | I look up the meaning of an unknown word in an English-Estonian dictionary. (home) | 1.61 | .95 | 1.76 | 1.00 | .22 |
| 2 | I let my mother or father, brother or sister check new words. (home) | 1.76 | 1.26 | 1.62 | 1.18 | .38 |
| 3 | I write new words in the (vocabulary) notebook. (home) | 2.42 | 1.49 | 2.66 | 1.34 | .20 |
| 4 | I constantly revise words studied before. (home) | 1.41 | .86 | 1.57 | .91 | .18 |
| 5 | I pick up new words when reading books, magazines, etc. in English. (home) | 1.11 | 1.26 | 1.58 | 1.14 | .00* |
| 6 | I ask the meaning of an unknown word from my mother or father, brother or sister. (home) | 2.26 | 1.27 | 1.73 | 1.29 | .00* |
| 7 | I study new words with a mate (e.g. class mate, friend). (home) | 1.09 | .92 | 1.20 | .96 | .35 |
| 8 | I use the textbook glossary for studying words. (home) | 2.59 | 1.31 | 2.59 | 1.31 | .99 |
| 9 | I write down the new words I pick up when watching TV, using the Internet, etc. (home) | .40 | .74 | .46 | .82 | .60 |
| 10 | I look up the meaning of an unknown word in the textbook glossary. (home) | 2.13 | 1.26 | 2.57 | 1.19 | .01* |
| 11 | I try to understand the meaning of an unknown word on the basis of the text. (home) | 2.25 | .96 | 2.35 | .91 | .40 |
| 12 | I use flash cards for studying new words. (home) | .66 | 1.05 | .64 | .91 | .89 |
| 13 | I pick up new words when watching TV programmes, films, commercials, etc. in English. (home) | 2.02 | 1.27 | 2.63 | 1.25 | .00* |
| 14 | I study the new words alone. (home) | 2.49 | 1.19 | 2.98 | 1.17 | .00* |
| 15 | When studying new words I put labels on the objects or the wall. (home) | .26 | .72 | .30 | .76 | .69 |

| | | | | | | |
|----|---|------|------|------|------|-------------|
| 16 | I pick up new words when playing computer games in English. (home) | 2.09 | 1.37 | 2.49 | 1.33 | .02* |
| 17 | I use the (vocabulary) notebook for studying new words. (home) | 2.06 | 1.36 | 2.32 | 1.40 | .16 |
| 18 | I tape new words and listen to them. (home) | .06 | .30 | .06 | .33 | .97 |
| 19 | I pick up new words when reading the Internet in English. (home) | 1.36 | 1.29 | 1.77 | 1.39 | .02* |
| 20 | I teach new words to my mother or father, brother or sister, friends. (home) | 1.27 | 1.01 | 1.33 | 1.08 | .70 |
| 21 | I try to understand the meaning of an unknown word by looking at the accompanying picture. (home) | 1.59 | .95 | 1.65 | 1.01 | .64 |
| 22 | I write new words in the notebook in three columns (words in English - their pronunciation - words in Estonian). (home) | 2.35 | 1.62 | 2.96 | 1.44 | .00* |
| 23 | I pay attention to unknown words. (home) | 2.25 | 1.19 | 2.37 | 1.22 | .46 |
| 24 | I group words in the notebook based on a topic or I do a mind map. (home) | .68 | .91 | .71 | .96 | .81 |
| 25 | I revise new words several times during a day. (home) | 1.55 | 1.07 | 1.51 | 1.21 | .80 |
| 26 | I make up sentences with new words. (home) | 1.13 | .96 | 1.06 | .99 | .62 |
| 27 | I find out the meaning of an unknown word if it hinders understanding the text. (home) | 2.53 | 1.18 | 2.70 | 1.23 | .28 |
| 28 | I write new words in the notebook in two columns (words in English - words in Estonian). (home) | 1.56 | 1.57 | .78 | 1.27 | .00* |
| 29 | I draw a picture of a new word. (home) | .28 | .58 | .20 | .46 | .29 |
| 30 | I cover the words in English (and their pronunciation), by looking at the words in Estonian I try to remember the words in English. (home) | 3.26 | 1.10 | 3.32 | 1.19 | .72 |
| 31 | I cover the words in Estonian, by looking at the words in English (and their pronunciation) I try to remember the words in Estonian. (home) | 2.06 | 1.43 | 1.87 | 1.49 | .32 |
| 32 | I repeat new words aloud or in a whisper. (home) | 2.38 | 1.17 | 2.18 | 1.36 | .23 |
| 33 | I repeat new words in my mind. (home) | 2.48 | 1.16 | 2.70 | 1.25 | .16 |
| 34 | I repeat new words by spelling them. (home) | .88 | 1.12 | .81 | .96 | .59 |

