

**Strategies in Vocabulary Learning:
A Comparative Study on the Use of Learning Strategies between Lower
and Upper Secondary School Students**

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The topic of this thesis is vocabulary learning strategies in English. Vocabulary is a central area on the field of second language acquisition as language competence is largely built on the knowledge of words. The aims of the study were to investigate what kinds of vocabulary learning strategies learners use, what kinds of differences there are in the strategy use between the study groups and what kind of a relationship there is between strategy use and vocabulary proficiency. The goal was to gain knowledge on the use of vocabulary learning strategies and how this knowledge could be used in the educational context. This empirical study was conducted in Finland Proper and the study groups investigated were lower secondary school students and upper secondary school students. A vocabulary strategy taxonomy by Norbert Schmitt (1997) was used as the theoretical background for the study due to its adequate and diverse strategy classification. A vocabulary strategy questionnaire was used to measure strategy use and a vocabulary test measured vocabulary proficiency. The study was based on the quantitative research approach but the qualitative approach was also used in open-ended questions. The results implied that there are no significant differences in the strategy use between the groups. Upper secondary school students used on average more determination and social strategies. Lower secondary school students used more memory, cognitive and metacognitive strategies. The results were surprising as upper secondary school students were assumed to use more cognitive and metacognitive strategies due to their older age and more instruction in English referring to higher cognitive capacity. However, upper secondary school students used on average more vocabulary strategies. The relationship between strategy use and vocabulary proficiency showed negative correlation implying that the more one uses strategies, the worse vocabulary proficiency one has. Vocabulary learning strategies could therefore be understood as compensation strategies and strategies may also be used inappropriately. Vocabulary strategies should be integrated in the L2 instruction and teachers should support students to use strategies. Future research could concentrate on the effect of learning strategies by conducting more qualitative research.

Keywords: learning strategies, vocabulary, second language, acquisition, proficiency

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List of abbreviations

EFL	English as a Foreign Language
FL	Foreign Language
L1	First Language
L2	Second Language
LSS	Lower Secondary School
LSSS	Lower Secondary School Students
SLA	Second Language Acquisition
TL	Target Language
USS	Upper Secondary School
USS	Upper Secondary School Students

1 Introduction

Vocabulary is a remarkable component in the process of second language acquisition (SLA). Words can be seen as the foundation for sentences and then again also for texts so it is indisputable that words really are a major area in the second language (L2). Norbert Schmitt (2010b, 3–4) has stated that vocabulary forms a significant part in the L2 learning process and also when reaching a good level in the L2. In order to facilitate the process of learning vocabulary, different language learning strategies can be used for help. Language learning strategies are different techniques or tools that enhance language learning and they support an initiative role of the learner in the learning process (Oxford 1990, 1). The use of different strategies may result in a better level of L2 proficiency (ibid.). Thus, the definition of vocabulary learning strategies can be based on the definition of language learning strategies but then the focus is more on the vocabulary proficiency instead of the general language proficiency. It can be said that language learning strategies do require a great deal of self-involvement from the learner as the learner does make the decision whether to use strategies or not. In the Finnish educational system, learners are very much supported to take initiative and be active learners in their own learning processes (Finnish National Agency for Education 2014). Due to this ideology that the learner is supposed to be a self-directed participant, researching learning strategies can be considered to be highly important.

The topic of this thesis is vocabulary learning strategies. The goals of this thesis are to discover what kinds of vocabulary learning strategies learners on different school grades use, whether there are any differences in the strategy use between these groups and whether there is a relationship between the use of vocabulary learning strategies and vocabulary proficiency level. These goals function also as the research questions. The study was conducted to lower secondary school students (LSSS) and upper secondary school students (USSS). The study was conducted in Finland Proper and the target language (TL) of this study was English as the L2. The theoretical framework of the study was based on Schmitt's (1997) vocabulary learning strategy taxonomy. Research on the use of vocabulary learning strategies between learners on different proficiency levels has been conducted which allows to deepen the presentation and discussion of vocabulary learning strategies (see e.g. Çelik and Toptaş 2010). Other researchers, such as Green and Oxford (1995), Gu and Johnson (1996) as well as

Kazemi and Kiamarsi (2017) have studied the relationship between learning strategies and proficiency level.

This study was conducted quantitatively. A questionnaire measured the use of strategies with a four-point Likert scale and a language test measured the vocabulary proficiency of the students. Some qualitative features were also present in the study as the questionnaire included two open-ended questions regarding the participants' subjective experiences on vocabulary learning strategies. This area of SLA is important to investigate since by researching the strategic behaviour of learners, we can obtain important information on their use of strategies and how they may affect, either positively or negatively, the learning process and learning outcomes. Knowledge on the use of strategies should be regarded as very important since teachers can help students to discover different learning strategies and help them choose the most suitable ones. Thus, teachers do have an important role in the students' L2 learning process as they can help to make the learning process as efficient as possible. In fact, Ahari et al. (2014) discovered that after providing actual instruction on vocabulary learning strategies to students, they used more vocabulary strategies and their skill level in vocabulary increased. This shows the importance of integrating vocabulary learning strategies in the classroom instruction.

In this thesis, the terms *acquire* and *learn* are used synonymously. Also, the terms *foreign language* (FL), *second language* and *target language* are used synonymously to refer to English as the L2. The pronoun *he* is used in this thesis to refer to the language learner but no discrimination between genders is meant with this as the purpose is only to refer to an individual learner.

This thesis starts with a general introduction to learning strategies and two different learning strategy taxonomies from Oxford (1990) and O'Malley and Chamot (1990) are presented. Also, some characteristics of a good language learner regarding strategic behaviour and factors concerning language proficiency and lexical proficiency are introduced. The presentation of the general learning strategy taxonomies functions as a basis for the next topic which treats more specifically vocabulary learning strategy classifications. Before the presentation of vocabulary learning strategy taxonomies, characteristics concerning the knowledge of words are discussed. After this, three different taxonomies from Schmitt (1997), Nation (2001) and Cook (2008) are introduced. The discussion is mostly focused on Schmitt's (1997) strategy classification since his inventory functions as the theoretical basis for the study.

After the theoretical section, the actual study of the thesis is covered. In the methodology section, research questions and hypotheses are explained. The quantitative and qualitative research methodologies, theoretical framework, subjects and the conducting of the study are also covered. The statistical methods used in the present study are also explained. Next, the results concerning the research questions are analysed by looking at the measures of central tendency and by using for example different statistical tests, such as the U test and Spearman's correlation for non-parametric study purposes. After presenting the results, a more thorough discussion on the results is covered and also the reliability and validity of the present study are evaluated. Finally, the conclusion finishes the thesis and some proposals for future research concerning vocabulary learning strategies are suggested. It is vital to understand in the educational world the importance of knowing how to use these vocabulary learning strategies if they are seen as being beneficial for positive learning results and hopefully this study will shed some new light on the field of vocabulary learning strategies.

2 Language learning strategies

This section discusses language learning strategies as a concept on a general level. Later on, the discussion continues to vocabulary learning strategies. However, it is important to understand learning strategies before moving on to more precisely vocabulary learning strategies since learning strategies provide a good theory base on which to add strategies concerning vocabulary. This section also covers some of the most common taxonomies of learning strategies and shows with the help of previous research why good language learners use these strategies.

The research into language learning strategies began in the 1970s. The intention was to switch the focus from teacher-oriented perspective to learner-oriented perspective which was interested in how learners' actions could affect their own L2 acquisition (Schmitt 1997, 1). According to Schmitt (1997, 2), consciousness of that aptitude was not the dominant factor in the L2 success was a growing factor and so the success of learning outcomes was more due to the individual learner's efforts. Thus, a greater emphasis was put on the actual learners of language and how they controlled their language learning and language use (Schmitt 1997, 1–2). It is quite fascinating that already in the 1970s the focus began to be on the learner since the latest national core curriculum for basic education in Finland also emphasizes the active role of an individual learner in the learning process (Finnish National Agency for Education 2014).

2.1 Definitions of language learning strategies

Language learning strategies have been defined in many ways but they all share a common idea of strategies. Oxford has come up with her definition in which language learning strategies are steps which learners take in order to increase the effectiveness of their language learning (Oxford 1990, 1). Strategies are seen as tools since they support active and self-motivated participation in the learning process. According to Oxford, using strategies appropriately may result in increased self-confidence and better proficiency level (ibid.). O'Malley and Chamot see learning strategies as “the special thoughts or behaviours that individuals use to help them comprehend, learn, or retain new information” (O'Malley and Chamot 1990, 1). These researchers base the concept of language learning strategies on cognitive theory which means that individuals process information (target language material)

and this cognitive activity involves thoughts which are referred to as “mental processes” (ibid). Thus, when the learner engages himself in the process of using learning strategies, mental processing is required to take place. Nation (2001) has also come up with his definition on what a learning strategy means. According to Nation (2001, 217), a strategy involves the possibility of a choice which means that there are a set of strategies to pick one. A strategy should also require knowledge and it should benefit from practicing. A strategy should also affect vocabulary learning so that it increases efficiency and the use of vocabulary (ibid.). This last note on increasing efficiency and the use of vocabulary is very important as the ultimate goal of using strategies is that they should help the learner to achieve better results in the L2.

The first empirical studies researching L2 learning strategies were conducted in the mid-1970s in a line of work which is called “the good language learner”. The goal of this research was to discover which factors contribute to the fact that some language learners become more successful in their L2 than others. The findings showed that besides aptitude and motivation in L2 learning, the good learners were also actively involved in their learning processes (Naiman et al. in Ortega 2013, 208). Joan Rubin (1975) has listed some traits for good language learners which will be discussed later on when the discussion moves on to the characteristics of a good language learner which are all related to strategic behaviour in language learning.

Oxford has listed some central features of language learning strategies which will be covered next. The key features according to Oxford are listed in Table 1 (Oxford 1990, 9).

Table 1. Key features of language learning strategies (Oxford 1990, 9)

<ol style="list-style-type: none">1. Contribute to the main goal, communicative competence.2. Allow learners to become more self-directed.3. Expand the role of teachers.4. Are problem-oriented.5. Are specific actions taken by the learner.6. Involve many aspects of the learner, not just the cognitive.7. Support learning both directly and indirectly.8. Are not always observable.9. Are often conscious.10. Can be taught.11. Are flexible.12. Are influenced by a variety of factors.

Key feature number 1 in Table 1, “Contribute to the main goal, communicative competence”, can be raised as a central issue. Canale and Swain have presented a four-part definition of communicative competence. This theoretical framework includes *grammatical competence*, *sociolinguistic competence* and *strategic competence* (Canale and Swain 1980, 29–30). Later on, a fourth component was added by Canale to the communicative competence framework which is *discourse competence* (Canale 1983). Grammatical competence includes rules regarding phonology, morphology, syntax and semantics related to sentence-grammar. This component of the communicative competence includes also knowing lexical items. Grammatical competence helps learners to decide and express what utterances literally mean (Canale and Swain 1980, 29–30). Sociolinguistic competence means the knowledge of sociocultural rules and discourse rules. These types of rules help to interpret utterances in social situations (Canale and Swain 1980, 30). Strategic competence covers communication strategies that can be either verbal or non-verbal. These strategies are divided into strategies that relate to grammatical competence and sociolinguistic competence. Strategic competence helps learners to compensate communication breakdowns if these breakdowns derive from variables in performance of insufficiencies in competence (Canale and Swain 1980, 29–30). Discourse competence regards to achieving “a unified spoken or written text in different genres” (Canale 1983, 9). *Cohesion* in form and *coherence* in meaning are ways to achieve unity of a text (ibid.).

Oxford sees communicative competence as the main goal of language learning. All language learning strategies used appropriately are related to the goal of communicative competence. Learners must interact and use meaningful language which is appropriate for the context so that they can acquire communicative competence. Learning strategies make it easier for learners to take part in communication that is authentic (Oxford 1990 8).

Key feature number 2 in Table 1, ”Allow learners to become more self-directed” is also a central point in language learning strategies. Ortega (2013, 208) has stated that “strategies are conscious mental and behavioural procedures that people engage in with the aim to gain control over their learning process”. The concept of consciousness and taking control over one’s learning are significant aspects when the learner decides to use learning strategies. This shows that learning strategies are actually fairly high-level metacognitive processes as the learner needs to take initiative to make his learning more effective. Next, some learning strategy taxonomies are presented in order to deepen the understanding of L2 learning strategies.

2.2 Categorizations of language learning strategies

Several taxonomies for language learning strategies have been suggested by different researchers. Researchers have not yet reached a consensus on which strategy inventory would be the ultimate one but perhaps the most common strategy inventories come from O'Malley and Chamot (1990) and Oxford (1990). However, there are also other noted strategy inventories from other researchers (see e.g. Rubin 1981) but in this thesis, only O'Malley and Chamot and Oxford's classifications are presented.

O'Malley and Chamot divide their strategy inventory into three categories which are *metacognitive strategies*, *cognitive strategies* and *social and affective strategies* (O'Malley and Chamot 1990, 137–9). The first category, metacognitive strategies, refers to planning and thinking about the learning process, self-monitoring the current learning task and also evaluating the learning outcomes. Cognitive strategies refer to interacting with the actual target language material that is to be learnt as well as manipulating the language material either mentally or physically. The learner may also apply a particular technique in order to facilitate the learning. Some sub-categories in this category are *repetition*, *note-taking* and *translation*. The last category of this classification is social and affective strategies. These types of strategies refer to interaction with other people in order to facilitate learning or the learner may also use his affective control in the learning process to assist his learning. Some sub-categories are *cooperation* and *self-reinforcement*. Ali Kazemi and Soraya Kiamarsi (2017) used O'Malley and Chamot's theoretical framework for their study which researched intermediate and advanced learners' strategy use in reading comprehension activities. The study also sought to discover whether there is a relationship between the two groups' proficiency and strategy choices. The learners in the more advanced group used more metacognitive strategies and the most frequently used strategies were self-monitoring, self-reinforcement and self-management. Intermediate learners used more cognitive and social/affective strategies than the advanced learners. Note-taking and translation were the most frequent strategies used by the intermediate learners. The results indicated that there is a connection between the frequency and choice of strategies and the level of proficiency (Kazemi and Kiamarsi 2017, 156). Quite surprisingly, though, the intermediate learners used more cognitive strategies than the more advanced group. However, the fact that the more advanced group used more metacognitive strategies was predictable as their metacognitive abilities in language learning can be assumed to be on a higher level and thus they are more

able to reflect on their learning. O'Malley and Chamot's strategy inventory is very much used on the field of SLA, possibly due to its detailed and clearly defined strategy classifications.

Oxford classifies her strategies into *direct strategies* and *indirect strategies* (Oxford 1990, 17). Direct strategies involve the actual target language material. Mental processing of the language material is required in each direct strategy category. Direct strategies fall into three sub-categories which are *memory strategies*, *cognitive strategies* and *compensation strategies* (Oxford 1990, 37). Indirect strategies do not directly involve the learnt language but instead they support and enable language learning in other ways. Indirect strategies involve *metacognitive strategies*, *affective strategies* and *social strategies* (Oxford 1990, 135). As can be seen, the strategy inventories of Oxford (1990) and O'Malley and Chamot (1990) do overlap with each other. A study conducted by Green and Oxford (1995) sought to discover whether there is a relationship between the use of strategies and success in language learning. The study was conducted by using SILL (the Strategy Inventory for Language Learning) which is based on Oxford's already presented strategy inventory (1990). The results showed that the more successful learners used a greater variety of learning strategies (Green and Oxford 1995, 286). The results are similar when comparing to the discussed Kazemi and Kiamarsi's study (2017) in the sense that more proficient language users use more learning strategies than lower proficiency level learners. However, the higher-level students used more cognitive strategies in Green and Oxford's study (1995) which differs from the Kazemi and Kiamarsi's study (2017) in which the lower-level students used more cognitive strategies than the higher-level students.

Khosravi (2012) used also Oxford's SILL (1990) as the theoretical framework for her study. The purpose of her study was to investigate the possible relationship between the participants' level of language proficiency and language learning strategies as well as the influence of proficiency level on learning strategies. The most and the least used strategies were also of interest. The participants were Iranian English as a foreign language (EFL) students between ages 13 and 48 and the two study groups were elementary and intermediate learners (Khosravi 2012, 2122). The results showed that learners on the intermediate level used more frequently cognitive, metacognitive and social strategies than EFL students on the lower proficiency level. The use of memory strategies did not differ significantly between the groups (Khosravi 2012, 2129). We see that there are similarities between the studies of Khosravi (2012), Kazemi and Kiamarsi (2017) and Green and Oxford (1995). In Khosravi's study (2012), higher proficiency level students used more metacognitive strategies than lower-level learners, exactly like in Kazemi and Kiamarsi's (2017) study. Green and Oxford

(1995) discovered that more advanced learners used more cognitive strategies than learners on the lower proficiency level and this also was the case in the Khosravi's (2012) study. Khosravi (2012, 2129) discovered that the more the learner uses cognitive strategies, the better proficiency level the learner has. This implies that there is a positive relationship between this particular strategy group and language proficiency (ibid.). The frequency in the overall use of learning strategies did not differ between the study groups and the reason for this may be due to the closeness of proficiency levels between the groups (ibid.). The researcher makes an important note on the role of teachers when employing language learning strategies. In order to provide learners better chances to learn the L2, teachers need to support students to the use of learning strategies. Being aware of the students' learning strategies affects also teaching methods which should be applied based on the strategies used in the classroom (ibid.). Thus, the role of the teacher in learning strategies should not be understated.

2.3 Characteristics of a good language learner related to strategic behaviour

There are certain characteristics that are attached to good language learners. As the success in language learning is different among second language learners, it is crucial to investigate what kinds of strategies the good language learners might employ in their own learning (Rubin 1975, 41). Joan Rubin has come up with seven different strategies which good language learners possibly use in learning the target language (1975, 45–8). Rubin's strategies and their definitions are listed below.

- 1. Guessing:** The good language learner is willing to guess and is also accurate in guessing. The good language learner may enjoy uncertainty and he also wants to try out his guesses. The good language learner takes in and stores efficiently a great deal of information.
- 2. Communicating:** The good language learner is willing to communicate and take part in communicative situations in order to learn the target language. Using circumlocutions, paraphrases and gestures are common ways to compensate language abilities.
- 3. Making mistakes:** The good language learner tolerates vagueness and is not afraid to look foolish if it results to reasonable communication.

4. **Attending to form:** The good language learner attends to the formal elements of a language. He tries to find patterns and schemes in order to categorize information.
5. **Practicing:** The good language learner practises for example words and sentence formulations. He tries to find situations where he can use language so he will for example go to movies, speak with native speakers or speak in the foreign language classroom.
6. **Monitoring:** The good language learner monitors both his own speech and the speech of others. He watches how others receive his speech and he observes whether his performance and standards meet. The good language learner is able to learn from mistakes.
7. **Attending to meaning:** Besides attending to the form of language, the good language learner pays attention to the contexts of speech acts, relationships of the speech act participants and also the rules of speech in order to understand the messages that the utterances carry.

(Rubin 1975, 45–8)

These characteristics in Rubin's listing (1975, 45–8) cover in multiple ways what good language learners do in order to acquire a good level of language proficiency. A good language learner intends to find many kinds of situations in which he can practise his language skills. Careful consideration concerning the attending to form as well as to meaning and monitoring are represented but more spontaneous ways to learn the TL are also present in Rubin's list (*ibid.*). Guessing and making mistakes form a crucial part in the language learning process so a good language learner is not afraid to take risks when learning a language. It could be thus concluded that a great deal of effort is demanded from the language learner who has a goal to acquire the TL.

Rubin's list (1975) has many similarities when it comes to the individual differences of learners. Individual differences are factors which affect the process of learning the L2 (Pietilä 2014, 45). It is interesting that the process of acquiring the L2 does not vary that much between learners since the differences that can be observed are seen in the rate of learning and in the outcome of language proficiency (*ibid.*). The factors that contribute to the differences of the rate and outcome in the L2 are for example personality, learning styles and motivation. Naturally, learning strategies are also part of individual differences (*ibid.*). The personality factor can be linked for example to Rubin's (1975, 45, 47) categories referring to *guessing*

and *making mistakes* as the tolerance of ambiguity and willingness to take risks are key factors here (Pietilä 2014, 55). Learning styles are also very much linked to Rubin's categories (1975, 47) such as *attending to form* and *monitoring*. The concept of *field dependency* is central here as if the learner is *field independent*, he is analytical and discerns the details from a big picture, thus attending to the formal elements of the language and monitors his speech (Pietilä 2014, 62). *Practicing* (Rubin 1975, 47) is also a key factor here as it can be linked to motivation that is an individual difference (Pietilä 2014, 49). It can be said that the persistence to practise linguistic skills derives to some extent from the level of motivation. We see that the strategies linked to a good language learner in Rubin's list (1975, 45–8) are very much linked to individual differences. Thus, the characteristics of a good language learner may be ultimately individual differences which, to a certain extent, could be considered as inherent human characteristics. Next, the discussion moves on to cover language proficiency.