| | | | | | | |
|----|--|------|------|------|------|-------------|
| 35 | I look at a new word, close my eyes and picture the spelling of the word. (home) | 1.21 | 1.18 | 1.22 | 1.27 | .94 |
| 36 | I look at a new word, close my eyes and picture the meaning of the word. (home) | .94 | 1.09 | .87 | 1.06 | .61 |
| 37 | I put a tick (a cross) in front of a new word I could not remember. (home) | 1.59 | 1.36 | 1.53 | 1.49 | .76 |
| 38 | I look through the new words which I have ticked (crossed). (home) | 2.01 | 1.56 | 1.95 | 1.61 | .77 |
| 39 | I revise the new words ticked (crossed) as long as I can remember them. (home) | 2.24 | 1.50 | 2.11 | 1.61 | .52 |
| 40 | I write new words down at least once. (home) | 2.66 | 1.38 | 2.46 | 1.29 | .25 |
| 41 | I act out (mime) new words. (home) | .47 | .82 | .21 | .57 | .01* |
| 42 | I simply look new words through without covering the columns. (home) | 1.59 | 1.21 | 1.72 | 1.20 | .42 |
| 43 | I ask the meaning of an unknown word from the teacher. (lesson) | 2.36 | 1.08 | 2.45 | 1.01 | .54 |
| 44 | I repeat new words in chorus with the tape. (lesson) | 1.63 | 1.36 | 1.77 | 1.37 | .46 |
| 45 | I look up the meaning of an unknown word in an English-Estonian dictionary. (lesson) | 1.58 | 1.34 | 1.87 | 1.24 | .09 |
| 46 | I study new words from a video in English. (lesson) | .61 | .90 | 1.03 | 1.25 | .00* |
| 47 | I ask the meaning of an unknown word from my desk or class mate. (lesson) | 1.91 | 1.16 | 2.28 | 1.20 | .02* |
| 48 | I try to understand the meaning of an unknown word on the basis of the text. (lesson) | 2.16 | 1.02 | 2.34 | 1.08 | .19 |
| 49 | I study new words by playing word games (e.g. bingo, hangman, guessing game, etc.). (lesson) | 1.33 | 1.03 | 1.55 | 1.21 | .14 |
| 50 | I repeat the new words in chorus after the teacher. (lesson) | 2.57 | 1.28 | 2.86 | 1.11 | .07 |
| 51 | I write new words in the (vocabulary) notebook. (lesson) | 2.69 | 1.39 | 3.06 | 1.19 | .03* |
| 52 | I look up the meaning of an unknown word in the textbook glossary. (lesson) | 2.30 | 1.27 | 2.73 | 1.16 | .01* |
| 53 | I check the knowledge of new words with my desk or class mate. (lesson) | 1.59 | 1.10 | 1.75 | 1.19 | .27 |

| | | | | | | |
|----|--|------|------|------|------|-------------|
| 54 | I associate new words with the words studied before. (lesson) | 1.26 | 1.00 | 1.65 | 1.09 | .01* |
| 55 | I try to understand the meaning of an unknown word by looking at the accompanying picture. (lesson) | 1.59 | 1.02 | 1.68 | 1.12 | .53 |
| 56 | I make up sentences with new words. (lesson) | 1.21 | 1.14 | 1.40 | 1.09 | .20 |
| 57 | I study words by solving crosswords. (lesson) | 1.02 | 1.02 | 1.25 | 1.23 | .11 |
| 58 | I draw a picture of a new word. (lesson) | .35 | .68 | .27 | .60 | .35 |
| 59 | I associate English words with Estonian words based on the pronunciation or spelling. (lesson) | 1.35 | 1.07 | 1.49 | 1.12 | .32 |
| 60 | I pay attention to unknown words. (lesson) | 2.20 | 1.25 | 2.21 | 1.26 | .95 |
| 61 | I group words in the notebook based on a topic or I do a mind map. (lesson) | .67 | .90 | .66 | .87 | .94 |
| 62 | I associate new words with their synonyms (e.g. <i>huge</i> = <i>very big</i>) or antonyms (e.g. <i>tall</i> - <i>short</i>). (lesson) | 1.20 | .94 | 1.56 | 1.19 | .01* |
| 63 | I study the words of an expression together as if they were just one word (e.g. <i>What a shame!</i>). (lesson) | 1.52 | 1.03 | 1.75 | 1.24 | .14 |
| 64 | I study words by singing songs and reading poems. (lesson) | 1.30 | 1.18 | 1.11 | 1.18 | .21 |

Note: *M* - mean, *SD* - standard deviation, *p* - level of significance, * - statistically significant difference

Appendix 10a

Students' perceptions of the usefulness of the strategies (home context)

| No | Item No | Item in the questionnaire | Frequency |
|----|---------|--|-----------|
| 1 | 30 | I cover the words in English (and their pronunciation), by looking at the words in Estonian I try to remember the words in English. | 102 |
| 2 | 1 | I look up the meaning of an unknown word in an English-Estonian dictionary. | 75 |
| 3 | 22 | I write new words in the notebook in three columns (words in English - their pronunciation - words in Estonian). | 75 |
| 4 | 16 | I pick up new words when playing computer games in English. | 53 |
| 5 | 2 | I let my mother or father, brother or sister check new words. | 51 |
| 6 | 3 | I write new words in the (vocabulary) notebook. | 47 |
| 7 | 17 | I use the (vocabulary) notebook for studying new words. | 41 |
| 8 | 8 | I use the textbook glossary for studying words. | 35 |
| 9 | 40 | I write new words down at least once. | 35 |
| 10 | 13 | I pick up new words when watching TV programmes, films, commercials, etc. in English. | 34 |
| 11 | 37 | I put a tick (a cross) in front of a new word I could not remember. | 34 |
| 12 | 10 | I look up the meaning of an unknown word in the textbook glossary. | 32 |
| 13 | 23 | I pay attention to unknown words. | 30 |
| 14 | 27 | I find out the meaning of an unknown word if it hinders understanding the text. | 29 |
| 15 | 6 | I ask the meaning of an unknown word from my mother or father, brother or sister. | 28 |
| 16 | 14 | I study new words alone. | 27 |
| 17 | 32 | I repeat new words aloud or in a whisper. | 27 |
| 18 | 31 | I cover the words in Estonian, by looking at the words in English (and their pronunciation) I try to remember the words in Estonian. | 25 |
| 19 | 39 | I repeat the new words ticked (crossed) as long as I can remember them. | 25 |
| 20 | 5 | I pick up new words when reading books, magazines, etc. in English. | 24 |
| 21 | 19 | I pick up new words when reading the Internet in English. | 24 |
| 22 | 33 | I repeat new words in my mind. | 23 |
| 23 | 38 | I look through the new words which I have ticked (crossed). | 22 |

| | | | |
|----|----|--|----|
| 24 | 11 | I try to understand the meaning of an unknown word on the basis of the text. | 20 |
| 25 | 42 | I simply look new words through without covering the columns. | 19 |
| 26 | 25 | I revise new words several times during a day. | 18 |
| 27 | 12 | I use flash cards for studying new words. | 16 |
| 28 | 28 | I write new words in the notebook in two columns (words in English - words in Estonian). | 16 |
| 29 | 35 | I look at a new word, close my eyes and picture the spelling of the word. | 16 |
| 30 | 4 | I constantly revise words studied before. | 12 |
| 31 | 20 | I teach new words to my mother or father, brother or sister, friends. | 11 |
| 32 | 21 | I try to understand the meaning of an unknown word by looking at the accompanying picture. | 11 |
| 33 | 7 | I study new words with a mate (e.g. class mate, friend). | 9 |
| 34 | 36 | I look at a new word, close my eyes and picture the meaning of the word. | 9 |
| 35 | 26 | I make up sentences with new words. | 7 |
| 36 | 15 | When studying new words I put labels on the objects or the wall. | 6 |
| 37 | 34 | I repeat new words by spelling them. | 6 |
| 38 | 9 | I write down the new words I pick up when watching TV, using the Internet, etc. | 5 |
| 39 | 24 | I group words in the notebook based on a topic or I do a mindmap. | 5 |
| 40 | 18 | I tape new words and listen to them. | 3 |
| 41 | 29 | I draw a picture of a new word. | 2 |
| 42 | 41 | I act out (mime) new words. | 1 |

Appendix 10b

Students' perceptions of the usefulness of the strategies (school context)