2.4 Language and lexical proficiency

The L2 proficiency focuses on several aspects of the target language and the research has used three variables to predict L2 proficiency. These variables are *L2 aptitude*, *L2 affect* and *L1 skills* (Sparks et al. 2009, 726). L2 aptitude includes four independent variables which affect L2 learning. These variables are (1) *phonetic coding ability* which concerns coding and memorizing the relationships between sounds and symbols, (2) *grammatical sensitivity* which regards the ability of learning and using grammar correctly, (3) *inductive language learning ability* which concerns the skill to deduce forms and rules of language from linguistic material and (4) *rote memory* which means the learner's capacity to retrieve associations regarding phonetics and grammar (Carroll in Sparks et al. 2009, 726-7). L2 affect concerns affective variables. Affective variables are the learner's emotional characteristics which affect how the learner responds to any given situation. An example of affective variables is language anxiety (Gardner and MacIntyre in Sparks et al. 2009, 727–8). L1 skills concern the relationship between L1 and L2. It has been discussed since the 1970s that L1 skills, L2 aptitude and L2 proficiency would all be related to each other in some way (Sparks et al. 2009, 729). Cummins invented *the Linguistic interdependence hypothesis* which presumes that L2 language and literacy skills depend to some extent on L1 skills when the learner is exposed to L2 (Cummins in Sparks et al. 2009, 729). Thus, Cummins has speculated that if a learner's L1

competence is on a low level, the learner's L2 competence will be on a low level also (ibid.). Next, the discussion on proficiency focuses more specifically on the L2 lexical proficiency.

Lexical proficiency can be said to consist of three variables which are *the size of vocabulary*, *the depth of vocabulary knowledge* and *the accessibility of core lexical items* (Meara in Crossley et al. 2010, 562). Vocabulary size means the number of words the learner knows and the diversity of words. The depth of vocabulary knowledge refers to how well the learner knows a word. Some lexical features related to this are for example semantic relatedness, word associations and word sense relations. The accessibility of core lexical items means how fast the learner can retrieve or process the learnt words. Some lexical features related to this are for example familiarity of words and the concreteness of words (ibid.). The L2 lexical proficiency is a great part of language acquisition and linguistic competence and three factors support this. For example, communication errors are often due to misunderstandings of lexical items. Lexical proficiency is also attached to academic achievement. The amount of knowledge of how learners process and produce language material can also be increased by understanding lexical acquisition of learners (Crossley et al. 2010, 562).

There are certain developmental aspects when a child acquires the meaning of words. Aitchison (1994) has come up with a development pattern regarding how a child learns the meaning of different words in his L1. Aitchison's development scheme is applied here to the purposes of learning an L2 as it can be assumed that the process of acquiring the meaning of words between L1 and L2 is fairly similar. The first stage is *the labelling task*. In this phase, the learner learns to associate the name of an object to the thing that it refers to (Aitchison 1994, 170–1). The second stage is *the packaging task*. Here, the learner acquires to use the learnt word in different contexts and apply its use to other objects (Aitchison 1994, 172). The last stage, *network building*, refers to putting the words into a semantic network (Aitchison 1994, 177). For example, relations between words and collocations are learnt in this phase (Aitchison 1994, 178–9). Aitchison's model (1994) is informative and systematic as it shows the linear process of how a learner gains the lexical proficiency.

Certain key points can be distinguished when it comes to learning L2 vocabulary and thus gaining vocabulary proficiency. According to Schmitt (2010a, 1), an extensive vocabulary storage is required from learners in order to perform in the L2 and he also adds that learning a broad range of vocabulary is probably going to be among the greatest challenges in language learning. Schmitt (2010a) lists five key principles which learners as well as teachers should take into notice in L2 vocabulary learning. The first one is that “a

large vocabulary is needed to function in a language” which refers to the number of word families that a learner should master in order to function in everyday conversations and read authentic texts. The knowing of 2000 to 3000 word families is seen as sufficient (Schmitt 2010a, 1–2). The second principle is that “various kinds of word knowledge are needed to use a word well” (Schmitt 2010a, 4). For example, Cook has come up with different kinds of word knowledge which include *forms of the word*, *grammatical properties*, *lexical properties* and *meaning of the word* (Cook 2008, 50–1). The third key issue is that “vocabulary learning is incremental” (Schmitt 2010a, 8). This means that in order to master an L2 word, the learner needs several connections with the target word instead of just a single encounter with the word (ibid.). The fourth principle is that “vocabulary learning requires consolidation”. The manner of reviewing and the repetitive practice of the word is highly important in order to store the word into memory. The last main principle suggests that “vocabulary learning requires enhancement of partial knowledge”. This refers to knowing the different types of word knowledge as learners usually begin with the knowledge of the word’s form-meaning function, then move on to its grammatical characteristics and after a while learners acquire the word’s contextual purposes (Schmitt 2010a, 12). Before introducing vocabulary learning strategies, some individual characteristics related to the acquiring of L2 words are presented.

There are several individual differences which may affect the learning process of words (Niitemaa 2014). The characteristics of a learner affecting the process of learning words are for example the tolerance of taking risks and cognitive skills (Niitemaa 2014, 148). Learners who are willing to take risks are more capable of using words and thus learning them. Cognitive skills help to infer the meaning of words when they are out of their usual context as well as link the newly learnt words to some previously learnt material. Analytical learners have the advantage of learning the morphology of words and also acknowledging the fact that the same word may have multiple meanings (ibid.). The words themselves do also contribute to the process of learning words as, according to Niitemaa (2014, 149), certain words are just simpler to learn than some other words. The lexical factors affecting here are for example “speech sounds, spelling, the frequency of the word, length, meaning and even the word class” (ibid.; my translation). For example, nouns are easier to learn than words from other word classes as the creation of a mental image is easier when it comes to acquiring nouns. Also, Niitemaa sees that it is easier to learn concrete meanings than abstract meanings (ibid.). The learning environment has also an effect when acquiring words (Niitemaa 2014, 150). If the L2 learner integrates the learning of foreign words in the outside-school context, the learning of words becomes more effective. The incidental learning of words can be involved

in many free time activities, for example when watching movies, playing games and listening to music that is in the TL (ibid.). Thus, we see that motivation has a great effect in the learning process if the L2 learner is willing to integrate the learning of foreign words in his free time activities. Next, the theory moves on to concern vocabulary learning strategies and several strategy taxonomies are introduced.

3 Vocabulary learning strategies

Vocabulary forms a significant component of language use and learning vocabulary is an important part in achieving a good level in the second language (Schmitt 2010b, 3–4). There is evidence to back this up since it is typical that vocabulary size and language proficiency correlate. Prebianca (2014) studied the relationship between lexical access and proficiency level in speech production in L2. The study groups were intermediate and advanced learners of English. The results showed that the more advanced learners of English showed better speech production skills when naming correctly words than the intermediate group. Thus, the advanced group had better access to words and therefore they showed better proficiency level. Before moving on to vocabulary learning strategies, it is important to understand what it means to know a word. A description of this is offered and then the discussion moves on to vocabulary learning strategies.

3.1 What it means to know a word

Generally, knowing a word means knowing the form, the meaning and the use of the word (Nation 2001, 26). The *learning burden* of a word refers to the specific amount of effort that the word requires to be learnt. Naturally, different words have different kinds of learning burdens. The principle of the amount of learning burden is that the more the learner is familiar with the word's patterns and knowledge, the lighter is the learning burden. The patterns and knowledge that the word represents may derive from L1 or other learnt languages. The patterns and knowledge can for example be sounds, spelling patterns, grammatical patterns and similar collocations and constraints. If an L1 is closely related to the TL, the learning burden will most likely be very light (Nation 2001, 23–4).

It is important to acknowledge the distinction between *receptive* and *productive* vocabulary knowledge. Receptive vocabulary use means that the learner perceives the form of a word while listening or reading and also retrieves the meaning of the word. Productive vocabulary use refers to expressing the meaning of a word through speaking or writing and also retrieving and producing the correct spoken or written form of the word (Nation 2001, 24–5). Some examples of the receptive word knowledge are the ability to identify the word when heard and the ability to understand the meaning of the word in a specific context. Nation gives also examples of the productive word knowledge and attaches these examples to a word *underdeveloped*. Some examples are the ability to pronounce it correctly and with

stress and the ability to come up with words usually occurring with the word (Nation 2001, 26, 28).

Cook (2008) has also researched the knowledge of vocabulary. *Forms of the word, grammatical properties, lexical properties and meaning of the word* make up the knowledge of vocabulary (Cook 2008, 50–51). Under the category of forms of the word belong *pronunciation* and *spelling* thus meaning the spoken and written forms of language. Grammatical properties consist of *grammatical category* meaning whether the word is for example a noun or a verb as well as *possible and impossible structures*. This means that a certain word can appear in particular structures and the term *argument structure* is closely related to this (ibid.). For example, the verb *win* can appear in particular argument structure, for example *She won the race*, in which the argument structure of the verb requires subject (she) and object (the race).

Lexical properties include *collocations* of words as well as *appropriateness* of words. Collocations are somewhat set expressions of words in which a word conventionally is presented with another word (Cook 2008, 51). Cook uses as an example a collocation *man in the street*. In this phrase, the word *man* is the *node* and the words *in the street* are *collocates* which characterize the node (Cook 2008, 51, Orlandi 2016, 20). Appropriateness refers to knowing when and to whom a particular word is appropriately used (Cook 2008, 51). As an example of appropriateness, Cook (2008, 51) uses a phrase *my man* which would be suitable to say to a popstar but not for a prime minister. Meaning of the word comprises of *general meanings* and *specific meanings*. General meanings mean that words have general characteristics, for example the word *man* has meanings attached to it such as *male* and *adult*. Specific meanings mean that the word *man* has specific senses, for example *a human being* or *one of the pieces used in chess* (ibid.). Cook (2008, 51) makes a noteworthy comment on the vocabulary acquiring process. Acquiring a word does not only mean that the word is linked to its translated equivalent but it also means that the already mentioned categories (forms of the word, grammatical properties, lexical properties and meaning) should also be taken into account (ibid.). Acquiring a word is thus a diverse system in which different aspects of the word in question should be considered, not just the translation of the word. However, many EFL school books usually offer just word lists so it is up to the teacher and the student to diversify the process of acquiring the word.

Gu and Johnson (1996) researched vocabulary learning beliefs and strategies related to vocabulary size and English proficiency. Metacognitive strategies, such as self-initiation and selective attention, were seen as predicting positive English proficiency (Gu and Johnson

1996, 668). Cognitive strategies, like contextual guessing, using dictionaries, concentrating on word formation and paying attention to the surrounding context, all correlated positively with vocabulary size and proficiency. However, repeating visually new words predicted negative correlation with regard to the size of vocabulary and proficiency whereas oral repetition showed to correlate positively with proficiency (ibid.). The major observation that Gu and Johnson make is that in order to be able to use L2 vocabulary in real context, vocabulary learning and vocabulary knowledge should be part of the target discourse, integrated, and not treated as decontextualized (Gu and Johnson 1996, 669). Learning words separately may not help to profoundly understand the word's use.

3.2 Vocabulary learning strategy taxonomies

The previous discussion on the L2 learning strategies in section two offered a general understanding of learning strategies so next the discussion moves on to more specifically address vocabulary. The vocabulary learning strategy taxonomies by Schmitt (1997), Nation (2001) and Cook (2008) are introduced. As with general learning strategies, no consensus on the ultimate vocabulary strategy inventory has been reached yet but for the sake of versatility and more profound understanding of vocabulary learning strategies, three taxonomies are introduced next.

3.2.1 Schmitt's taxonomy

The first vocabulary strategy inventory to be discussed is Schmitt's taxonomy (1997). This taxonomy is discussed more profoundly than the other two inventories from Nation (2001) and Cook (2008) since the present study uses Schmitt's taxonomy as the theoretical basis. Thus, it is important to look at his strategy inventory in a more detailed manner. Schmitt compiled his strategy taxonomy list on a versatile manner. First, Schmitt examined several vocabulary reference books and textbooks which provided the first strategies for his inventory. Second, he conducted a study for Japanese learners and teachers of English. The learners wrote reports which were on how they studied English vocabulary and Schmitt took several strategies from these reports. Third, some teachers reviewed the list of strategies and then added those strategies which they knew from their experiences (Schmitt 1997, 7). Schmitt divides vocabulary learning strategies into two different categories which are

discovery strategies and *consolidation strategies* (Schmitt 1997, 10–11). With discovery strategies, Schmitt means strategies that a learner uses when facing a new word and discovering the meaning of that word (Schmitt 1997, 8). Consolidation strategies mean strategies which the learner uses to consolidate the new word's meaning. Thus, this strategy system is based on a linear time system since strategies are used depending on whether the learner faces the word for the first time and uses discovery strategies or after the first encounter when the learner uses consolidation strategies to strengthen the meaning of the word. These strategies comprise of sub-strategies which will be next discussed individually. The ultimate listing of vocabulary learning strategies is presented below by Schmitt (1997, 10–2).

Discovery strategies

Determination strategies

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

Social strategies

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

Consolidation strategies

Social strategies

- Study and practice meaning in a group
- Teacher checks students' flash cards or word lists for accuracy
- Interact with native-speakers

Memory strategies

- Study word with a pictorial representation of its meaning
- Image word's meaning
- Connect word to a personal experience

- Associate the word with its coordinates
- Connect the word to its synonyms and antonyms
- Use semantic maps
- Use 'scales' for gradable adjectives
- Peg method
- Loci method
- Group words together to study them
- Group words together spatially on a page
- Use new word in sentences
- Group words together within a storyline
- Study the spelling of a word
- Study the sound of a word
- Say new word aloud when studying
- Image word form
- Underline initial letter of the word
- Configuration
- Use Keyword Method
- Affixes and roots (remembering)
- Part of speech (remembering)
- Paraphrase the words meaning
- Use cognates in study
- Learn the words of an idiom together
- Use Physical action when learning a word
- Use semantic feature grids

Cognitive strategies

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

Metacognitive strategies

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

(Schmitt 1997, 10–2)

Discovery strategies are divided into *determination strategies* and *social strategies*. First, determination strategies mean that if the learner does not know the target word, he must

discover the meaning of the word with different guessing strategies (Schmitt 1997, 13). The meaning of the word can be guessed through structural knowledge of the target language and roots and affixes of words may help in this. Cognates also offer a great way to guess the meaning of the word, especially if the target L2 is close to the learner's own L1. Context may also help the learner to guess the meaning. In the written text, the surrounding words and pictures may be beneficial to the learner. In spoken context, different gestures and intonation may also give clues. Schmitt makes a good point in that analysing contextual clues requires a certain level of proficiency in language, background knowledge of the topic and strategic knowledge of how to discern the contextual clues. Reference materials (primarily dictionaries) as well as word lists and flash cards can also help in guessing the word. However, Schmitt admits that many teachers think that words should be learnt in context and thus word lists and flash cards would not be suitable for communicative language teaching and learning (Schmitt 1997, 12–14). Nevertheless, learners are all individuals so for some learners this rather old-fashioned way of learning words may be just fine.

Second, social strategies refer to asking help from someone who knows the word. Teachers, classmates and friends are usually the sources of word knowledge. Teachers may offer help with foreign words in several ways. They can give L1 translations and synonyms or they can paraphrase the word or use the word in a specific sentence. Naturally, a combination of these is also possible. However, there are also dangers with giving L1 equivalents and synonyms as the students must know the word's collocational, syntactic and stylistic differences before they can use the word productively. Group work is also a good way to discover new words (Schmitt 1997, 15). Peers offer great support in the discovery process as learners go through the new words together.

Consolidation strategies include *social strategies*, *memory strategies*, *cognitive strategies* and *metacognitive strategies*. Due to the somewhat overlapping nature of the learning strategies, social strategies are also present in consolidation strategies. First of all, social strategies in this category include group work which basically means that students study and practise the meanings of words together. Teachers can also check whether students' flash cards and word lists are accurate. Interacting with native speakers is also a social strategy and this can increase the number of words learnt (Schmitt 1997, 11, 16).

Second, memory strategies (also called as *mnemonics*) comprise of a significant amount of strategies in Schmitt's inventory. Memory strategies involve that the word is related to a certain previously learnt knowledge so that the word is retained in memory. Pictures and especially pairing the target words with equivalent pictures may help in memorizing the target

language material. Relating words with coordination (apple → other fruits, such as pear), synonymy (irritated → annoyed) and antonymy (dead → alive) is a good way to link new words to L2 words that the learner already knows. Grouping of words can also prove to be effective as learners are prone to group words without really even consciously trying to do that (Schmitt 1997, 16–18).

Third, cognitive strategies include repetition and mechanical ways in studying L2 vocabulary. Repetition can be either written or verbal and the student repeatedly says or writes something over and over again. Writing word lists or using physical flash cards are also ways to facilitate the learning of the words. Cognitive strategies also include study aids. An example of these is note-taking in class in which the learner creates his own structure for words that he just learned and taking notes also offers more exposure when the learner reviews the newly learnt words (Schmitt 1997, 21).

Finally, metacognitive strategies refer to controlling and evaluating the L2 learning. Becoming a more efficient learner is one of the purposes of metacognitive strategies. Maximizing exposure to the L2 is highly important, so for example books, magazines and movies in the L2 are an efficient source for exposure (Schmitt 1997, 22). Today, the list could definitely be continued with the increasing amount of input in digital media that is in English. It could be said that the exposure to English has never been easier than in today's society. Interacting with native speakers of the L2 belongs also to metacognitive strategies and testing oneself provides either positive or negative feedback which then implies whether the learner should continue using these strategies. Scheduling the time for practising words may also help to learn the words if the learner has a specific plan for this. Reviewing the newly acquired material soon after the material has been gone through for the first time is also a metacognitive strategy. It is also noteworthy to highlight that no one will ever learn all the words of the L2 and learners should concentrate on learning words that are the most useful ones. It is an important skill to tolerate ambiguity of foreign words in the running text so “the conscious decision to persevere may be one of the most important strategies of all” (Schmitt 1997, 23) which is very well stated. Schmitt's taxonomy (1997) is very popular on the field of L2 vocabulary learning strategies and two studies which used Schmitt's strategy inventory as their theoretical framework are presented next.

Waldvogel (2013) studied the relationship between vocabulary learning strategies and proficiency levels among adult learners of Spanish as the FL. As mentioned, he used Schmitt's (1997) vocabulary learning strategy taxonomy as the basis for his study. There were three proficiency groups involved which were beginners, intermediate learners and advanced

learners. Waldvogel used a vocabulary learning questionnaire in order to discover which strategies the learners preferably used. The results indicated that there is a strong relationship between the use of vocabulary strategies and proficiency level. The more proficient learners of Spanish used more vocabulary strategies than the less experienced learners. Waldvogel explains this with the fact that vocabulary learning strategies are advanced-level cognitive and metacognitive processes so they demand more cognitive skills from the language learner and learners who are less proficient in the L2 may not have these skills yet (Waldvogel 2013, 216). As Waldvogel notes, it should be acknowledged that using learning strategies does not automatically lead to success in learning if learners do not have the knowledge at their disposal to metacognitively connect strategies and the use of their language. Less proficient learners may also have to direct their cognitive resources to lower-level functions and thus they have fewer resources available to concentrate on the strategy use (ibid.). However, it should be noted that there are also some external factors that may contribute to vocabulary learning, other than vocabulary learning strategies. The factors can be for example the learning environment, which means L2 versus the learner's L1, motivation, beliefs about L2 learning, learning tasks and cultural background (ibid.). It is important to acknowledge the presence of these factors but as this thesis concerns vocabulary learning strategies and how they are connected to proficiency, external factors are given less footstep.

Çelik and Toptaş (2010) investigated vocabulary learning strategies by Turkish EFL students across different proficiency levels. The theoretical framework used in this study was also Schmitt's vocabulary learning strategy taxonomy (1997). The study was interested to discover the frequencies and patterns related to strategy use and how these differ between different levels of proficiency (Çelik and Toptaş 2010, 62). The groups investigated were elementary learners, pre-intermediate learners and intermediate learners. The results showed that pre-intermediate and intermediate learners used more determination strategies than elementary learners (Çelik and Toptaş 2010, 70). However, learners on the elementary level showed greater use of social strategies than learners on the pre-intermediate and intermediate levels (Çelik and Toptaş 2010, 66). Also, the intermediate learners used more frequently memory strategies than elementary level learners. The use of cognitive strategies was also more common among the intermediate-level learners than among the elementary and pre-intermediate learners. Finally, the pre-intermediate and intermediate learners used more frequently metacognitive strategies than learners on the elementary level (Çelik and Toptaş 2010, 70). As a concluding point, the researchers suggest that instruction related to vocabulary learning strategies requires improvement. Educators and curriculum planners

should become more aware of the individual differences in L2 learning. By acknowledging the presence of learning strategies, teachers can help students to become more aware of the ways they learn the L2 in the most efficient manner and thus become more self-directed and motivated learners (ibid.). Next, another vocabulary learning taxonomy is introduced and the discussion will cover Nation's (2001) vocabulary strategy inventory.

3.2.2 Nation's taxonomy

Nation divides his strategy inventory into three categories. These are (1) *planning: choosing what to focus on and when to focus on it*, (2) *sources: finding information about words* and (3) *processes: establishing knowledge* (Nation 2001, 218). Each of these categories are presented next. The first category, *planning: choosing what to focus on and when to focus on it*, consists of different aspects of attention which refers to where and how to focus attention and how the learner gives attention to the word. This category has several subcategories and the first is *choosing words*. This means that learners should make a strategy plan and direct their attention to specific vocabulary and also where they are able to find this vocabulary, e.g. high-frequency and academic words (Nation 2001, 218–9). *Choosing aspects of word knowledge to focus on* is the second subcategory and it basically means that knowing the meaning of the word is not usually enough so other aspects of the word should be considered if the learner wishes to use the word in productive speaking and writing. *Choosing strategies* involves that the learner should choose the most appropriate strategy, how to practise this strategy and when to change to some other strategy. *Planning repetition* means that the learner should return to the already studied words and focus attention to those words (Nation 2001, 219).