| No | Item No | Item in the questionnaire | Frequency |
|----|---------|---|-----------|
| 1 | 43 | I ask the meaning of an unknown word from the teacher. | 130 |
| 2 | 51 | I write new words in the (vocabulary) notebook. | 118 |
| 3 | 50 | I repeat the new words in chorus after the teacher. | 85 |
| 4 | 60 | I pay attention to unknown words. | 82 |
| 5 | 45 | I look up the meaning of an unknown word in an English-Estonian dictionary. | 77 |
| 6 | 52 | I look up the meaning of an unknown word in the textbook glossary. | 65 |
| 7 | 48 | I try to understand the meaning of an unknown word on the basis of the text. | 57 |
| 8 | 47 | I ask the meaning of an unknown word from my desk or class mate. | 53 |
| 9 | 56 | I make up sentences with new words. | 48 |
| 10 | 59 | I associate English words with Estonian words based on the pronunciation or spelling. | 47 |
| 11 | 49 | I study new words by playing word games (e.g. bingo, hangman, guessing game, etc.). | 44 |
| 12 | 53 | I check the knowledge of new words with my desk or class mate. | 44 |
| 13 | 64 | I study words by singing songs and reading poems. | 42 |
| 14 | 44 | I repeat new words in chorus with the tape. | 41 |
| 15 | 57 | I study words by solving crosswords. | 34 |
| 16 | 62 | I associate new words with their synonyms (e.g. <i>huge</i> = <i>very big</i>) or antonyms (e.g. <i>tall</i> – <i>short</i>). | 34 |
| 17 | 63 | I study the words of an expression together as if they were just one word (e.g. <i>What a shame!</i>). | 30 |
| 18 | 55 | I try to understand the meaning of an unknown word by looking at the accompanying picture. | 25 |
| 19 | 46 | I study new words from a video in English. | 23 |
| 20 | 54 | I associate new words with the words studied before. | 14 |
| 21 | 61 | I group words in the notebook based on a topic or I do a mindmap. | 14 |
| 22 | 58 | I draw a picture of a new word. | 12 |

Appendix 11

Vocabulary learning strategies according to factors

Factor 1 – Rote rehearsal

- Item 30 - I cover the words in English (and their pronunciation), by looking at the words in Estonian I try to remember the words in English. (home)
- Item 37 - I put a tick (a cross) in front of a new word I could not remember. (home)
- Item 38 - I look through the new words which I have ticked (crossed). (home)
- Item 39 - I revise the new words ticked (crossed) as long as I can remember them. (home)
- Item 40 - I write new words down at least once. (home)

Factor 2 – Creative rehearsal

- Item 12 - I use flash cards for studying new words. (home)
- Item 15 - When studying new words I put labels on the objects or the wall. (home)
- Item 18 - I tape new words and listen to them. (home)
- Item 26 - I make up sentences with new words. (home)
- Item 29 - I draw a picture of a new word. (home)
- Item 56 - I make up sentences with new words. (lesson)
- Item 58 - I draw a picture of a new word. (lesson)

Factor 3 – Taking notes

- Item 22 - I write new words in the notebook in three columns (words in English - their pronunciation - words in Estonian). (home)
- Item 24 - I group words in the notebook based on a topic or I do a mind map. (home)
- Item 3 - I write new words in the (vocabulary) notebook. (home)
- Item 51 - I write new words in the (vocabulary) notebook. (lesson)

Factor 4 – Guessing

- Item 11 - I try to understand the meaning of an unknown word on the basis of the text. (home)
- Item 21 - I try to understand the meaning of an unknown word by looking at the accompanying picture. (home)
- Item 48 - I try to understand the meaning of an unknown word on the basis of the text. (lesson)
- Item 55 - I try to understand the meaning of an unknown word by looking at the accompanying picture. (lesson)

Factor 5 – Dictionary use

- Item 1 - I look up the meaning of an unknown word in an English-Estonian dictionary. (home)

- Item 10 - I look up the meaning of an unknown word in the textbook glossary. (home)
- Item 27 - I find out the meaning of an unknown word if it hinders understanding the text. (home)
- Item 52 - I look up the meaning of an unknown word in the textbook glossary. (lesson)
- Item 8 - I use the textbook glossary for studying words. (home)

Factor 6 – Miscellaneous

- Item 2 - I let my mother or father, brother or sister check new words. (home)
- Item 23 - I pay attention to unknown words. (home)
- Item 28 - I write new words in the notebook in two columns (words in English - words in Estonian). (home)
- Item 43 - I ask the meaning of an unknown word from the teacher. (lesson)
- Item 60 - I pay attention to unknown words. (lesson)
- Item 63 - I study the words of an expression together as if they were just one word (e.g. *What a shame!*). (lesson)

Factor 7 – Sources of words

- Item 13 - I pick up new words when watching TV programmes, films, commercials, etc. in English. (home)
- Item 19 - I pick up new words when reading the internet in English. (home)
- Item 46 - I study new words from a video in English. (lesson)
- Item 5 - I pick up new words when reading books, magazines, etc. in English. (home)

Factor 8 – Association and imagery

- Item 35 - I look at a new word, close my eyes and picture the spelling of the word. (home)
- Item 36 - I look at a new word, close my eyes and picture the meaning of the word. (home)
- Item 54 - I associate new words with the words studied before. (lesson)
- Item 59 - I associate English words with Estonian words based on the pronunciation or spelling. (lesson)
- Item 61 - I group words in the notebook based on a topic or I do a mind map. (lesson)
- Item 62 - I associate new words with their synonyms (e.g. *huge* = *very big*) or antonyms (e.g. *tall* - *short*). (lesson)