The second category, *sources: finding information about words*, refers to knowing different aspects of a word (Nation 2001, 219). *Analysing word parts* is the first subcategory of this category. If the learner knows common word parts, affixes and stems, the learning process of other words can become easier since word parts can provide useful knowledge of connections between words and one can check guesses based on the context. *Using context* means that the context can provide useful background knowledge and also linguistic cues which can help in finding out the meaning of the word (Nation 2001, 219–20). *Consulting a reference source* refers to finding out information about vocabulary. There are both formal sources such as dictionaries and also informal sources like asking help from other learners of

the L2 (Nation 2001, 220). Today's information technology provides an easy access to vocabulary information so the process of gaining new information has most likely become more efficient. *Using parallels with other languages* refers to the learning burden of a word. As was already discussed, this burden depends on the number of similar patterns and items that the learner is already familiar with, based on his previous studying of the L2 or his knowledge of L1 or other languages (L3 etc.) (ibid.).

The final category, processes: establishing knowledge, refers to how the learner can remember the learnt vocabulary and how it can be made available for use (Nation 2001, 221). *Noticing* means that the learner takes conscious actions in order to learn the target word. The learner can for example add the word to a vocabulary list or repeat the word (ibid.). The term *Noticing hypothesis* was first invented by Richard Schmidt and for more information on the Noticing hypothesis, see Schmidt (1990).

Retrieving means that the previously studied words are recalled. When retrieving, the connection between the cue and the retrieved knowledge becomes stronger. For example in productive use, the cue stands for the meaning or the use of the word and the retrieved information refers to the form of the word. In receptive use, the cue is the spoken or written form of the target word and the meaning or the use of the word is the retrieved information. Retrieval can happen in many ways since it can be productive or receptive, oral or visual or in context or decontextualized (ibid.). *Generating* is the final subcategory of establishing vocabulary knowledge. The strategies attached to this subcategory are for example semantic mapping and creating sentences in which the newly acquired words appear. Using the word in different contexts and with the four skills of language (speaking, listening, reading and writing) is also a strategy in which the learner must analyse the word so that it fits to the particular context (Nation 2001, 222). As can be seen, Schmitt and Nation's taxonomies do overlap with each other to some extent. For example, strategies such as analysing word parts and consulting a reference source, which belong to Nation's inventory, do overlap with strategies which are analysing affixes and roots as well as consulting bilingual or monolingual dictionaries which are part of Schmitt's taxonomy. Before presenting the summary of the taxonomies, the strategy inventory from Cook (2008) is still presented.

3.2.3 Cook's taxonomy

Cook divides vocabulary learning strategies into two main categories which are *strategies for understanding the meaning of words* and *strategies for acquiring words* (Cook 2008, 58–62).

Guess from the situation or context is the first subcategory of strategies for understanding the meaning of words. This means that context can provide useful background information. For example, in spoken or written situations some words can be foreign so the learner can use cues in the context to guess the word. *Use a dictionary* is the second subcategory. There are different types of dictionaries and the learner can choose whether he wants to use for example monolingual or translation dictionaries. If the learner wants to keep L1 and L2 as strictly separate units in mind, the learner can choose monolingual dictionary but if the learner thinks that the two language systems are kept effectively separate, he can choose the translation one (Cook 2008, 58–9). Overlapping between these three taxonomies can be once again seen here as the strategy of using a dictionary does overlap with Schmitt and Nation’s inventories. *Make deductions from the word form* means that the meaning of the target word can be deduced from its form as the word can provide cues from its structure (Cook 2008, 60). Affixes and stems can provide useful information of the word. *Link to cognates* is the last subcategory of understanding the meaning of the word and it refers to linking the word to a language that the learner already knows, for example L1 (ibid.). However, learners should be aware that words that look the same between languages may carry different meanings. This phenomenon is called *false friends* (Cook 2008, 57, 60).

The second main category, strategies for acquiring words, involves remembering the word so that it can be used in different contexts (Cook 2008, 60). *Repetition and rote learning* refers to practising the word by repeating it. Some strategies attached to this are memorizing word lists or testing the words with the help of flashcards. *Organizing words in the mind* means that vocabulary learning can become more effective if words are grouped into meaningful units (Cook 2008, 61). For example, words related to breakfast can form one meaningful unit. *Linking to existing knowledge* means that different memory systems in the learner’s mind are exploited in order to link the new information to the old one. Some famous memory methods are *loci method* in which the learner stores information in a location which is specifically visualized and another method is called *keyword method* by Atkinson (1975) (Cook 2008, 62). An English L1 keyword means that it sounds the same as the L2 word but these words are not connected in any other way (Atkinson 1975, 821). This method has two stages. In the first stage spoken L2 word is linked to the keyword as it sounds similar (also called as *acoustic link*) and in the second stage the L1 keyword is attached to the L2 word with a mental image (also called as *imagery link*). Atkinson gives an illustrative example of this. A Spanish word *poto* means duck in English (pronounced as “pot-o”) so the English word *pot* can be used as the keyword. Thus, the learner can think of a mental image of a duck

which has a pot on his head and therefore remember the Spanish equivalent *poto* for the word duck (Atkinson 1975, 821–2). Next, a summary of the discussed vocabulary learning strategy taxonomies is provided.

3.2.4 Summary of the taxonomies

The previous presentation of Schmitt (1997), Nation (2001) and Cook's (2008) vocabulary learning strategy inventories intended to provide an understanding of the field of vocabulary learning strategies. As has already been seen, the taxonomies are somewhat overlapping so certain strategies are fairly similar between these inventories. Even though these strategies provide a broad understanding of vocabulary learning strategies, it could be said that these strategies are partly outdated since they do not take into account the possibilities that today's information technology can provide for L2 learners. The national core curriculum for basic education supports the usage of information and communication technology in the learning process (Finnish National Agency for Education 2014, 284). Computer-assisted language learning with its many different applications as well as different channels of media suitable for language learning are increasing in language instruction all the time. Thus, there is a need for an updated vocabulary strategy taxonomy that takes also into account the information technology aspect. Learning new vocabulary has never been this easy as it is today since learners of L2 encounter new words in different channels of media, for example in internet, social media, computer games and television programmes.

In the light of the present study, it is important to discuss the positive and negative sides of these three vocabulary learning strategy taxonomies by Schmitt (1997), Nation (2001) and Cook (2008). This way I am able to show why Schmitt's taxonomy was chosen as the theoretical basis for the study. Schmitt's (1997) division of the strategies into *discovery strategies* and *consolidation strategies* is very straightforward and informative. Discovery strategies and consolidation strategies include other strategies which makes this classification very versatile and easy to follow as the strategies are clearly divided under each main strategy. Schmitt's taxonomy offers multiple strategies which makes it practical for the present study as many different strategy options can be offered to the participants. Moreover, Schmitt's strategies offer some freedom of action since he has included so many strategies in his compilation so I am able to use only those strategies in the study which are most relevant for students in lower secondary school and upper secondary school.

Nation (2001) divides his strategies into *planning: choosing what to focus on and when to focus on it*, *sources: finding information about words* and *processes: establishing knowledge*. This compilation does offer a clear system to follow as the main categories offer sub-categories. This compilation shows also a linear time line which would represent language learning as it starts with planning, moves on to sources and finishes with processes. However, in the light of the present study, the strategies inside these main categories seem fairly theoretical and not as practical as Schmitt's strategies. After all, the questionnaire is conducted for students in lower secondary school and upper secondary school so that it is why the strategies must be as easy to understand as possible. As for purely practical reasons, Nation's taxonomy does not offer that many strategies as Schmitt's inventory does so this would naturally affect negatively the compilation of the questionnaire and the number of statements in it.

Cook's taxonomy (2008) is divided into two main categories which are *strategies for understanding the meaning of words* and *strategies for acquiring words*. This division does actually resemble slightly Schmitt's taxonomy. The idea behind this inventory is very straightforward as first the learner must understand the meaning of the word and then he can start practising the word and strengthen the meaning of the word in memory. Therefore, Cook's inventory is very clearly constructed. However, his compilation of strategies does not offer that many strategies as Schmitt's inventory does. Thus, as with Nation's taxonomy, the problem is that the questionnaire of the present study would be affected negatively. Besides, Cook's taxonomy does not offer that much practicality when using the strategies in learning the TL as Schmitt's inventory does as Cook's strategies are somewhat more theoretical than Schmitt's strategies. This notion is based on the fact that Schmitt actually offers some grass-root level strategies such as using flash cards or taking notes in class (Schmitt 1997).

It is important to acknowledge how language learners themselves see the usefulness of using learning strategies in their own learning process. Fan (2003) investigated how learners perceive the usefulness of vocabulary learning strategies. The study was set in Hong Kong and it explored the learning of English vocabulary of Cantonese speakers. It has been studied before that the relationship between learner beliefs and the use of strategies is positive which means that the more learners consider that a specific strategy is important, the more often they use it (see Fan 1999, 2000). However, Fan (2003) shows that, quite surprisingly, there appeared to be contradictions between the frequency of the use of vocabulary strategies and their perceived usefulness in learning the L2 vocabulary (Fan 2003, 234). Learners may actually think that strategies that they often use may not be useful. For example, even though

the learners of the study told using more strategies related to guessing than other strategies, they did not consider the guessing strategies to be more useful than using dictionary in L2 vocabulary learning (Fan 2003, 234-5). This discrepancy led Fan (2003) to recommend three types of strategies concerning the learning and teaching of L2 vocabulary which are presented next.

The first strategy is to use strategies which are considered useful and also often used and especially used by the most proficient learners. A strategy that would belong here is consulting dictionary to discover the meaning of a word in context. The second recommendation is to use strategies which are seen to be useful and seldom used but still related to a great vocabulary proficiency. Strategies like these are for example management strategies. The third recommendation is to use strategies which are rarely used and also considered not so useful but used more by higher-proficiency learners than lower-proficiency learners. Metacognitive strategies, such as thinking about the progress in learning vocabulary, belongs to this third recommendation (Fan 2003, 235). Naturally, as Fan (2003, 235) also points out, teachers have a great part in vocabulary strategy use process as they have to encourage the learners to use the strategies and they would also have to discover why students use seldom certain strategies despite they see them as useful in the learning process. Thus, teachers have a great amount of responsibility in teaching the strategies as well as carrying out the strategy learning process further by gently pushing the learners to explore and use new strategies.

The individual learner in the middle of all the provided strategies should be taken into account. Zou and Zhou (2017) investigated the vocabulary learning strategies used by ethnic minority students in a Chinese university. The actual results concerning the strategies are not gone through at this point but the focus is on the individual learner. The researchers note that the fact that matters the most in the use of vocabulary learning strategies is that the learners of English as the L2 should attempt to discover the most suitable strategies for them (Zou and Zhou 2017, 471). Employing a diverse strategy system is important as some strategies are more adequate for different occasions in language learning (ibid.). EFL teachers should have a large and diverse repertoire of tasks to teach vocabulary and not support students to just memorize English words. Students should also understand that acquiring vocabulary demands great efforts and they should try to discover the suitable manners of learning (ibid.). Zou and Zhou (2017, 471) support the cooperation between the teacher and the students in order to learn English vocabulary in the most effective manner. We see that vocabulary learning

strategies are really to a great extent an individual feature in one's own learning process as some strategies are more suitable to some learners than others.

Before introducing the methodology of the present study, the actual benefits concerning vocabulary strategy instruction should be noted. Ahari et al. (2014) investigated whether teaching vocabulary learning strategies has any effect on vocabulary learning and the use of vocabulary strategies. The study was conducted to first year intermediate English learners in an Iranian university (Ahari et al. 2014, 34). The results showed that there was a significant increase in the use of vocabulary strategies and in the vocabulary proficiency level after the students were provided instruction in vocabulary strategies (Ahari et al. 2014, 44). Thus, the researchers suggest that learning strategies should be included in the process of learning English (ibid.). By taking advantage of vocabulary learning strategies, learners are more able to control their learning which could lead to increases in the levels of confidence, learning motivation and proficiency (Ahari et al. 2014, 45). The researchers are very much to the point when they emphasize the role of the teacher when employing strategies in teaching and learning. Teachers should check on a routine basis how these strategies are used in the classroom and they should know how to apply strategies to suitable tasks (ibid.). We see that vocabulary learning strategies form a diverse system which has great potential to affect learning outcomes and thus strategies should be integrated in the vocabulary learning process.

4 Methodology

This section concentrates on the methodology of the present study. In the study, I intended to discover what kind of strategies my study groups use and whether any differences appear in the use of vocabulary learning strategies between the two groups. I also aimed at discovering connections between strategy use and proficiency level in English vocabulary. First, I will present and discuss the research questions and hypotheses of the study. Then I will introduce the research methodology which is based on the quantitative research methodology and I will also show the theoretical framework on which the study is based on. After this, the subjects of the study as well as the questionnaire and the language test are presented. Finally, I will discuss the statistical methods used for conducting the study.

4.1 Research questions and hypotheses

Vocabulary learning strategies and proficiency in vocabulary skills form the core for the present study. In this study, I had two study groups. One group was from lower secondary school and the other group was from upper secondary school. Both of these schools are Finnish schools and the groups study English as the L2. The strategies discussed in this thesis refer to strategies that the students use when learning English. My aim is to answer three research questions which are presented as follows:

- 1) What kinds of vocabulary learning strategies do lower secondary school students and upper secondary school students use?
- 2) What kinds of differences are there in the use of vocabulary learning strategies between lower secondary school students and upper secondary school students?
- 3) What kind of a relationship is there between the use of vocabulary learning strategies and the proficiency level in English vocabulary?

My first research question presents for example which strategies the students use most and least. This first research question focuses mostly on the individual strategy statements. The purpose of this research question is to map the field of vocabulary learning strategies in order to gain more thorough understanding of the use of strategies among the students. This research question has thus a more experimental approach to the topic. For this first research

question, I have no specific hypothesis whereas for the open-ended questions I do have a hypothesis. In the survey that I conducted for the students, there were two open-ended questions regarding whether the students had any other strategies that they used in their language learning which were not mentioned already in the strategy statements. My hypothesis was that that the students report using fairly extensively free-time activities and digital media, such as video games and the Internet, for learning new words.

My second research question concerns the differences which the two study groups might have when using vocabulary learning strategies in their L2 English studies. With the word “differences” I mean the number of vocabulary learning strategies that the students use as well as the different kinds of learning strategies that the learners use. My hypothesis for the second research question was that upper secondary school students use more vocabulary learning strategies in their studies than lower secondary school students. This is due to the fact that upper secondary school students have had more instruction in English and thus more experience of the TL. Also, Waldvogel (2013) discovered that more proficient learners used more frequently vocabulary learning strategies than learners who had less experience of the L2 instruction. My hypothesis was that upper secondary school students use more cognitive and metacognitive strategies as their cognitive and metacognitive skills would supposedly be on a higher level. Kazemi and Kiamarsi (2017) also discovered in their study that higher-level learners used more metacognitive strategies and Green and Oxford (1995) discovered that higher-level students used more cognitive strategies. Higher-level students in Khosravi (2012) and in Çelik and Toptaş’ (2010) studies used both cognitive and metacognitive strategies more than lower proficiency level students. Due to the higher age of USSS, their abilities to consciously use different strategies would be on a higher level. For the LSSS, my hypothesis was that they use more social and memory strategies than upper secondary school students as these strategies do not require cognitive and metacognitive abilities to be on such a high level. Kazemi and Kiamarsi (2017) as well as Çelik and Toptaş (2010) showed also in their study that the lower-level learners used more social strategies than the higher-level learners.

My third research question concerns the relationship that there is between the use of vocabulary learning strategies and the level of proficiency in English vocabulary. This means that I intended to discover whether the number of learning strategies correlates with the level of proficiency. I discovered the vocabulary proficiency levels of the students by conducting a language test which included both a receptive and a productive exercise. My hypothesis for this third research question was that there is a positive correlation between the use of vocabulary learning strategies and the vocabulary proficiency level. This means that that the

more the learner uses strategies, the better scores the learner achieves from the language test and thus the better proficiency level the learner has. To be clear with the difference between the different types of correlation, negative correlation, as opposed to positive correlation, means that the more the learner uses vocabulary learning strategies, the worse proficiency level the learner has. Kazemi and Kiamarsi (2017) as well as Green and Oxford (1995) discovered that there is a relationship between the high frequency of using strategies in language learning and the high proficiency level in the TL. Khosravi (2012) also discovered that the more the learner used cognitive strategies, the better proficiency level the learner had. This clearly suggests that there is a positive relationship between the frequency of strategies, particularly cognitive strategies, and proficiency level. Gu and Johnson's study (1996) revealed that cognitive and metacognitive vocabulary learning strategies did have a positive relationship with English vocabulary proficiency. Also, Ahari et al. (2014) discovered that after students were taught on vocabulary learning strategies, their vocabulary level increased. This shows that there was a positive relationship between the learning strategies and the proficiency level.

4.2 Research methodology and theoretical framework

In the present study, I used quantitative research methodology. Some qualitative features were also included in the study as two open-ended questions are present in the survey. However, this study cannot be seen as a mixed methods study due to a fairly limited amount of qualitative material so this study is treated as a quantitative study. The reason why I chose this methodology is that it suited well to the aims of the study. The study scores from the questionnaire and the language test were attained in a numerical form, apart from the open-ended questions, so conducting a quantitative study was reasonable for this purpose. There are some positive factors supporting quantitative study and according to Dörnyei (2007, 34–5) quantitative study is regarded to be fairly accurate methodology as it uses numbers, standardized procedures and aims at objectivity and generalizability.

As already mentioned in the previous section, I used Schmitt's taxonomy (1997) as the theoretical framework for conducting the survey. His division of the strategies into *discovery strategies* and *consolidation strategies* is very clear as well as informative and his taxonomy offers a broad range of strategies. Due to the versatility of his inventory, Schmitt's taxonomy suited best for the purpose of this study.

4.3 Subjects

The subjects for the study were lower secondary school students and upper secondary school students. The LSSS were more specifically ninth grade students and USSS were first year students. The ages of the participants were not asked in the answering sheet as the actual school grades were considered more important. However, in the Finnish education system students on the ninth grade in lower secondary school are normally fourteen to fifteen years old and students on the first grade in the upper secondary school are normally fifteen to sixteen years old. Thus, the highest possible age range among all the participants was two years, varying between fourteen and sixteen. The highest possible age range inside one group was one year. As the ages were not asked, exceptions in the ages cannot be known. At the time of conducting the study, the students were at the beginning of the school year. The number of students in the lower secondary school group was in total 21. The number of female students was 11 and the number of male students was 10. The total number of upper secondary school students was 27. 16 students of this total number were female and the number of male students was 11. Thus, the total number of students altogether was 48.

The study was set in two different schools in Finland Proper. I asked the permissions for conducting the survey from both the teachers and the headmasters. I promised to the schools and the students that their identity would be protected so they all remain anonymous in this paper. The subjects were however coded so that it was possible to analyse the data. The two schools use the national core curriculum for basic education and the national core curriculum for general upper secondary schools.

When looking at the surveys, I noticed that one student in the upper secondary school study group had, apart from one strategy statement, always chosen the number 1 which equals “never” using the strategy. This female student had written in the open-ended answers that English is her second language so she does not need help to learn words and she does not practise English words. Therefore, I decided not to take into account her responses as this would affect the reliability of the results then. Thus, the total number of lower secondary school students was 26, making the total number of females 15 and males 11. The purpose of the study is after all to investigate what kinds of strategies the learners use in English that is regarded to be an FL instructed at school.

4.4 Conducting the survey

I chose to base this study on a questionnaire and a language test. Questionnaire seemed like a good option to gain results from multiple people and, according to Dörnyei and Taguchi (2010, 6) questionnaires show efficiency in researcher time, effort and financial resources. The aim of the present study was to gain information on vocabulary learning strategies so instead of for example interviewing all the 62 respondents, including the pilot study group, lower secondary school group and upper secondary school group, conducting a questionnaire seemed like a valid choice for the size of this thesis. Next, I will explain the piloting process as well as the structure and the conducting of the survey.

4.4.1 Piloting

Before conducting the final surveys for the two study groups, it was important to conduct a pilot study. According to Dörnyei and Taguchi (2010, 53), *piloting* or “field testing” is a major part of constructing a questionnaire. In the case of this study, piloting the language test was also integral. Piloting a questionnaire is conducted for a sample of respondents who represent a target sample that the questionnaire is meant for. This trial then shows how the instrument works and whether it fulfils the aim of the instrument. After gaining the results from the piloting phase, alterations can be made for the final version of the survey (Dörnyei and Taguchi 2010, 53). The piloting of the present study was conducted to a group of ninth graders in lower secondary school. This lower secondary school was also the same for the actual testing situation. It did not seem necessary to conduct a pilot study for both study grades as information from the pilot study for ninth graders fulfilled the study’s purpose. There were in total 14 respondents in the piloting study. From 14 students, 6 students were female and 8 students were male.

After the pilot study, I made a few changes for the whole survey. The original questionnaire included primarily a five-point Likert scale but it did not include any option for never using the strategy in question. This actually caused slightly confusion in the piloting situation as one student did not know how to mark one statement as this student did not use the strategy in question at all. The questionnaire was then modified to a four-point Likert scale which offered the option of not using at all the strategy in question. A four-point Likert scale was chosen as in the pilot questionnaire, the options three, four and five did not differ greatly from each other (3 = fairly often, 4 = often and 5 = very often). Thus, in the final

version the numbers were represented as follows: 1 = never, 2 = seldom, 3 = fairly often and 4 = often.

The language test exercises in the pilot study were also modified. I included two tasks taken and then modified from upper secondary school books. Both of the tasks were entirely receptive so they did not measure any productive skills. Apparently, the tasks were fairly easy as 50 % of the students, which implies 7 students in total, obtained full scores. I calculated the measures of central tendency of this study and the mean score was 18.6 points out of total 22 points. Median was 21.5 and mode was 22. After conducting the pilot study, I was able to make judgements on which level ninth graders are in their English skills on average. This helped to form the exercises for the final versions of the vocabulary tests and they were eventually different tasks compared to the original ones. However, it appeared to be fairly difficult to have the right amount of difficulty in the exercises since the danger is that the tasks are too easy or too difficult. This would then imply that a great amount of variation could not be attained in the test scores.

4.4.2 Questionnaire and language test

Before conducting the surveys, I had to take into account the research ethics, especially the permission process. As all of my respondents were minors, I had to ask permissions from their guardians. I had written a ready message concerning my study and for the piloting phase, the headmaster forwarded the message for the guardians and in the actual testing situations, the teachers sent the message for the students' guardians. All of the students in the pilot group and in the study groups were allowed to take part in this study. I was always present in the testing situations since I regarded it extremely important that I explained the purpose of answering to the questionnaire and the test as well as described the structure of the whole survey. As an incentive, I gave the students little rewards after finishing answering to the survey. The actual time for conducting the study in the classrooms ranged between twenty to thirty minutes.

The final questionnaire was the same for both of the groups whereas the exercises in the language test differed. Both of the questionnaires are presented in Appendices 1 and 2. The questionnaire was in Finnish for the two groups whereas the instructions for the language test were in Finnish for lower secondary school students and in English for upper secondary school students. In the questionnaire, there were first brief instructions on what this survey concerns and how the students are supposed to answer to the questions. The anonymity of

responding and the confidentiality of treating the answers were also mentioned. Naturally, I also told about these issues to the students out loud. After the instructions, there were two simple tasks which required the students to mark whether they were male or female and whether they were in lower secondary school or in upper secondary school. These questions were naturally to be informative for me but these tasks also had a psychological purpose as being very simple tasks, they hopefully helped the responding student to relax.

The survey itself consisted of part A and part B. Part A consisted of the questionnaire regarding the strategy statements and part B consisted of the vocabulary test. Part A included in total 32 questions from which two were open-ended questions. All these statements were divided into two larger groups, discovery and consolidation strategies, according to Schmitt (1997). The main groups included the sub-groups with their different strategies. The sub-groups were in order in the questionnaire which made the process of typing in the data fairly simple. Naturally, I did not reveal in the questionnaire which strategies belong to which groups as this could have just confused the students and I did not regard it as relevant. After each statement, the students marked from one to four according to how much they used a specific strategy. One represented “never” and four meant “often”. I made the wording of the strategy statements more approachable when taking into account the students’ age. This was because it was crucial that all the respondents understood all the statements with ease and so that their concentration was not too focused on understanding what the statements really meant. Thus, they were only able to concentrate on the reflection process regarding their own strategy use. The two open-ended questions concerned whether the students had any other strategies, techniques or ways when they wanted to know what a new word means or when they wanted to remember also later what the new word means. Thus, the students were able to add their own strategies which were not mentioned previously in the strategy statements. The maximum value from the strategy questionnaire was 120 points if a student answered the option four in each statement ($30 \times 4 = 120$).

Part B consisted of the exercises which imply the level of vocabulary knowledge. There was one receptive task and one productive task for both of the groups. The receptive task was a multiple-choice exercise and the productive task was a gap-filling exercise. As mentioned, the tasks were different due to the fact that upper secondary school students have studied English as an L2 for a longer time and so their proficiency level would presumably be on a higher level. However, it seemed important that the structure of the tasks was similar for both of the groups. The receptive task tells about the student’s receptive skills of how the learner recognizes the right word. The productive task tells more about whether the student can

actually use the word in question and write it. The exercises were taken from USS course books. The book used for the USS vocabulary test was *In Touch: Earth Beat Course 8* (Davies et al. 2010). The books used for the LSS test were *Open Road 1* (McWhirr et al. 2008), *Open Road 2* (Karapalo et al. 2008) and *Open Road 3* (Karapalo et al. 2008). The reason for choosing these particular books was that they offered adequate tasks for the study purposes. I modified some of the exercises to make them slightly easier, especially for the LSSS, and I also modified the structure of some of the tasks so that they would be more suitable for my study purpose. The tasks had to be difficult enough so that the scores would show a good amount of variation. The intention was that the students who have very high-level skills in English would be distinguished from the students who have weaker skills in English. By having fairly difficult exercises, the variation can be observed. The maximum score from the vocabulary test was 34 as the first exercise was worth 14 points and the second exercise was worth 20 points. I scored the exercises with a coherent scoring system. In the multiple-choice exercise, one point was given if the student had chosen the right answer. In the second exercise, the gap-filling task, there were in total ten empty slots so ten different words were asked to be written correctly. Each of the words was worth two points. One point was given if the word was the correct word or a close synonym and another point was given if the word was written in a correct form. I also gave points ranging from zero to two so points .25, .5, .75, 1.25, 1.5 and 1.75 were also given. The points ranging from .25 to 1.75 varied in terms of how correctly the word was written. If there was only a minor error, the score 1.75 was given. If there were multiple errors in the word, .25 was given. Thus, depending on the number of errors, the scores were given following this logic. To be as objective as possible when scoring the words, I aimed at discovering similarities between words from different students. It often happened that students had written the same word in a same incorrect form, so this enabled to be give the same scores for the students. By using these quarter and half points, the scores and thus the results could demonstrate more variability.

4.5 Statistical methods

According to Dörnyei (2007, 223) the two main purposes in statistical research are to investigate the *difference* between variables and to look at the *relationship* between variables. The variables in the present study are the values from the strategy questionnaire and the scores from the language test. The questionnaire scores represent *ordinal data* as the choices (1 = never, 2 = seldom, 3 = fairly often and 4 = often) can be placed on a frequency

continuum (Dörnyei 2007, 207). However, the numbers on the scale do not represent any even measurement or interval measurement so this data can be treated as ordinal data (Dörnyei 2007, 208). The scores from the language test demonstrate *interval data* as the values or scores are at a regular distance from each other and these values can also be placed on a continuum (ibid.). However, the strategy questionnaire values could also be interpreted as interval data. This is due to the fact that the total scores from the questionnaire were counted together and thus the points are at a regular distance from each other. In the next section, which presents the results of the study, the total scores in terms of values are at times used but the average numbers of the four-point Likert scale are also used. The average number of the scale was calculated by counting all the values from the questionnaire and dividing this total score by the number 30 which is the total number of the closed-ended statements.

I used two programmes for handling my data and analysing the results of the study. The spreadsheets which I used were Microsoft Excel 2016 and IBM SPSS Statistics 25. In order to be specific with the data, I kept separately all the six strategy groups. It is noteworthy to mention that not all the strategy groups were of equal size so this should be taken into account when analysing the results. Altogether the values of 30 strategy statements as well as the scores from the exercises in the language test from each student were typed into Excel. The strategy questionnaire also included two open-ended questions. The students had answered in Finnish to these questions as the questions themselves were also in Finnish. Thus, I translated their answers into English. The purpose of these questions was to gain knowledge on the students' subjective experiences regarding this topic.

After typing the data into Excel, I began procedures which were necessary for analysing the research questions one and two. The Excel program was used to count the measures of central tendency, mean, median and mode. This was done with all the 30 questions. I also counted the total number of strategies that each individual student reported to be using. In order to discover the descriptive statistics of the scores from the questionnaire, measures of variability were calculated by using SPSS. Inferential statistics was also used to discover the differences in the strategy use by the study groups. Inferential statistics shows whether the results could be generalized to a larger context and to do this, the results should be powerful enough (Dörnyei 2007, 209). I used the non-parametric Mann–Whitney U test and the reason for using this test instead of its parametric equivalent, t-test, was that Mann–Whitney U test does not assume the results to show normal distribution (Dörnyei 2007, 230). Thus, this test was more adequate for the present study.

As with the third research question, I used both Excel and SPSS to discover how the number of strategies and the test scores correlated. In order to analyse the results from the language test exercises, I used Excel and SPSS to calculate the measures of central tendency and measures of variability. Each exercise was analysed individually as well as the total scores. Inferential statistics was also necessary here so I used Spearman's rank order correlation. Spearman's correlation was very applicable to the purposes of this study as it is non-parametric and therefore does not assume the normal curve (Dörnyei 2007, 230). It is also suitable for ordinal and interval data which can be considered the main data types of this study. This correlation bases its function on the ranks of the data and thus puts the data into a rank order so this is not actually based on the real values of the data (ibid.). The results of the study are covered next by using the above mentioned statistical tests.

5 Results

This section presents the results of the study. The structure of this section is based on the three research questions which will be answered one by one. First, the results cover the first research question which concerns what kinds of strategies the students use. The strategies of the study groups are presented separately in order to make clear distinctions between the study groups. As mentioned in the previous section, the purpose of presenting the results of this research question is to offer a thorough understanding how these individual strategies are used. After introducing the results for the first research question, I will present the results for the second research question which treats the differences that the study groups have in their strategy use. For research questions one and two, all the six sub-categories of the main two strategy groups, discovery and consolidation strategies by Schmitt (1997), are presented separately in order to understand the strategic behaviour in more detail. The third research question considers the relationship between strategy use and language test scores. At this point, the language test is also taken into account and I will present the results of the tests as well.

5.1 Strategies used by study groups

All the six different strategy sub-groups are presented here. The first research question is shown below:

- 1) What kinds of vocabulary learning strategies do lower secondary school students and upper secondary school students use?

In order to answer to this research question, each strategy sub-group is analysed individually and the answers of the study groups are shown separately.

5.1.1 Determination strategies

Determination strategies are the first sub-group of the main group, discovery strategies. Discovery strategies, according to Schmitt (1997), are strategies which the learner uses when facing a new word and trying to understand the meaning of the word. As mentioned previously, determination strategies imply that if the learner does not know the target word,

he must use different guessing strategies to understand the meaning of the word (Schmitt 1997). Guessing from textual context and using flash cards were examples of this strategy group. The individual statements from the survey are presented below and they are translated from the original Finnish ones into English:

1. I use pictures appearing in the text when I try to understand what the new word means.
2. I use words surrounding the text which help me to understand the new word.
3. In speaking situations, I try to understand with the help of the speaker's gestures, what the new word means.
4. I use English-Finnish dictionaries to understand the new word.
5. I use English-English dictionaries to understand the new word.
6. I use word lists (e.g. word lists in the textbook chapters) when I am learning new words.

In this sub-section, I will first cover the results of determination strategies by LSSS and then the results of the same strategy group by USSS are presented. This is done in the form of presenting the measures of central tendency. Figure 1 shows the results from determination strategies of LSSS. The means of the results are more closely looked at whereas I regard that median and mode are not as relevant in this case. This procedure goes also for all the rest of the strategy sub-groups. The abbreviation "LSS" stands for lower secondary school.

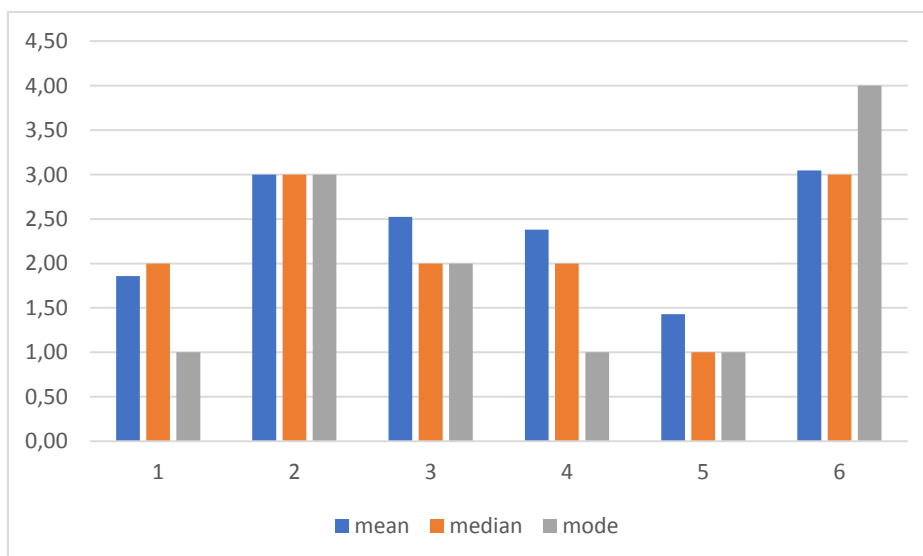


Figure 1. Determination strategies in LSS

As can be seen in Figure 1, the highest mean for using strategies is for statement 6 (mean=3.05) so the use of word lists is popular among LSSS. The lowest mean concerns statement 5 (mean=1.43). This could be compared to statement 4 which actually concerns the use of bilingual dictionaries, more precisely English-Finnish dictionaries (mean=2.38). Thus, in this sample the use of bilingual dictionaries is more common than the use of monolingual dictionaries. The highest median concerns statement 2 and also statement 6 (median=3.00) so using textual context as well as using word lists is fairly frequent in this sample. The highest mode is also for statement 6 (mode=4.00). Therefore, it can be said that the use of word lists and perhaps more precisely the textbook word lists seems to be very much present in the everyday learning of LSSS.

Figure 2 shows the measures of central tendency of how determination strategies are used in upper secondary school (USS).

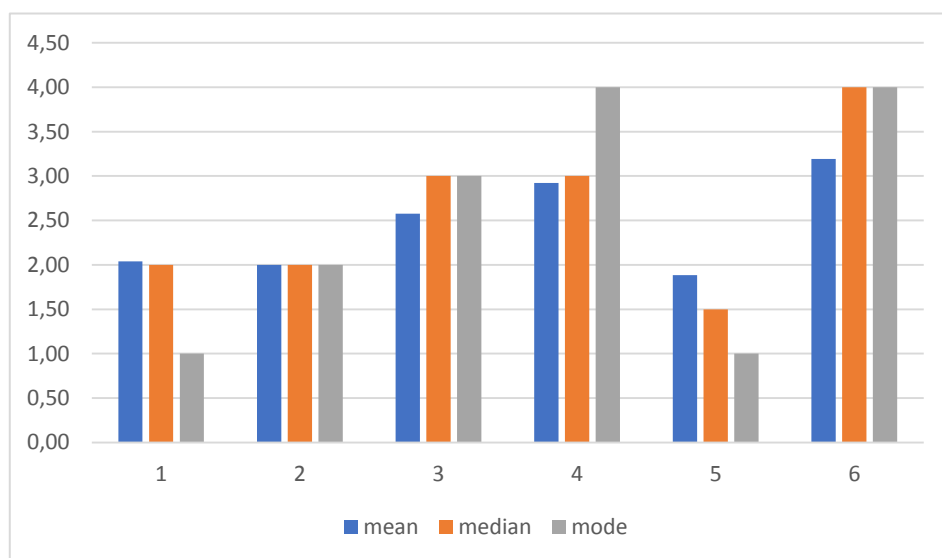


Figure 2. Determination strategies in USS

Based on Figure 2, USSS seem to use on average most the strategy of using word lists as statement 6 has the highest mean (mean=3.19). The lowest mean appears to concern statement 5 so using monolingual dictionaries is not very popular among this sample (mean=1.88). The highest median concerns statement 6 (median=4.00). The highest mode considers statements 4 and 6 (mode=4.0) so using bilingual dictionaries is also fairly much present in this sample. Thus, it can be concluded that USSS use quite extensively word lists in their learning and besides word lists, a great deal of help comes from bilingual dictionaries. However, the use of monolingual dictionaries is not that common in learning for USSS.

Based on this sample, it can be concluded that from determination strategies, both LSSS and USSS use mostly the strategy of using words lists in their learning of English. The least used strategy appears to be for both groups the strategy of utilizing monolingual dictionaries. Next, the results regarding social strategies of discovery strategies are looked at.

5.1.2 Social strategies (discovery strategies)

Social strategies are divided into discovery strategies and consolidation strategies (Schmitt 1997). First, the results concerning social strategies from discovery strategies are presented. The statements are shown below:

7. I ask help from the teacher if I don't know what the new word means.
8. I ask help from my classmates if I don't know what the new word means.

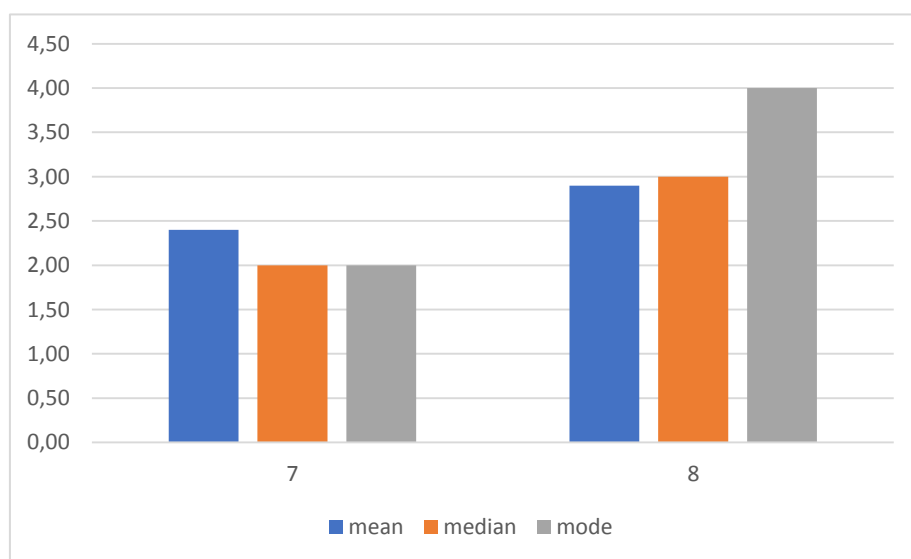


Figure 3. Social strategies (discovery strategies) in LSS

Figure 3 shows the measures of central tendency of social strategies in LSS. Based on this sample, LSSS use most the strategy of asking help from other classmates which statement 8 shows (mean=2.90). Statement 7 shows that these students use less the strategy of asking help from the teacher (mean=2.40). Statement 8 has a higher median (median=3.00) and the mode is also higher in statement 8 (mode=4.00).

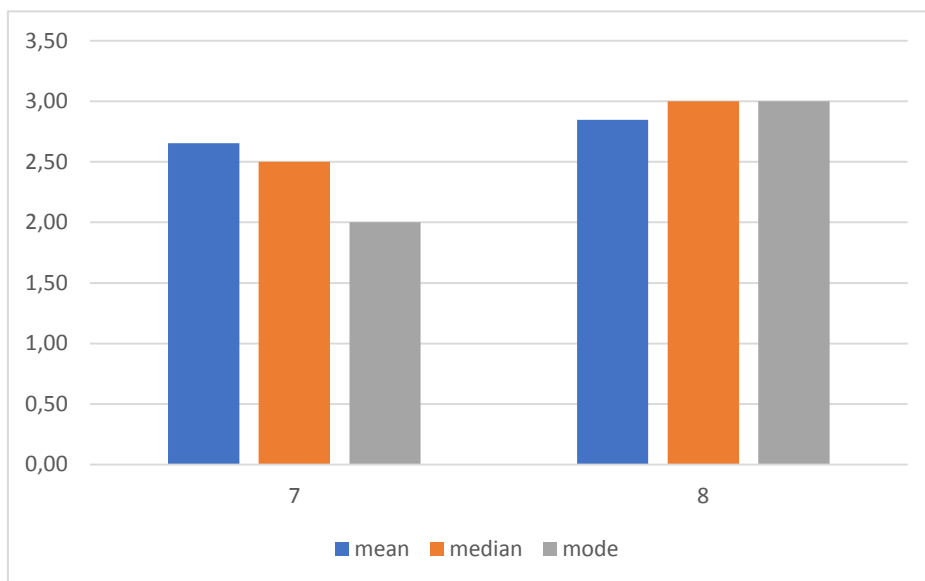


Figure 4. Social strategies (discovery strategies) in USS

Figure 4 shows that USSS use more the strategy in statement 8 (mean=2.85). Statement 7 has a lower mean (mean=2.65) so based on this sample, the students use more the strategy of asking help from peers. The highest median is for statement 8 (median=3.00) and statement 8 has also the highest mode (mode=3.00). To conclude, asking help from other peers in the class seems to be more frequent in this sample than asking help from the teacher.

5.1.3 Social strategies (consolidation strategies)

The discussion of results turns to consolidation strategies. Consolidation strategies according to Schmitt (1997) are strategies which the learner uses to strengthen the meaning of the word in his memory. Social strategies belonging to this strategy group consider discussing with native speakers and practising words with other people. The statements are shown below:

10. I discuss with people whose mother tongue is English.
11. I practise words with my friends.

Figure 5 shows the dispersion of answers to these two statements by LSSS. Statement 10 has a higher mean (mean=2.14) whereas statement 11 has a lower mean (mean=1.95). Median is the same for both statements (median=2.00) and statement 11 has a higher mode (mode=2.00). Quite interestingly, LSSS communicate more with native speakers than practise English words with other peers.

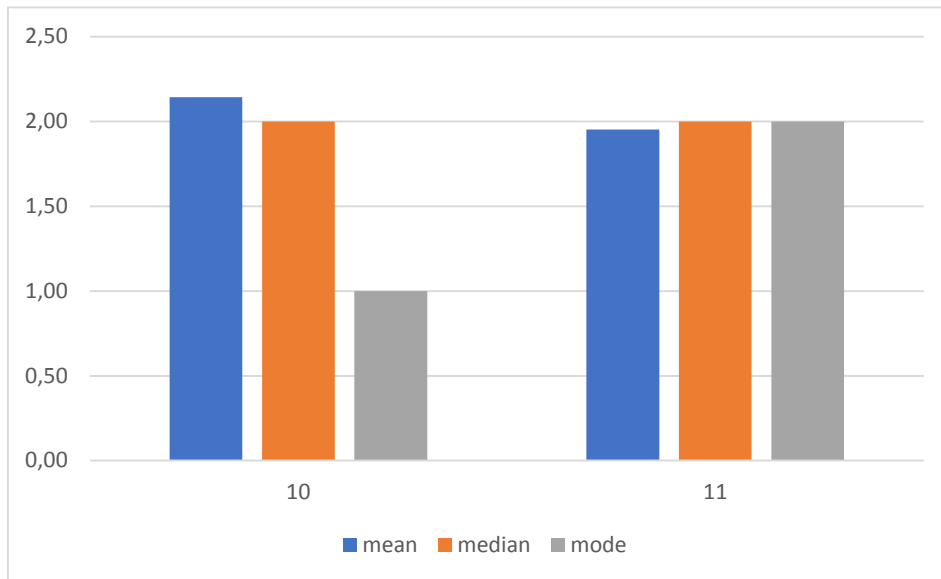


Figure 5. Social strategies (consolidation strategies) in LSS

Figure 6 shows how USSS answered to these social strategy statements. Statement 10 has a higher mean (mean=2.19) and statement 11 has a lower mean (mean=1.88). Median is the same for both statements (median=2.00) and the mode is also the same for both of the statements (mode=1.00). As with LSSS, also USSS seem to be more in contact with speakers whose L1 is English. However, as the mode is only 1.00 for both of the statements, it could be said that USSS do not use very extensively these social strategies. This mode could be compared to the mode of social strategies belonging to the discovery strategies. Those strategies have a higher mode equalling 3.00. Thus, social strategies from discovery strategies seem to be more present in the students' learning.

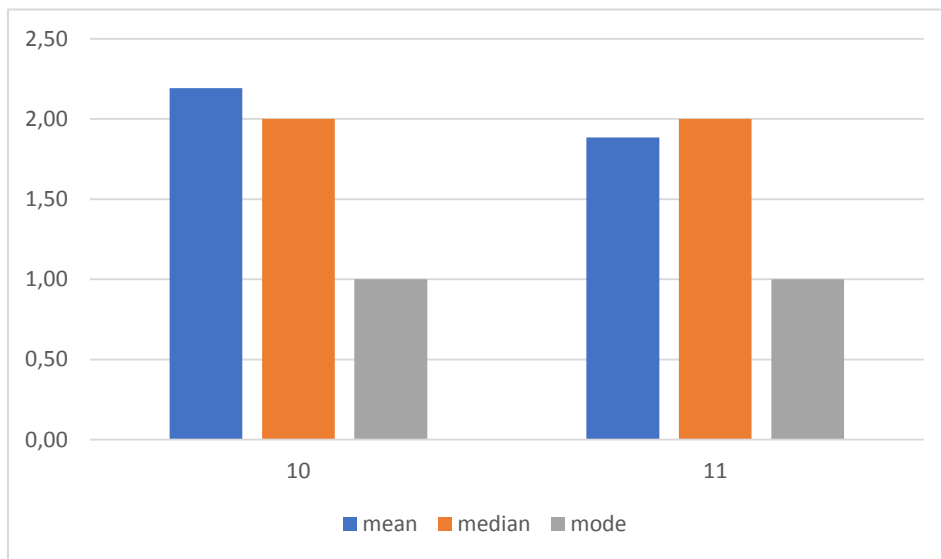


Figure 6. Social strategies (consolidation strategies) in USS

5.1.4 Memory strategies

Memory strategies belong also to consolidation strategies. The strategies are listed below.

12. I learn a new word when I connect the word to a picture representing it.
13. I connect the word to my own personal experience.
14. I connect the word to words which mean the same or to its antonym.
15. I group words in my own way e.g. to my book/notebook/tablet/computer so that I would remember them better.
16. I make up stories of words so that I would remember them better.
17. I say the word out loud when I am studying the word.
18. I think about what the word looks like i.e. how it is spelled.
19. I underline the first letter of the word.
20. I think in my own words what the word means.
21. I do some physical movement when I am studying the word (e.g. acting).

Figure 7 shows how LSSS use these memory strategies. Statement 18 has the highest mean (mean=3.00) whereas the lowest mean considers statement 19 (mean=1.00). The highest median concerns statements 17 and 18 (median=3.00). The highest mode considers statements 14, 17 and 18 (mode=3.00). To conclude, LSSS seem to use the strategy of thinking how a

word is spelled whereas based on this sample, they do not take advantage of the strategy of underlining the first letter of the word that much.

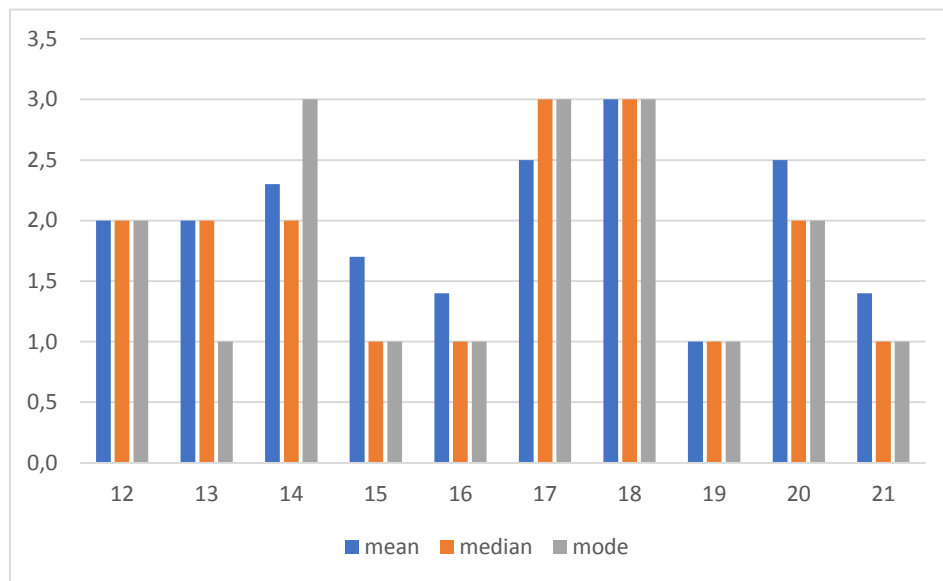


Figure 7. Memory strategies in LSS

Figure 8 shows the measures of central tendency regarding memory strategies used in USS. As with LSS, USS seem to also use the strategy of processing the spelling of the word as statement 18 has the highest mean (mean=2.60). Based on this sample, USS use least the strategy stated in statement 19 (mean=1.30) so underlining the first letter is not used much among these students. The highest median regards statement 17 (median=3.00) and the highest mode considers statements 17 and 20 (mode=3.00). The similarities between these two study groups are notable as the highest and lowest mean regard the same statements, 18 and 19 accordingly.

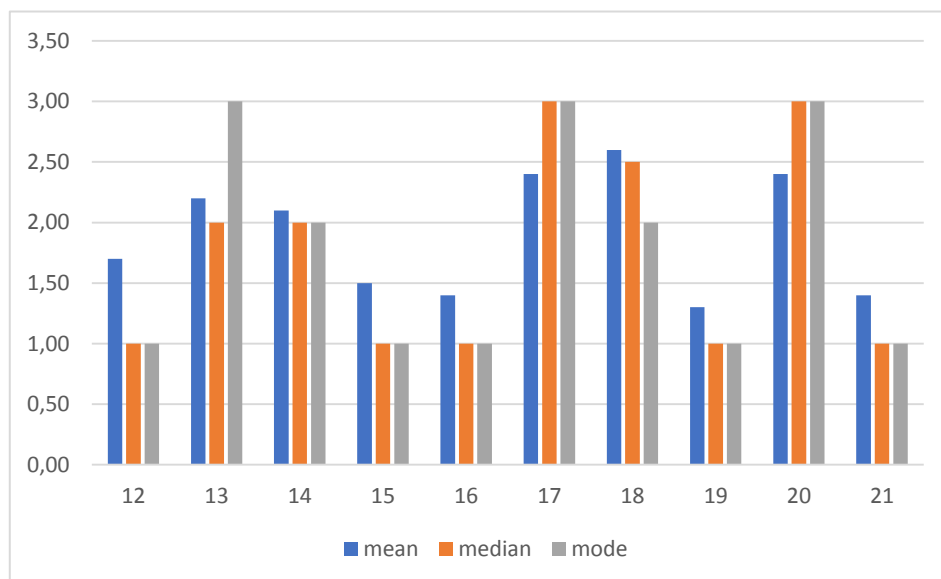


Figure 8. Memory strategies in USS

5.1.5 Cognitive strategies

Cognitive strategies concern the actual, physical ways of strengthening the meaning of the word in the learner's mind which can be seen in Schmitt's listing of the strategies (1997). The statements appearing in the survey are presented below:

22. I repeat the word out loud many times.
23. I write the word many times one after another e.g. to my book/notebook/tablet/computer.
24. I make word lists when I am learning new words e.g. to my book/notebook/tablet/computer.
25. I use flash cards when I am learning new words (on one side Finnish word and/or picture and on the other side English word and/or picture).
26. I make notes of words on the lesson e.g. to my book/notebook/tablet/computer.
27. I use the vocabulary sections in my textbook when I am learning new words.
28. I listen to words from a tape so that I would remember them better.

Figure 9 regarding LSSS shows that statement 27 has the highest mean of the statements (mean=2.81). Statement 28 has the lowest mean (mean=1.38). Thus, the textbooks seem to be very much present in the students' vocabulary learning. After all, it is the main learning

device for the students as a great amount of time is usually spent with the textbooks. Listening to words from a tape does not, at least according to this sample, have a great part in the students' vocabulary learning. The highest median concerns statement 27 (median=3.00) and the highest mode is also for statement 27 (mode=3.00). The measures of central tendency are next looked at from the perspective of USSS.

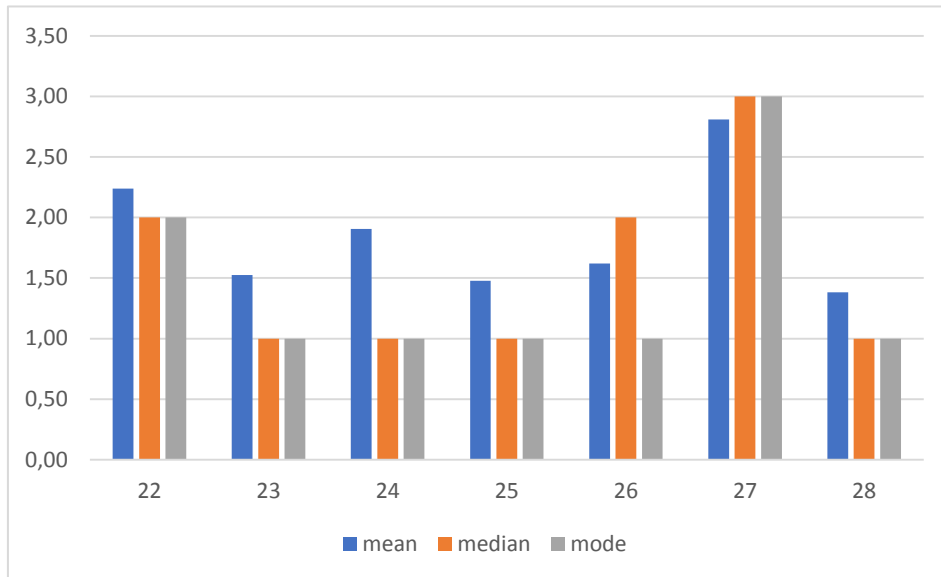


Figure 9. Cognitive strategies in LSS

Figure 10 shows that USSS use on average mostly the strategy of using the vocabulary in their textbooks when they learn new words. This is stated in statement 27 (mean=2.88). The least used strategy among this group considers statement 28 (mean=1.35) so as was with LSSS, the group of USSS does not really use the strategy of listening to words from a tape. The highest median regards statement 27 (median=3.00) and the highest mode concerns statements 22 and 27 (mode=3.00).

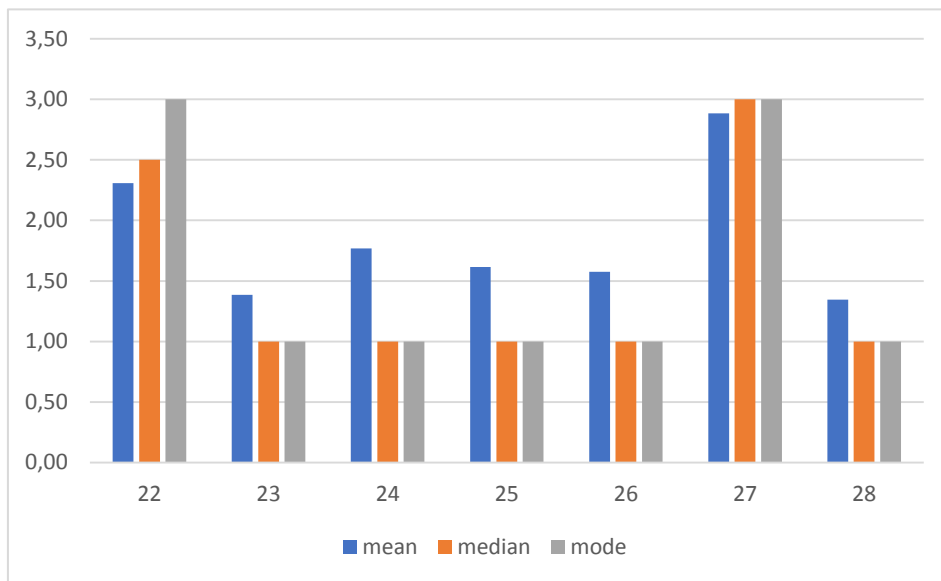


Figure 10. Cognitive strategies in USS

Next, the results of the last sub-group of consolidation strategies, metacognitive strategies, are presented.

5.1.6 Metacognitive strategies

Metacognitive strategies regard for example controlling and evaluating the learning process (Schmitt 1997). Below are the three statements concerning metacognitive strategies appearing in the survey:

- 29. I use English media when I am learning words (e.g. songs, movies, news, social media).
- 30. I skip a word if I feel that I don't learn it easily.
- 31. I test myself how I have learnt new words (e.g. by doing own word tests).

Figure 11 shows the dispersion of answers regarding metacognitive strategies in LSS. This sample of students seems to use most on average the strategy of taking advantage of the English media in statement 29 (mean=3.38) whereas they use least the strategy of skipping a word if it is considered as too difficult. This is presented in statement 30 (mean=1.81). The highest median considers statement 29 (median=4.00) and the highest mode concerns the

same statement (mode=4.00). Quite expectedly, the strategy of using media is very much used by this sample.

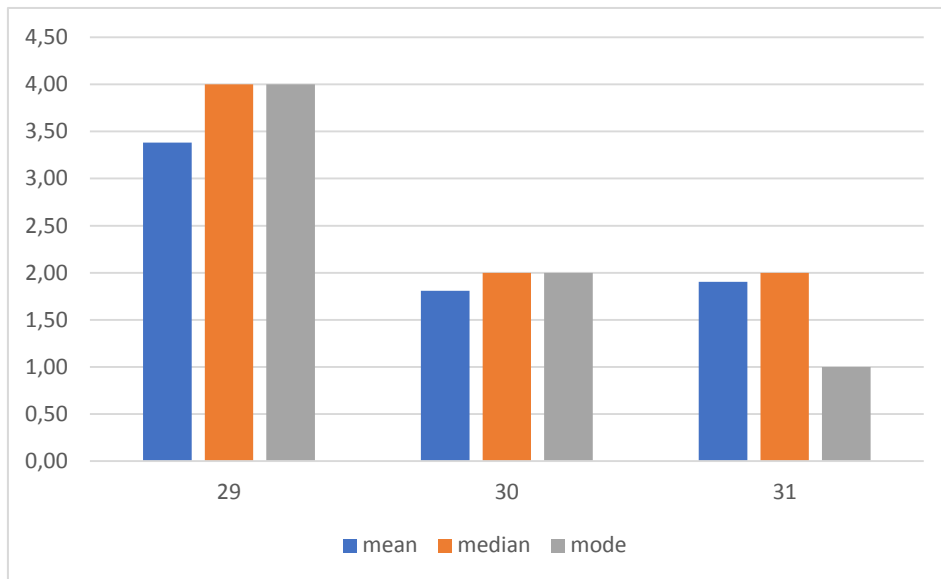


Figure 11. Metacognitive strategies in LSS

Figure 12 shows the measures of central tendency of metacognitive strategies in USS. This group uses mostly the strategy stated in statement 29 (mean=3.23) whereas the least used strategy concerns statement 31 (mean=1.81). Again, there is a similarity between the study groups when looking at the highest means but USSS seem to use least the strategy of doing word tests which differs from the strategic behaviour of LSSS. The highest median among USSS concerns statement 29 (median=3.50) and the highest mode is shown in statement 29 (mode=4.00), again showing the frequent use of English media.

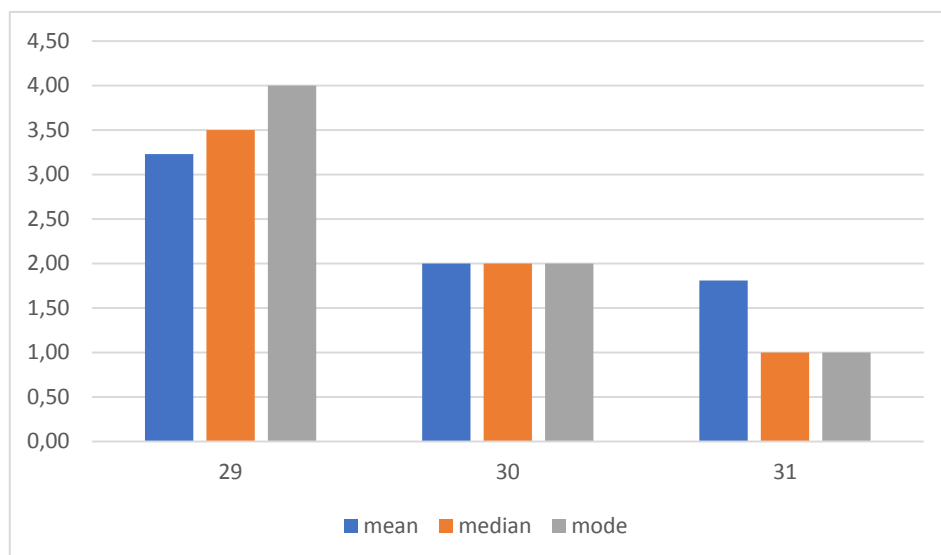


Figure 12. Metacognitive strategies in USS

The results of the individual strategy statements have been presented so next the results concerning the more general differences in strategy use between the study groups are presented.

5.2 Differences in strategy use between study groups

The second research question treats the differences in vocabulary strategy use between these two study groups. This research question is presented below:

- 2) What kinds of differences are there in the use of vocabulary learning strategies between lower secondary school students and upper secondary school students?

The way to analyse the results regarding this research question is to look at the differences in the measures of central tendency and measures of variability between the groups. The focus concerning the measures of central tendency is on the means as the mean is considered to be the most important factor when looking at the differences that the groups might have in strategy use. Also, the results gained from the U test are also presented. The process of analysing these strategy sub-groups is to look at the sub-groups individually. Unlike in research question one, individual statements are not looked at anymore at this point. First, the results concerning determination strategies are looked at.

5.2.1 Determination strategies

Figure 13 shows the measures of central tendency of LSSS and USSS. The means do differ between the groups. USSS have a higher average concerning the use of determination strategies (mean=2.80) whereas LSSS have a lower average (mean=2.50). It seems that based on this sample, USSS use more determination strategies in their learning of English. However, the median for both groups is the same (median=3.00) as well as the mode (mode=4.00). Thus, the difference can only be found in the values of the means.

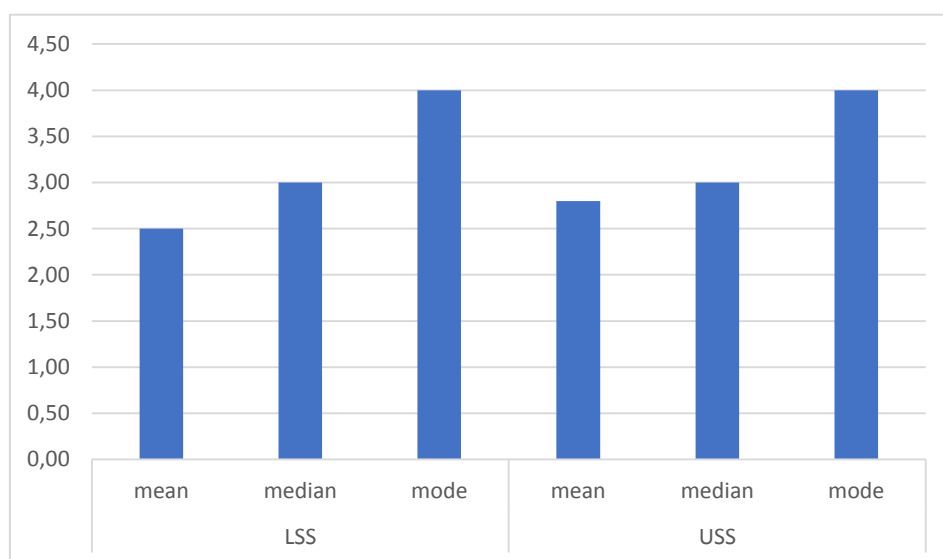


Figure 13. Determination strategies in LSS and USS

Table 2. Descriptive statistics of determination strategies in LSS and USS

	N	Minimum	Maximum	Mean	Std. Deviation
LSSS	21	10	17	14.24	2.364
USSS	26	8	24	15.15	3.823

Table 2 shows the differences in range, mean and standard deviation concerning the determination strategies of these two study groups. The standard deviation was calculated by counting every individual student's answers to determination strategies together. These values were then used to discover the standard deviation as well as the range and the mean of the answers. This same pattern was applied for other instances of standard deviation, range and mean in this paper. The maximum value of determination strategies was 24 which was

calculated by multiplying the number of questions (7) by the maximum value (4) concerning the choice “often”. Thus, the minimum value was 7 as 1 equals in the questionnaire “never”. This similar formula was used for other instances when counting the minimum and maximum values in this paper. Therefore, as Table 2 shows, USSS have the highest maximum (max=24) but quite interestingly, they also have the lowest minimum (min=8). The mean was also higher for USSS (mean=15.15) when comparing that to the mean value of LSSS (mean=14.24). As the maximum and minimum values suggest, the standard deviation is also higher for LSSS (SD=3.823) whereas the standard deviation was lower for LSSS (SD=2.364). Thus, there is more dispersion in the answers of USSS. Next, the similar graphic representation of the results is shown concerning social strategies.

5.2.2 Social strategies (discovery strategies)

Figure 14 shows the dispersion of answers in LSS and USS. It can be observed that USS have a higher mean here as well (mean=3.13) whereas the mean of LSS was lower (mean=2.60). It can be thus said that USSS use more social strategies from discovery strategies than LSSS. There are no major differences in the median and mode as both groups had the same median (median=3.00) but USSS had a slightly higher mode (mode=4.00) than LSSS (mode=3.00).

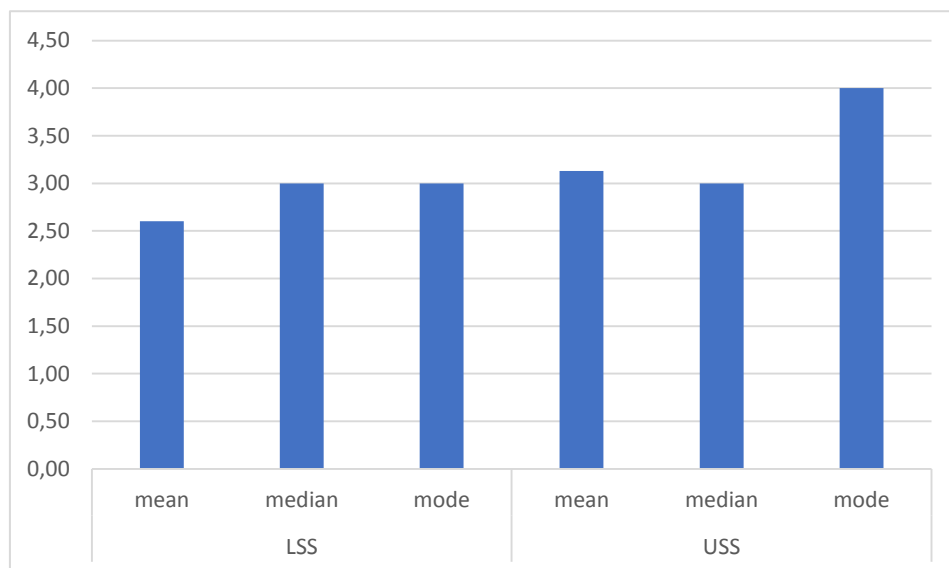


Figure 14. Social strategies (discovery strategies) in LSS and USS

Table 3. Descriptive statistics of social strategies (discovery strategies) in LSS and USS

	N	Minimum	Maximum	Mean	Std. Deviation
LSSS	21	2	8	5.29	1.821
USSS	26	2	8	5.50	1.860

Table 3 shows that the minimum and maximum values are the same for both groups (min=2), (max=8). The possible maximum value for this strategy sub-group was 8 and the possible minimum value was 2. However, the differences can be observed in the means and standard deviations. USSS have a slightly higher mean (mean=5.50) than LSSS (mean=5.29) and the dispersion of answers is also more varied when looking at the standard deviation of USSS (SD=1.860) and when comparing it to the standard deviation of LSSS (SD=1.821). It can be concluded that USSS use more vocabulary learning strategies here as well but the difference in their use is not, however, very notable.

5.2.3 Social strategies (consolidation strategies)

The dispersion of answers concerning social strategies from consolidation strategies can be observed in Figure 15. There it can be seen that no differences whatsoever can be observed as both groups have the same average (mean=2.00). The median stays also the same (median=2.00) but, for the first time, LSSS have higher mode (mode=2.00) as USSS have a lower mode (mode=1.00).

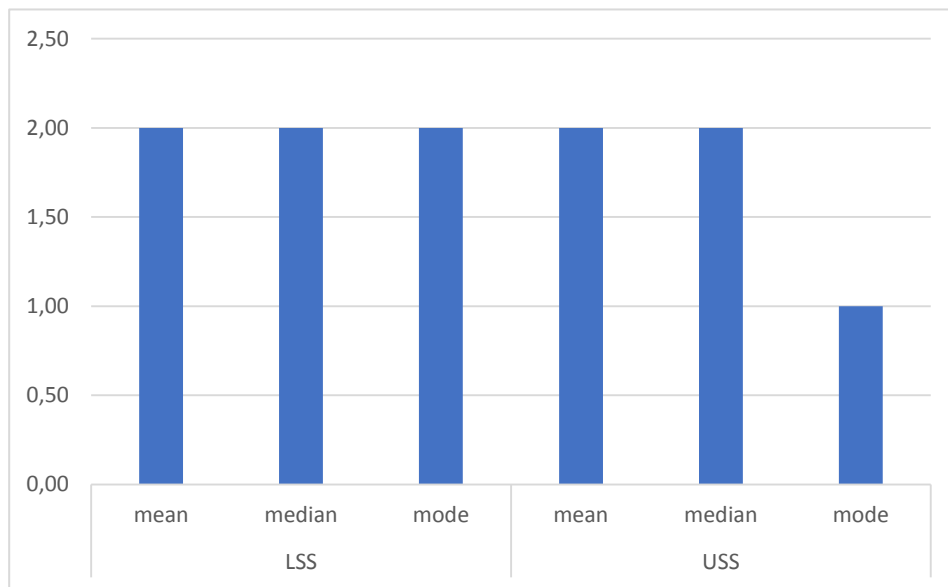


Figure 15. Social strategies (consolidation strategies) in LSS and USS

Table 4. Descriptive statistics of social strategies (consolidation strategies) in LSS and USS

	N	Minimum	Maximum	Mean	Std. Deviation
LSSS	21	2	7	4.10	1.300
USSS	26	2	8	4.08	1.831

When looking at more closely the dispersion of answers of these study groups in Table 4 we see that LSSS have actually a slightly higher mean (mean=4.10) as USSS have a lower mean (mean=4.08). The maximum value that was possible to gain from this strategy sub-group was 8 (max=8) and the minimum value was 2 (min=2). The minimum values are the same for both groups (min=2) whereas USSS have a higher maximum value (max=8) and LSSS have slightly lower maximum value (max=7). USSS have still a higher standard deviation (SD=1.831) as the same value for LSSS is lower (SD=1.300). To conclude, LSSS use this strategy group in their English learning more than USSS but, once again, there is more variation in the answers of USSS.

5.2.4 Memory strategies

Figure 16 shows the measures of central tendency concerning the results of memory strategies. As we see, LSSS have a slightly higher average (mean=1.98) than USSS (mean=1.91) which would imply that LSSS use more memory strategies. However, the medians are the same for both groups (median=2.00) as well as the modes (mode=1.00). The descriptive statistics of these groups are looked at next.

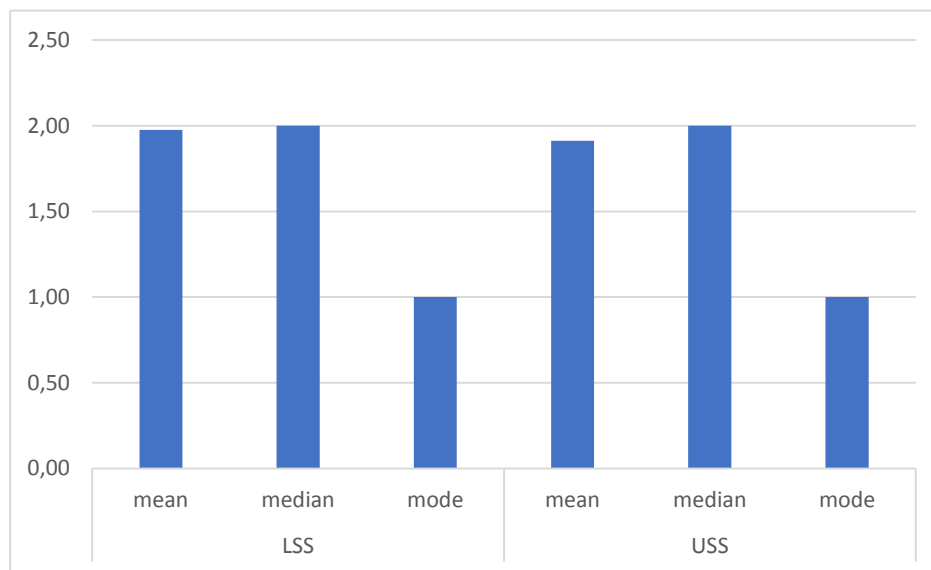


Figure 16. Memory strategies in LSS and USS

Table 5. Descriptive statistics of memory strategies in LSS and USS

	N	Minimum	Maximum	Mean	Std. Deviation
LSSS	21	12	29	19.76	4.110
USSS	26	11	35	19.04	6.527

Table 5 shows the descriptive statistics these study groups. The lowest possible minimum value gained from memory strategies is 10 and the highest possible maximum value is 40. USSS have again a higher maximum value (max=35) but also a lower minimum value (min=11). When looking at the means, we see that LSSS use a slightly greater amount of memory strategies as on the total value level, they have a higher mean (mean=19,76) when comparing that to the mean of USSS (mean=19.04). However, it cannot be said that this difference would show any striking difference. Once again, USSS have had more variation in

their answers when looking at their standard deviation (SD=6.527) and when comparing that value to that of the LSSS (4.110). It can be concluded that LSSS use slightly more memory strategies than USSS but there is more variation inside the group of USSS.

5.2.5 Cognitive strategies

The next results concern cognitive strategies. As can be observed from Figure 17, LSSS use slightly more cognitive strategies (mean=1.85) than USSS (mean=1.84). LSSS have also a higher median (median=2.00) than USSS (median=1.00). The modes are however the same for both groups (mode=1.00). The range, mean and standard deviation are looked at next on the total strategy value level.

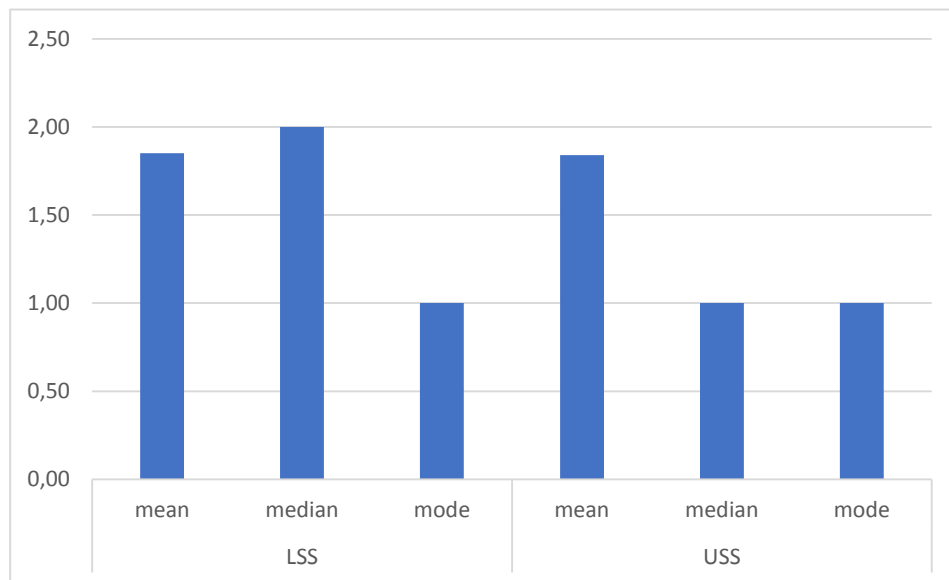


Figure 17. Cognitive strategies in LSS and USS

Table 6. Descriptive statistics of cognitive strategies in LSS and USS

	N	Minimum	Maximum	Mean	Std. Deviation
LSSS	21	7	21	12.95	4.141
USSS	26	7	21	12.88	4.102

The lowest possible minimum value concerning cognitive strategies was 7 and the highest possible maximum value was 28. Table 6 shows that the range values are the same for both groups (min=7, max=21). However, there is a slight difference in the mean, as was noted

earlier, since LSSS have a higher mean (mean=12.95) and USSS have a lower mean (mean=12.88). For the first time, LSSS have more dispersion in the answers as their standard deviation is higher (SD=4.141) and the same value is lower among USSS (SD=4.102). To conclude the results of cognitive strategies, it can be stated that based on this sample, LSSS use more cognitive strategies but the difference is very minor. Next, the results of the last strategy sub-group are presented.

5.2.6 Metacognitive strategies

Metacognitive strategies form the final strategy sub-group of Schmitt's (1997) strategy inventory. As Figure 18 suggests, LSSS use more metacognitive strategies (mean=2.37) than USSS (mean=2.32). However, the difference is not major. The medians are the same for both groups (median=2.00) as well as the modes (mode=1.00). The descriptive statistics are looked at more next.

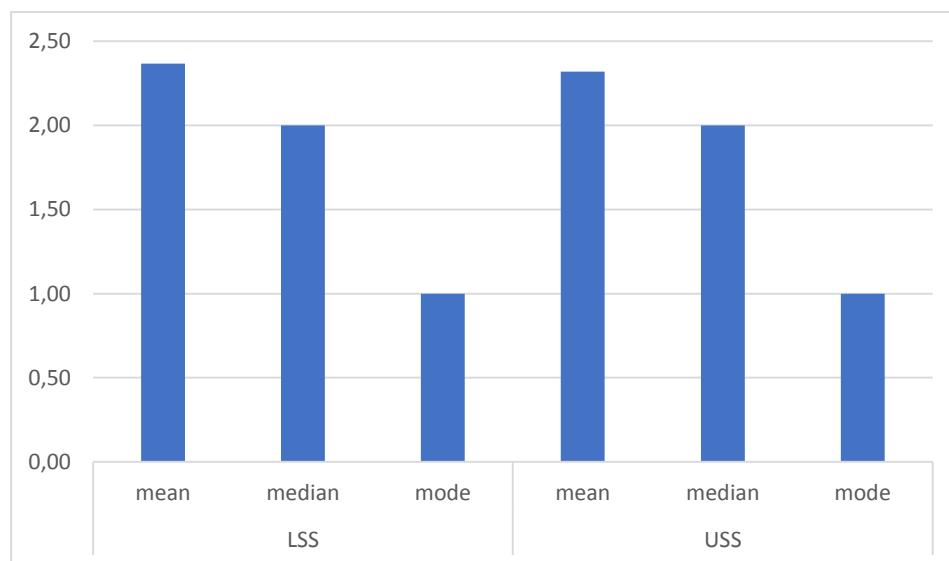


Figure 18. Metacognitive strategies in LSS and USS

Table 7. Descriptive statistics of metacognitive strategies in LSS and USS

	N	Minimum	Maximum	Mean	Std. Deviation
LSSS	21	4	9	7.10	1.513
USSS	26	4	10	7.04	1.509

The highest and lowest possible range values for this last strategy sub-group are the following: min=3, max=12. Based on Table 7, we can observe that the range is greater among USSS as they have a higher maximum value (max=10) and the similar value for the LSSS was lower (max=9). The minimum values were the same for both groups (min=4). As noted previously, the mean is higher among LSSS (mean=7.10) and lower for USSS (mean=7.04). For a second time, the standard deviation is higher among LSSS (SD=1.513) when comparing this value to the standard deviation of USS (SD=1.509) and thus LSSS have more dispersion in their answers. To conclude, the use of metacognitive strategies seems to be higher among LSSS.

5.2.7 Statistical tests on the differences between study groups

As mentioned previously in section 4, I used Mann–Whitney U test to investigate whether any significant differences appear in the overall strategy use between the study groups. The focus here is on the students’ total strategy use based on the whole strategy questionnaire. As mentioned, the U test was seen as appropriate for the purpose of this study as it does not assume the normal curve. There was not a significant difference between the use of strategies between the study groups so no major differences regarding the mean ranks were discovered by using the Mann–Whitney U test. The results of this test were not significant enough to reach the significance level ($p=.864$). The U-value was 265 and the Z-value was $-.171$.

Table 8 shows the groups’ overall strategic behaviour based on the strategy questionnaire. We see that no major differences can be observed as the mean in LSS was 63.43 and in USS the mean was 63.69. The difference in range values is fairly interesting as USSS have a greater range as their minimum and maximum values are the lowest and highest (min=38, max=101). The range values of LSSS are placed between the range values of USSS (min=43, max=85). There was quite a great deal of dispersion in the use of strategies between these two groups. In LSS, the standard deviation was lower (SD=11.052) than in USS (SD=16.250).

Table 8. Descriptive statistics of the total strategy use in LSS and USS

	N	Minimum	Maximum	Mean	Std. Deviation
LSS	21	43	85	63.43	11,0525
USS	26	38	101	63.69	16,250

Next, the results for the final research question are presented.

5.3 Relationship between strategies and language test scores

The third and final research question to be analysed concerns the relationship between vocabulary strategy use and vocabulary proficiency level. This research question is presented below:

- 3) What kind of a relationship is there between the use of vocabulary learning strategies and the proficiency level in English vocabulary?

In order to analyse the results of this research question, it is necessary to look at the results of the language tests. As mentioned in section 4, there were two different tests so that both study groups had their own tests. This was seen to reflect better their level of proficiency. The way to discover the relationship between the variables was to use Spearman's rank order correlation coefficient. As mentioned previously, Spearman's correlation was seen as applicable for the purposes of this study as it does not assume the normal curve. First, the results of the language test in LSS and USS are shown and then the results concerning the correlation tests are looked at.

The highest possible maximum score from the language test in LSS and USS was 34 points and the lowest possible minimum score was 0 points. Table 9 shows the range, mean and standard deviation of the tests. In LSS, the minimum score was 10 points (min=10) and the maximum score was 33.75 points (max=33.75) which implies that the range was fairly notable as one student almost reached full scores. The average score was 22.40 (mean=22.40) and the standard deviation was 7.81 (SD=7.81). In USS, the minimum score was 1 point (min=1) and the maximum score was 24 points (max=24). Thus, no student reached close to the maximum scores. The average score was also fairly low for this study group (mean=12.59). The standard deviation in USS was 5.91 (SD=5.91). The test results are by no means comparable between the study groups as the tests were different. However, the purpose of reporting these results was to show the vocabulary skill level of the students. As the results of the tests were briefly introduced, the results of the correlation tests are to be analysed next.

Table 9. Vocabulary test scores in LSS and USS

	N	Minimum	Maximum	Mean	Std. Deviation
LSSS	21	10.00	33.75	22.40	7.81084
USSS	26	1.00	24.00	12.59	5.90717

The two variables included in the correlation tests were the total values from the strategy questionnaire and the scores from the vocabulary test from each student. Tables 10 and 11 show the results of the correlation tests from both groups. Table 10 concerns the results of the correlation test of LSSS. It can be observed that the correlation coefficient is negative ($r_s = -.291$). The results are not significant enough ($p = .200$) in terms of the accepted significance level ($p < .05$). However, we can say that there was a negative correlation between the two variables. This would imply that the more one uses vocabulary learning strategies, the worse results he will obtain from the language test and thus the worse proficiency level in English vocabulary he has. Positive correlation would have suggested that the more one uses these vocabulary learning strategies, the better proficiency level in English vocabulary he has.

Table 10. Spearman’s correlation in LSS

			Strategy use	Test scores
Spearman's rho	Strategy use	Correlation Coefficient	1.000	-.291
		Sig. (2-tailed)	.	.200
		N	21	21
	Test scores	Correlation Coefficient	-.291	1.000
		Sig. (2-tailed)	.200	.
		N	21	21

Table 11 presents the results of the correlation test of USSS. Also here, we see that the correlation coefficient is negative ($r_s = -.505$). The results from this correlation are significant ($p = .009$). This said, there was a statistically significant negative correlation between the studied variables. The results suggest that the more one uses vocabulary learning strategies, the worse proficiency level in English vocabulary he has. There is very much similarity between the correlation results of LSSS and USSS, the only majorly different factor being that the results from the correlation test of USSS are significant.

Table 11. Spearman's correlation in USS

		Strategy use	Test scores
Spearman's rho	Strategy use	Correlation Coefficient	1.000
		Sig. (2-tailed)	.
		N	26
	Test scores	Correlation Coefficient	-.505**
		Sig. (2-tailed)	.009
		N	26

The results from the Spearman's correlation do strike as fairly surprising as they do not follow the results of previous research (see Green and Oxford 1995, Kazemi and Kiamarsi 2017). My hypothesis was not supported as my hypothesis for the third research question was that the more the learner uses strategies, the better results he will reach in the language test which would reflect the vocabulary skill level. Thus, my hypothesis was that the correlation is positive between these factors and the results suggest that the correlation was negative. The deeper analysis on the results concerning the correlation is covered in sub-section 6.4.

I investigated also qualitatively the results from the strategy questionnaire and the vocabulary test. I chose to look at the five best achieved and the five weakest achieved students in the language test in order to see whether any similar tendencies appear between the proficiency extremes. In the USS group, I chose six weakest performed students as four students had obtained the same score from the test so it was not reasonable to leave one out as this would have affected the results invalidly. There was not a great difference in the overall strategy use between the weakest and the best performed students which means that the strategy sub-groups must be investigated more thoroughly and individually to see whether any differences appear in the strategic behaviour. In LSS, the most notable differences can be observed in determination strategies, social strategies from discovery strategies and cognitive strategies. The best students seem to use on average more determination strategies than the weakest students. However, when looking at social strategies from discovery strategies, it seems that the weakest students use more these strategies than the best performed participants. Cognitive strategies reveal that the weakest students use more these strategies. In USS, most variation could be seen in determination strategies and cognitive strategies. Like in LSS, the best students seem to use more determination strategies than the weakest students in USS. Also, as it was in LSS, the weakest students use more cognitive strategies than the best students in USS. The weakest students in USS used more social strategies from discovery

strategies like in LSS, even though the difference was not that notable. Thus, there are similarities in the strategic behaviour based on the proficiency level between LSSS and USSS. The possible reasons behind these results are covered next.

Based on this sample, the best performed students used more determination strategies than the weakest performed students. The best performed students may have better skills when it comes to applying the context when trying to understand the new word's meaning. The use of context does demand some higher-level cognitive skills to link the word to other words surrounding it. Also, the use of dictionaries may be more efficient for the best students as they may be more capable of applying some study aids. The fact that the weakest students used more social strategies from discovery strategies does not come as a surprise. Weaker students need to ask more help from classmates and the teacher as their linguistic skills are not on the same level with the more proficient learners. The positive thing here is the fact that these weaker students do ask for help and do not dismiss the help that is available. It was surprising that the weakest students used more cognitive strategies than the best students as it could have been suggested that learners who are linguistically on a higher level, would also have better access to cognitive capacity. However, the reason that the weakest students used more cognitive strategies may derive from the fact that the cognitive strategies listed in the questionnaire were very practical and do not require many skills of deduction. The practicality can be observed for example in strategies such as repeating the word aloud many times or using flash cards in learning. Next, the discussion provides a deeper analysis on the results.

6 Discussion

In this section, the results from the previous section are more deeply discussed. The order of discussion is based on the research questions so the results of each research question are discussed individually. First, the results of the individual strategy statements in the strategy questionnaire are discussed, for example which factors may contribute to the students' answers. Next, the students' answers to the open-ended questions are discussed. After this, the discussion moves on to the differences in the strategy use on the strategy sub-group level between these two study groups. Then, the last research question concerning the relationship between the strategy use and the proficiency level is discussed more thoroughly. Some previous studies are linked to the discussion to see whether any similarities or differences appear between the present study and the previous studies. The hypotheses are also brought to the discussion to discover whether they are in accordance with the results. Finally, the validity and reliability of the present study are discussed.

6.1 Strategy statements

Each statement in the strategy questionnaire was looked at when reporting the results of the first research question. The order of discussing the strategies in this sub-section follows the original one so the results of determination strategies are discussed first. When looking at the use of determination strategies, both LSSS and USSS reported to be using most the strategy of using word lists when learning new words. This did not come as a surprise as school books are very much used on the lessons and students often do homework also from their books. In the parenthesis, there was a hint what word lists mean so word lists in the book chapters were given as a descriptor. Based on this sample, the textbooks are very much present in the students' everyday English learning and it could be regarded as a primary tool for learning new words. The students reported to be using least the strategy of using monolingual dictionaries when trying to understand a new word. This does not appear to be surprising as using monolingual dictionaries does require a fairly high level of English knowledge as new words may appear in the description of the target word. It is understandable that if a student wants to know the meaning of a new word, it is likely that he will choose the easier and quicker choice which is usually a bilingual dictionary, in this case an English–Finnish dictionary.

The next strategy statements that were looked at when reporting the results were social strategies included in the discovery strategies. Both groups used more the strategy of asking help from other classmates than asking help from the teacher. Asking help from peers may feel like a more convenient choice for the students if they are sitting next to each other in the classroom. Also, there can be a fear of embarrassing oneself if a student asks help from the instructor. There may also be a higher threshold if asking help from the teacher than from the classmates as things that could be regarded to be self-evident, may be easier to ask from peers. However, it is crucial that the teacher creates an open atmosphere in which questions are supported to be asked. In this sample, the average of asking help from the teacher was, however, fairly high, so it seems that students feel like that they can freely ask help from the instructor.

The next strategy sub-group to be analysed was social strategies from the consolidation strategies. Once again, there were no differences between the study groups in the sense that which strategy is used more. Discussing with people who have English as the L1 was supported more by both groups than the strategy of practising word with peers. This was quite surprising as the students seem to have quite a great deal of connections to native English speakers. This is of course a very positive surprise as the students evidently seem to be fairly interested in international contacts. Discussing English with a native speaker has most likely a positive influence on one's language skills as the students are able to practise the language outside the artificial language class. Hopefully this motivates also students to learn more English. It was not asked in the questionnaire how these students discuss with the native speakers. Today's information technology does naturally enable the connections to be created online and discussing may also take place in the game world. The next strategy sub-group to be discussed is memory strategies.

In the memory strategy sub-group, no major differences between the groups were found. Both groups reported to be using most the strategy of thinking the spelling of a word in question. The least used strategy in both groups was the underlining of the first letter of the target word. The reason why students may think about the spelling of a word so much may derive from writing the words for example in exercises, word tests and exams in which scores are gained by spelling correctly the words. Another reason for thinking so much about the spelling of the word may be due to the fact that Finnish and English are two extremely different languages. In Finnish, the spelling of a word does not differ in the case of most words from speech whereas in English most words have a different manner of spelling and pronouncing. Thus, it may be challenging when trying to remember the new English word. In

language instruction, word tests are usually held from every textbook chapter so students may have to learn a great number of words and especially how they are actually spelled.

The next consolidation strategy sub-group was cognitive strategies. Again, no differences were found on the individual strategy statement level. Both groups reported to be using the strategy of using vocabulary sections of the textbook when trying to consolidate the meaning of the word. The least used strategy was using a tape for listening the words and thus remembering them better also later on. The same kind of a statement regarding the use of vocabulary in textbook was also present in determination strategies from discovery strategies. However, in cognitive strategies the use of vocabulary sections in textbook was used for consolidating the word's meaning. The frequent use of vocabulary sections does not come as a surprise as the vocabulary sections are those which usually come to word tests and exams and they are also included in exercises as well as in homework. Thus, students are very much in touch with the vocabulary sections. Listening words from a tape did not seem to be a much-used vocabulary learning strategy. Sometimes the students have a CD on the back of their textbook from which for example chapters can be listened to. However, students do not always have access to CDs so it may affect the non-using of this strategy. In the era of digital learning the use of digital materials and digital textbooks may be, however, increasing as students have access to listening to the vocabulary sections also at home and not only at school. For further research, the investigation of what kinds of vocabulary learning strategies are used when more digital material is available could be of a great interest.

The last strategy sub-group that was analysed was metacognitive strategies from consolidation strategies. Both groups used most the strategy of using English media when learning new words. This was very predictable as there is almost an information overload in today's society and students spend a great amount of time playing games, watching movies and series, reading news online and updating social media. New words are present in many contexts of English media and the same words appear most likely quite frequently in these contexts which clearly helps to consolidate the word's meaning. There was a difference between the study groups in the metacognitive strategy that they use the least. LSSS used least the strategy of skipping a word if feeling like it is too difficult whereas USSS used least the strategy of testing oneself on how the new words have been acquired. The number of word tests kept at school may influence the non-testing practice in USSS if they already have a great number of word tests at school or if they do not feel like that testing oneself is an efficient strategy. It is a very positive news that LSSS do use least the strategy of skipping a word if it is considered as difficult. This shows perseverance and that they are willing to

spend much time on practising words. However, it may also be sometimes a wise decision to skip a word if it is not considered as very relevant in the learning context and thus the learning stays more efficient. As already mentioned, the creator of this theoretical framework concerning vocabulary learning strategies has also stated that it may be that the most important strategy is to tolerate the ambiguity of unknown words (Schmitt 1997). There are an endless number of words and thus the language learner will never be able to learn all the words in the world. Next, the students' own experiences on vocabulary learning strategies are discussed.

6.2 Students' subjective experiences

There were two open-ended questions in the survey which regarded the students' own strategy use. Discovery strategies included one open-ended question and consolidation strategies included the other open-ended question. In this sub-section, the students' answers are presented so that they are divided into these two main strategy groups and also to answers based on the study group. The answers of the students are my own translations. Not every student answered to these open ended-questions but still, a fairly extensive data was gained. Due to the extent of this paper every answer cannot be analysed. The examples are numbered and the number in the brackets after each answer represents the code number of a single student.

First, there was a question concerning discovery strategies. The question was in Finnish but the translated English version goes as follows:

Which other strategies, techniques or ways do you use when you want to know what the new word means? Write your answer on the lines below.

LSSS reported using fairly extensively the Internet when wanting to find out the meaning of a new word. Examples 1 to 3 below are answers from LSSS who reported using the Internet as a strategy source.

- (1) "I learn the word by looking for it in the net. I find the meaning of the word in that way" (104)
- (2) "I don't know about the strategies but mostly I learn everything from the net (NF, games, YouTube etc.)" (108)
- (3) "Google Translate" (109)

As can be seen in Example 3, Google Translate was mentioned as a way to find out the meaning of the word. This strategy was actually mentioned three times in the answers so students seem to use this strategy quite extensively. As the number of electronic devices is increasing all the time, it is fairly easy to use digital dictionaries. Examples 1 to 3 express the use of determination strategies (Schmitt 1997). For example, Schmitt's sub-strategy *guess from textual context* applies to Examples 1 to 2 as the word can be understood based on the context that the Internet offers. Example 3 demonstrates the strategy of using a *bilingual dictionary* (ibid.).

Parental help was also mentioned in the answers which is a very positive factor in language learning. Having a supporting network at home for the student could increase the motivation to learn the TL. Example 4 demonstrates that parental help was used. This Example could be applied to belong to Schmitt's social strategies (1997) even though parental help is not expressed in this category as such.

(4) "the net and asking from parents" (207)

The LSSS reported also other free time activities when trying to understand the meaning of a new word. Examples 5 and 6 demonstrate the use of free time activities. Watching videos, movies and series as well as playing games were sources of vocabulary strategy use. Today's information technology enables that these activities are easily accessible. It could be said that if learning material is easily accessible for the learner, learning may become more enjoyable.

(5) "Umm well, I spend my free time by playing games in the net when I can ask from my English-speaking friends and watching series with English subtitles helps to write the word and apply its elsewhere" (110)

(6) "I watch movies and play games in which English is only spoken" (103)

As shown in Example 5, one student reported to be watching series with English subtitles which then helps to spell the word and then it is possible to apply the word to other contexts. This shows great skills of taking initiative of learning new English words as it would be easier to watch the series with Finnish subtitles. Examples 5 and 6 belong to determination strategies and to sub-strategies *analyze any available pictures or gestures* and *guess from textual context* (Schmitt 1997). Having visual aid does help to infer the meaning of a word, and

series, movies and games also provide a context which helps to understand the word's meaning.

Upper secondary school students reported also to be using fairly extensively the Internet as a source of a vocabulary learning strategy. Examples 7 to 9 demonstrate the use of Internet by students in USS. These Examples belong also to determination strategies and more specifically sub-strategies such as *guess from textual context* and *bilingual dictionary* (Schmitt 1997).

(7) "Google Translate" (110)

(8) "I look for the word directly from the net" (2007)

(9) "I write the word to google" (2016)

USSS, like LSSS, seem to use Google Translate as a medium of learning the meaning of the word and Example 7 shows this. Two students altogether reported using Google Translate and one student reported to be using Cambridge dictionary but this student did not mention whether this dictionary was online or in a book form. Fan (2003) also recommends the use of a dictionary when trying to understand the meaning of the word, especially when the target word is used in context, like in Example 9.

Help from parents was also regarded to be a source of a social strategy. Other people were also mentioned, for example a teacher or an interlocutor, when trying to understand the meaning of the word. Examples 10 to 12 demonstrate the help from the teacher, the parents and the interlocutor. It can be fairly important that a student has multiple people around who help and support him in the language learning process. These Examples belong to social strategies and Example 10 belongs specifically to the sub-strategy *ask teacher for an L1 translation* (Schmitt 1997).

(10) "I always ask from the teacher or look from the net" (2005)

(11) "I ask from my parents" (2012)

(12) "I usually talk with an English and if I don't understand some word, I ask from that person" (1002)

Other strategies such as watching programs in which new words are discussed and linking the word to the topic of a conversation were also mentioned as shown in Examples 13 and 14.

(13) "I can for example watch some program in which new words are discussed and which includes new words" (2011)

- (14) “I try to think the meaning of the word by thinking how it is connected to the topic of the conversation” (2014)

As mentioned in Example 14, linking a word to the subject of the discussion shows great cognitive skills. Utilizing the context to infer the word’s meaning may prove to be very effective in many situations. Examples 13 and 14 express the sub-strategy *guess from textual context* from determination strategies (Schmitt 1997).

To conclude, LSSS seem to use on average more the Internet as a source of a discovery strategy than USSS. The majority of LSSS’ answers regarded the use of Internet but the Internet was not regarded as important among USSS. However, many free time activities were mentioned in the answers, such as playing games and watching videos and movies. Ninth graders seem to use nevertheless more of these activities which include some digital technology. The versatility of the answers is still notable as both LSSS and USSS seem to use varying strategies to make the learning of the new word more effective.

The answers regarding consolidation strategies are discussed next. The English version of the original Finnish one appeared in the survey as follows:

Which other strategies, techniques or ways do you use when you want to make sure that you will remember also later what the new word means? Write your answer on the lines below.

The answers gained from LSSS showed a great deal of versatility on how they try to remember the newly learnt word also later. The answers varied from saying the word out loud to inventing some unforgettable memory rule. Two students reported to use the word in communicative situations which Examples 15 and 16 demonstrate. These Examples belong to social strategies and more specifically to the sub-strategy *study and practice meaning in a group* (Schmitt 1997).

- (15) “I use it (word) when talking” (102)

- (16) “I mostly talk with people in English and at the same time one learns new words” (108)

Also, playing games and watching movies were seen as effective ways to keep the word in mind as demonstrated in Example 17. This Example expresses Schmitt’s (1997) metacognitive strategies and especially the sub-strategy *use English-language media (songs, movies, newscasts etc.)*.

(17) “I play games, watch movies which are in English.” (103)

The actual repetition and using the word in everyday life appeared to be fairly frequent ways to remember the word as can be seen in Examples 18 to 20. These Examples express memory strategies. Example 18 demonstrates *study word with a pictorial representation of its meaning*, Example 19 illustrates *use new word in sentences* and Example 20 demonstrates *study the spelling of a word* (Schmitt 1997). Example 20 can also be seen to represent *written repetition* which is part of cognitive strategies in Schmitt’s taxonomy (1997).

(18) “Still the same thing, the English language is nowadays always present so you learn it easier and the repetition of seeing the word teaches the meaning of the word and helps to remember it” (110)

(19) “I use the words a lot” (204)

(20) “I write the words down so that I can remember how they are written and then I read through the words” (208)

Example 18 regarding the constant presence of English is very much to the point. LSSS seem to be very frequently in contact with the English language so it is quite inevitable to learn at least to some extent new words. The resources for learning new words have grown enormously especially because of today’s information technology. It could be thus said that learning new words has never been easier as it is nowadays.

One student reported to be using context as a medium for remembering the word which shows fairly advanced learning skills from a ninth grader. The answer regarding the use of context is shown in Example 21. This Example can be seen to represent *use new word in sentences* which is stated in Schmitt’s (1997) memory strategies. Gu and Johnson (1996) also support to the use of context when learning new words. This clearly can help to understand how words act in different environments.

(21) “I add the word to a sentence and figure out what it means with the help of other words” (104)

Testing and inventing an own memory rule system were also mentioned in the answers. Example 22 shows the process of testing oneself and it belongs to metacognitive strategies and more specifically to the sub-strategy *testing oneself with word tests* (Schmitt 1997).

Example 23 demonstrates the use of a memory rule but it cannot be attached to a specific sub-strategy in Schmitt's memory strategies (1997).

- (22) "I learn the word and test myself the next day whether I remember the word" (207)
- (23) "I invent some unforgettable memory rule" (209)

Naturally, students' own motivation does have an effect on how well they will remember the words. Being initiative and inventing own working systems for remembering the word can fairly surely affect only positively learning outcomes. This study group shows that they do use versatile vocabulary learning strategies. Whether they use them consciously or subconsciously could be a subject of further research.

The answers of USSS regarding the use of consolidation strategies are treated next. Like LSSS, also USSS reported to be using versatile strategies for remembering new words. For example, they mentioned to be using movies, series and videos as a source of vocabulary learning strategies which can be seen in Examples 24 and 25. Both of these Examples belong to metacognitive strategies and specifically to *use English-language media (songs, movies, newscasts, etc.)* (Schmitt 1997).

- (24) "I watch movies/videos without subtitles and I translate into Finnish in my head" (1011)
- (25) "I usually watch a lot of series and movies which help me to remember many words" (2008)

In Example 24, watching movies and videos without subtitles shows a great amount of motivation. Integrating the learning of new words to free time activities is most likely a very effective learning strategy.

Repeating the newly learnt words came up in the answers. Repeating is a very convenient way to practise words as it does not require any extra material. Several students reported to be repeating the words in order to remember them as demonstrated in Examples 26 and 27. Example 26 can be seen to belong to memory strategies, such as *say new word aloud when studying*, as well as to cognitive strategies, like *verbal repetition*, to which Example 27 can also be attached (Schmitt 1997).

- (26) "I can repeat the word more and more and I read them aloud to myself" (2011)
- (27) "I keep repeating it many times to myself in my head" (2012)

Different techniques of memorization are very convenient ways to learn new words as no material as such is needed. Example 28 demonstrates a memory strategy but cannot be attached to a specific sub-strategy in Schmitt's strategy listing (1997). Example 29 can be applied to cognitive strategies and to the sub-strategy *flash cards*. Example 30 could be applied to concern a metacognitive strategy, like *testing oneself with word tests*, except without the actual word test.

(28) "I just try to remember" (1002)

(29) "The memory card thing in point 25, but I do them to post-it papers and glue them to my wall so that I would see them often and they would stay in my mind" (2010)

(30) "I press one difficult word to mind and after a while I try to think what it meant" (2014)

As shown in Example 29, having post-it papers on walls does help to learn the words as they are easily accessible and also in sight quite frequently. Visual aid can be very effective and most likely helps to learn the spelling of the word.

Testing the words came up in the answers of USSS. For example, a flash card app *Quizlet* was mentioned in the answers, as shown in Example 31. Having someone else asking the words can prove to be effective. Perhaps having someone else inquiring the words may push the learner to try to remember harder the words. Examples 31 and 32 demonstrate this activity. Example 31 belongs to both cognitive strategies, specifically to the sub-strategy of using *flash cards*, and also to social strategies, *study and practice meaning in a group*. Example 32 belongs also to this sub-strategy in social strategies (Schmitt 1997).

(31) "By playing Quizlet, a friend asks words" (2013)

(32) "Someone asks new words from me" (2016)

As the students reported to be using quite extensively different vocabulary learning strategies, it can be concluded that strategies are an individual feature in one's own learning, just like learning strategies belong to individual differences (Pietilä 2014). Here it becomes very accurate that learning strategies do help learners to gain more self-directedness (Oxford 1990). Becoming more self-directed happens most effortlessly when learners acknowledge the strategies that fit them best. Zou and Zhou (2017) also emphasized that it is very important that learners discover the most adequate ways to use vocabulary learning strategies.

These students' answers show elements of what good language learners do (Rubin 1975). In Rubin's listing, *practising* can be lifted as it appears in many answers, like in the

answer of student number 208: “I write the words down so that I can remember how they are written and then I read through the words.” Also, the learning environment has an effect on the acquiring process so for example integrating the learning of words to free time activities becomes important (Niitemaa 2014). The answers of the participants show that they are willing to integrate the learning process to the context outside of school, like for example student number 110 shows by watching series with English instead of Finnish subtitles. Students also reported to be watching movies and playing games which contribute to the incidental learning of words (ibid.).

Vocabulary learning strategies should be lifted as an important topic in the educational world since teachers can have a great impact on students as instructors can help them to find the best strategies. Khosravi (2012) emphasizes the supportive role of the teacher in the learning process. Also, Ahari et al. (2014) point out that teachers should have knowledge on how to use learning strategies in the actual learning of foreign words. My hypothesis for these open-ended questions was that the students report using quite frequently free-time activities, such as Internet sources and video games when trying to understand the meaning of the new word and when trying to remember the word also later on. This hypothesis was supported as many students reported to be using strategies like these. Of course, there were many other strategies besides information technology but the use of technology was notable among the answers. Next, the results concerning the differences in the strategy sub-groups between the study groups are discussed.

6.3 Differences in strategy use

The differences regarding the use of strategy sub-groups are discussed next. As with the individual strategy statements, the order of discussion follows the order of strategy sub-groups presented in the previous section regarding the results. First, the differences in the use of determination strategies are discussed. As shown in the results section, USSS reported using slightly more determination strategies than LSSS. This result is in line with Çelik and Toptaş’ study (2010) which revealed that higher proficiency level students used more determination strategies than students on a lower proficiency level. Çelik and Toptaş (2010) do offer a great equivalent study to compare to since they also used Schmitt’s taxonomy as their theoretical framework. Many factors may contribute to the present study’s results. USSS may be more used to dealing with for example dictionaries and word lists as they have studied for a longer time and this may have become as an established manner to learn English words.

Due to the longer length of their education, it may be that they know how to take advantage of these strategies more.

USSS use also more social strategies regarding discovery strategies than LSSS. However, Çelik and Toptaş (2010) discovered that elementary level learners used more social strategies than pre-intermediate and intermediate-level learners which differs from the result of the present study. Also, Kazemi and Kiamarsi's study (2017) showed that intermediate learners used more social/affective strategies than advanced learners. Khosravi (2012) discovered as well that intermediate learners used more frequently social strategies than advanced learners. The result of this study concerning social strategies may be due to the fact that USSS are older and so it may feel less embarrassing to ask help as ninth graders could be more in their adolescence and it may be more of a threshold to ask help. The fact that USSS ask more help regarding English words may also derive from the fact that there is quite a difference in the level of difficulty of English language between lower secondary school and upper secondary school so for natural reasons, USSS may actually need more help in English. When looking at other social strategies in terms of consolidation strategies, the use of these strategies is the same between these two groups as the groups had the same average. Thus, no statements regarding differences in strategy use can be made. Both groups use similarly these strategies which does not come as a surprise as it can be presumed that both groups have the same opportunities for discussing with people whose L1 is English and also practising words with friends.

LSSS use slightly more memory strategies than USSS. However, this result is not in line with Çelik and Toptaş (2010, 70) as they discovered that higher-level learners used more memory strategies than students on the lower proficiency level. It can only be speculated why LSSS use more these strategies. Perhaps memory strategies are more suitable for younger students as older students could use more strategies which require more cognitive capacity and thus memory strategies could be regarded as fairly easy and more appropriate for comprehensive school.

LSSS use also slightly more cognitive strategies. This was very surprising as it could be thought that the cognitive abilities of USSS are on a higher level and thus they would be using more cognitive strategies. Even though there was not a great difference between the groups, the results are still very interesting. Green and Oxford (1995) discovered in their study that higher-level students used more cognitive strategies than lower-level students which shows that there are differences between studies and that the use of strategies is very much based on the study groups. Çelik and Toptaş' study (2010) is in line with Green and Oxford's study

(1995) as it showed that more proficient learners use more cognitive strategies than learners on the lower proficiency level. However, Kazemi and Kiamarsi (2017) discovered in their study that students on the intermediate level used more cognitive strategies than the more advanced group so previous research does support the results of the present study to a certain extent. However, it is very enlightening to see that LSSS do use these strategies so their learning is aided by cognitive strategies. Perhaps the instruction of cognitive strategies is more visible in comprehensive school than in upper secondary school. There is also a fairly great rush in USS to go through all the aspects required on different courses so possibly for reasons regarding the busy schedule, the use of cognitive strategies is less frequent in USS.

The last strategy sub-group to be discussed is metacognitive strategies. Quite surprisingly, LSSS reported to be using more these strategies than USSS as their average was higher. Again, the difference was not a major one but the fact that LSSS use more metacognitive strategies is very fascinating. Kazemi and Kiamarsi (2017) discovered that the advanced group used more metacognitive strategies than the intermediate group. Also, Khosravi's study (2012) revealed that students on a higher proficiency level used more frequently metacognitive strategies than learners on a lower level. Çelik and Toptaş' study (2010) is also in line with Kazemi and Kiamarsi (2017) as well as Khosravi's (2012) results as they also discovered that pre-intermediate and intermediate learners employed more metacognitive strategies than elementary level learners. It would have been more likely to presume that the USS group would have used more metacognitive strategies as they are supposedly on a higher level in their English skills. USSS are also older so they would presumably have better control over their own learning. After all, metacognitive strategies do refer to the controlling and planning one's own learning. However, all the students are individuals and they control their own learning also with other mechanisms and not just with learning strategies.

My hypotheses for this second research question were to some extent supported. LSSS do use more memory strategies than USSS which showed to be accurate based on these samples. However, the hypotheses regarding the use of social strategies, cognitive strategies and metacognitive strategies were not supported. Unlike hypothesised, USSS use more social strategies as the hypothesis was that LSSS use more social strategies. Also, LSSS use more cognitive and metacognitive strategies than USSS even though the hypothesis was that USSS use more these strategies in their learning of English. The hypothesis concerning the overall difference in the strategy use between these groups did prove to be accurate. The hypothesis was that USSS use more strategies since they have had more instruction in English and thus

they are more experienced language learners and language users. The descriptive statistics showed that USSS use slightly more vocabulary learning strategies. However, the differences in the strategy sub-groups as well as in the overall strategy use were fairly small and as the U test showed, the overall difference in the strategy use was not significant. It should be noted that the tendencies which apply in this study may not apply in another study. Strategy use is, after all, an individual feature in one's language learning process and as the significance level showed, the results cannot really be generalized to a larger population. Next, the relationship between the strategies and the proficiency level are discussed.

6.4 Relationship between strategy use and proficiency level

The results of the last research question concerning the relationship between strategy use and proficiency level are discussed next. The way to analyse this final question was to use the non-parametric correlation test by Spearman. In LSS, Spearman's correlation test revealed that the correlation was negative. This means that the more one reported to be using strategies in the strategy questionnaire, the worse scores one got from the vocabulary test. However, in LSS the results were not significant enough to reach the significance level. In USS, the results were the same but the results were significant. This means that the results gained from the correlation test concerning USSS could be generalized to a larger context. The language tests of this present study may have been too difficult for the learners which could reflect the fairly low correlation levels (LSS: $r_s = -.291$, USS: $r_s = -.505$). This may be accurate when looking at the test scores of USSS which showed to be fairly low. However, in LSS the test results showed good dispersion and the maximum score reached almost full scores which tells that the level of difficulty was appropriate for the LSS group. The level of vocabulary proficiency of different groups does vary as some groups may have better vocabulary skills than others and the test has to be objective so it has to take into account the assumed proficiency in that specific school grade.

It is fascinating that the results from the present study do differ from previous studies. For example, Oxford and Green (1995), Gu and Johnson (1996), Khosravi (2012), Waldvogel (2013), Ahari et. Al (2014) as well as Kazemi and Kiamarsi (2017) all reported in their studies that there was a positive relationship between strategy use and L2 proficiency level. My hypothesis for the final research question was not supported as my hypothesis was that the more one uses vocabulary learning strategies, the better scores one achieves from the vocabulary test. However, the results show that the more one uses strategies, the worse scores

one gains from the test. The results do strike as very surprising and they do require discussion on why the correlation was negative. The reason behind the negative correlation may be that students use vocabulary learning strategies as compensation strategies. Perhaps the use of strategies is regarded as crucial in order to succeed at least to some extent in exercises that require vocabulary knowledge. Students may feel like they have to compensate their vocabulary skills by using strategies which may or may not help in the learning process. It can also be that students have not discovered the most appropriate strategies for them and thus use “wrong” strategies which do not really help positively when trying to understand the meaning of a word and when trying to remember it also later. The word may be stored up in the working memory in a non-efficient manner and thus the word does not move on to the long-term memory if non-suitable strategies are used. If wrong kinds of strategies are used, it could happen that there is no positive increase in vocabulary knowledge.

The negative correlation could also be explained with the attitude towards learning strategies. It can be that vocabulary learning strategies are not regarded as especially important with regard to vocabulary knowledge. Students may feel like there is no connection between whether one uses strategies or not and vocabulary skills. It should be emphasized that vocabulary learning strategies are not the only factor that may contribute to the level of language proficiency as many other individual differences do affect the overall language learning process, for example motivation, personality and learning styles (Pietilä 2014). Thus, it cannot be really presumed that the great use or little use of vocabulary learning strategies would affect mostly the level of vocabulary proficiency. However, it is interesting to see whether there is connection at all between the use of vocabulary learning strategies and vocabulary proficiency. Before concluding this paper, the discussion on validity and reliability is still covered.

6.5 Validity and reliability

In this sub-section, the two quality criteria, research validity and reliability, are evaluated. Validity has two main areas which are *internal validity* and *external validity*. Dörnyei (2007, 52) explains that a study is internally valid if the outcome of the study is measured and controlled by the variables that are supposed to be investigated whereas the study is internally invalid if the results are affected by factors which would not have thought to cause them. In this study, internal validity was achieved by the questionnaire and the vocabulary test as the three research questions regarded the use of strategies, the differences in the strategy use and

the relationship between strategy use and vocabulary proficiency. It can be said that the questionnaire was especially aimed at measuring how much the subjects use these vocabulary strategies and the questions regarded specifically *vocabulary* learning strategies and not just learning strategies in general. The language test was included in the survey because the proficiency levels had to be gained in some manner and the test served well to show the vocabulary skill levels. The main point of the test was to measure the level of English vocabulary knowledge and not for example grammatical knowledge or discourse knowledge and thus it can be said that the tests were internally valid. Also, the fact that this study included also the piloting phase enabled to really look at whether the strategy questionnaire and the language test really measured what they were supposed to be measuring. Some changes were done to the piloting version in order to make the final survey as good as possible and thus this improved the validity of the study.

When looking at the scores of the vocabulary tests, LSSS scored very well on average and one of the students reached almost to full scores. However, the average score of USSS was quite low and the best performed student scored 24 points out of the total 34 points which is still fairly far away from the full scores. It could be argued that the test for LSSS was very appropriate when looking at the difficulty level. In USSS, the test was possibly too difficult and thus the validity of the study may be harmed if the test did not show the skills that the students really have. However, as also noted earlier, the test had to be fairly difficult so that the students who have great vocabulary skills would be separated from the students who have weak vocabulary skills and thus the results would show dispersion. It may also be due to the lack of interest and motivation of answering to the test which can be reflected negatively in the scores then.

External validity means whether the results can be generalized to a larger context and thus a study is externally valid if its findings can be applied to larger population (Dörnyei 2007, 52). When looking at the significance levels, the results concerning the third research question on the relationship between the two variables, strategy use and proficiency level, were significant. The correlation done for the USSS reached the aspired significance level and thus the results concerning this experiment could be generalized to a larger context. The same correlation test done for the LSS group did not achieve the approved significance level so the results concerning that experiment can only be applied to this sample and not for a larger population. However, the fact that the findings showed external validity to some extent is a very positive factor.

When looking at the qualitative side of the study, for example the discussion of the results and the students' answers to the open-ended questions, some research subjectivity can naturally be discovered. There was not an interview which would have given more information on why the students answered in the way they did. The researcher can only make her own inferences based on the answers but still keep in mind the relevance of the conclusions based on the topic.

According to Taylor (2013, 55), the factor affecting the generalizability of the results is the process of sampling. In order to guarantee that the external validity is not threatened, the chosen samples must represent the target population (Taylor 2013, 55). In this study, the target populations were students on the ninth grade in lower secondary school and students on the first grade in upper secondary school. Other factors attached to the target populations were that the students should be in schools which belong to the Finnish education system and follow the guidelines of the National core curricula for these school levels. The chosen sample groups can be seen to obey the norms of the target population as they represent the target school grades and they are included in the Finnish education system. The schools of this study also follow the Finnish curricula for each specific grade. Also, these groups were not English-oriented and therefore could be seen to represent the majority of English as the L2 students in Finland. Thus, external validity can be seen as achieved.

The second quality criterion is reliability. According to Dörnyei (2007, 50), reliability refers to the consistency of results gained by using measurement instruments and procedures. *Rater reliability* and *intra-rater reliability* are attached to the concept of reliability. Here, the intra-rater reliability can be seen as a major factor when looking at the quality criteria. Intra-rater reliability can be discovered for example in the scoring of the vocabulary tests. In order to achieve research reliability, I had a set of guidelines which I followed when scoring the test and the scoring system was explained in sub-section 4.4.2. By having the same guidelines for each group and participant, intra-rater reliability was easier to achieve. The natural causes for causing any inconsistency when scoring the tests were also avoided since if the researcher felt tiredness or lack of concentration after scoring many tests, the scoring was not continued. Next, the final conclusions finish the thesis.

7 Conclusion

The focus of this thesis was on learning strategies and more specifically vocabulary learning strategies. Vocabulary learning strategies can be seen as a central topic on the field of SLA as words form a significant part in the L2 learning process. Learning strategies can have positive effects in the learning outcomes if the learner is able to choose strategies that fit best for his own learning (Oxford 1990). The teacher's role is highly important here as the instructor should help learners to find the most suitable strategies (Zou and Zhou 2017, Khosravi 2012). The National Core Curriculum for Basic Education does support learners to active involvement in the learning process which could be reflected for example in the use of learning strategies and more specifically in vocabulary learning strategies (Finnish National Agency for Education 2014). Thus, the learner's own mental processing and involvement in the learning process does form a great part in L2 learning.

The aims of the present study were to investigate vocabulary learning strategies with three research goals. First, the focus of interest was what kinds of vocabulary learning strategies the study groups use. Second, the aim was to discover differences in vocabulary learning strategies between the study groups. Third, the goal was to discover the relationship that there may exist between the use of vocabulary strategies and vocabulary proficiency. The theoretical framework of the study was based on Norbert Schmitt's (1997) vocabulary learning strategy taxonomy. This choice was due to the fact that Schmitt (1997) divides his strategy inventory into discovery strategies and consolidation strategies and inside these main groups there are six different strategy sub-groups. This classification was versatile and straightforward which enabled to conduct the study in a coherent manner.

The study was conducted quantitatively in the form of a vocabulary learning strategy questionnaire and a vocabulary test but some qualitative features were also present due to the open-ended questions. This study included two study groups which were from lower secondary school, more specifically ninth graders, and upper secondary school, consisting of first year students. Also, a piloting phase was included in order to guarantee the validity and reliability of the study. The statistical procedures used to answer to the research questions included measures of central tendency, measures of variability and non-parametric tests such as the U test and Spearman's correlation test due to the non-parametric approach of the study.

The results for the first research question, what kinds of vocabulary learning strategies lower secondary school students and upper secondary school students use, were analysed on

the basis of the individual strategy statements in the strategy questionnaire. There were actually no differences in the use of these individual statements between the groups when looking at the highest averages per strategy sub-group. From determination strategies, both groups used on average most word lists which can be for example discovered in textbooks. Asking help from classmates was the most used strategy from social strategies which belong to discovery strategies and discussing with people whose L1 is English was the most used strategy inside social strategies belonging to consolidation strategies. From memory strategies, thinking about the spelling of a word had the highest average and from cognitive strategies, using vocabulary sections in the textbook was the most commonly used strategy. Finally, using English media to consolidate the word's meaning had the highest average from metacognitive strategies. The answers were fairly predictable since for example the using of textbook in determination and cognitive strategies seems to be very much present in the students' everyday life due to school books. Also, the use of English media from metacognitive strategies did not come as a surprise when taking into account the increasing amount of digital technology nowadays. Since the age gap was fairly small between these groups, although there has been a transition from LSS to USS, it was not a great surprise that the answers were so similar. My hypothesis for the answers regarding the open-ended questions was that students use quite extensively digital media when learning new words. In the students' answers, the influence of digital media was notable as they reported to be using for example video games, series and movies when trying to understand the new word or when consolidating the word's meaning and therefore my hypothesis was supported. The students' answers were very versatile which shows that learning strategies are ultimately part of individual differences (Pietilä 2014). The answers show that the students acknowledge the most suitable strategies for them which is very important in the learning process of words (Zou and Zhou 2017).

The second research question was about the differences in the use of strategies between the study groups. The focus here was to look at the strategy sub-groups as wholes and to discover any differences appearing there. USSS used on average more determination strategies and social strategies which belong to discovery strategies. Both groups used on average equally as much social strategies belonging to consolidation strategies. LSSS used, however, on average more memory strategies, cognitive strategies and metacognitive strategies. My hypothesis regarding this second research question was supported to some extent. My hypothesis was that LSSS use more social strategies and memory strategies and USSS use more cognitive strategies and metacognitive strategies. LSSS did use more memory

strategies but it was very surprising that they actually used also more cognitive strategies and metacognitive strategies than USSS. I assumed that as USSS are older, they have had more instruction in English and their cognitive capacity would automatically be on a higher level, they would have used more cognitive and metacognitive strategies. USSS actually used also more social strategies so the hypothesis was not supported based on this sample. My second hypothesis was that USSS use in general more vocabulary learning strategies than LSSS which was supported and is also in line with previous research (Green and Oxford 1995, Waldvogel 2013). However, the differences were not significant so fairly minor differences in the strategy use could be observed between the study groups.

The third research question was about the nature of the relationship between the use of vocabulary strategies and proficiency level in English vocabulary. My hypothesis was that the correlation is positive so that the more one uses strategies, the better scores one will achieve in the vocabulary test. The correlation tests showed to be, very surprisingly, negative. This means that the more one uses strategies, the worse scores one will attain from the test and thus my hypothesis was not supported. The correlation test done for USSS was significant so based on the group of USSS, the results could be generalized to a larger context. The results for this last research question were not in line with previous research which has shown that there is a positive relationship between learning strategies and proficiency level (Green and Oxford 1995, Gu and Johnson 1996 and Khosravi 2012). One possible reason for the negative correlation may be that strategies could be seen as compensation strategies so that one must use strategies in order to gain at least some points from the vocabulary test. Also, it should be noted that learning strategies are only one individual feature among other individual differences in SLA that may affect learning, such as motivation and learning styles (Pietilä 2014). Thus, it cannot be said for certain whether there is a connection between the amount of using vocabulary learning strategies and vocabulary proficiency. However, the negative correlation may also be due to the study groups of the present study so as groups always differ due to their individual differences, different results could be attained from other groups and the correlation could be positive.

There were some limitations concerning the present study. Due to the fact that this study was mostly quantitative, the underlying factors affecting the strategy use of the students cannot be known for certain. By adding more qualitative features to the study, for example interviews with the respondents, it would have enabled the gaining of even more certain knowledge on the reasons behind the strategy use. Thus, quantitative research could be seen as too simplifying as the real mental processing of the participants cannot be thoroughly

discovered. The survey, including the questionnaire and the vocabulary test, did also have some drawbacks as the respondents may have felt unmotivated to answer to the survey. The answering was made anonymously and thus it did not affect the course grade which may have affected the motivation to really give the best performance.

It should be remembered that the strategy use does not define the learner as a good or a bad learner of English. Strategy use is, after all, only one aspect among other individual differences in the L2 learning process. However, it would be important to acknowledge the existence of learning strategies and especially vocabulary learning strategies in the educational world as some students may feel that that these strategies actually help to a great extent in the learning process. Teachers should help learners to find the most suitable strategies for them. This naturally takes time and resources but the effect on the learning outcomes may be notable as was discovered in the study by Ahari et al. (2014). Even though this study did not reveal that the using of vocabulary learning strategies has a positive influence on the test results, the positive effect of learning strategies should not be disregarded.

Vocabulary learning strategies is a field of research that still needs to be investigated. Future research could focus on a more qualitative approach to investigate this area of study. Opinions on the use and functionality of L2 vocabulary strategies by teachers and students from different school grades would give important knowledge on the attitudes towards strategies. This could be conducted in an interview format to gain thorough reflections. Also, integrating these vocabulary learning strategies in the classroom instruction in the form of a longitudinal research would give valuable information whether strategies increase the effectiveness of L2 learning. The teaching of learning strategies, not only vocabulary learning strategies, should be integrated in the learning process so that students will learn the L2 in the most efficient way and so that learning strategies feel like a natural part in everyday learning.

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Appendix 1. The survey conducted in lower secondary school

Kysely sanaston oppimisstrategioista ja kielitesti

Sanaston oppimisstrategiat ovat sanaston oppimisessa käytettäviä keinoja ja tekniikoita. Näitä ovat esimerkiksi sanakirjan käyttö ja avun kysyminen opettajalta, kun et tiedä, mitä sana tarkoittaa.

Kyselyn jälkeen löydät kaksi tehtävää. Vastaa niihin parhaasi mukaan.

Vastaa mahdollisimman rehellisesti, sillä jokainen vastauksesi on arvokas minulle. Kysely tehdään nimettömänä. Kaikki vastaukset käsitellään luottamuksellisesti.

Kiitos vastauksistasi ja tsemppiä vastaamiseen!

Vastaa jokaiseen kysymykseen.

Rastita viivalle sinulle sopiva vaihtoehto.

Olen
tyttö _____
poika _____

Olen
yläkoulussa _____
lukiossa _____

Käännä sivua!

A) Sanaston oppimisstrategiat. Vastaa alla oleviin väittämiin siten, kuinka usein käytät kyseistä sanaston oppimisstrategiaa (1 = en koskaan, 2 = harvoin, 3 = melko usein, 4 = usein). Ympyröi se numero, joka sopii sinuun parhaiten.

Esim. jos kysyt melko usein apua opettajalta, merkitset vastauksesi näin:

Kysyn apua opettajalta, jos en tiedä, mitä uusi sana tarkoittaa.

1 2 3 4

Kun kohtaan uuden englanninkielisen sanan, käytän alla olevia strategioita ymmärtääkseni, mitä uusi sana tarkoittaa:

1. Käytän tekstissä olevia kuvia, kun yritän ymmärtää, mitä uusi sana tarkoittaa.
1 2 3 4
2. Käytän tekstistä löytyviä ympärillä olevia sanoja, jotka auttavat minua ymmärtämään uuden sanan.
1 2 3 4
3. Yritän ymmärtää puhetilanteissa puhujan eleiden avulla, mitä uusi sana tarkoittaa.
1 2 3 4
4. Käytän englanti-suomi –sanakirjoja uuden sanan ymmärtämisessä.
1 2 3 4
5. Käytän englanti-englanti –sanakirjoja uuden sanan ymmärtämisessä.
1 2 3 4
6. Käytän sanalistoja (esim. oppikirjan kappaleiden sanalistoja) opetellessani uusia sanoja.
1 2 3 4
7. Kysyn opettajalta apua, jos en tiedä, mitä uusi sana tarkoittaa.
1 2 3 4
8. Kysyn luokkakavereiltani apua, jos en tiedä, mitä uusi sana tarkoittaa.
1 2 3 4
9. Mitä muita strategioita, tekniikoita tai tapoja käytät, kun haluat tietää, mitä uusi sana tarkoittaa? Kirjoita vastauksesi alla oleville viivoille.

Kun haluan varmistaa, että muistan myös myöhemmin, mitä uusi englanninkielinen sana tarkoittaa, käytän alla olevia strategioita:

10. Keskustelen henkilöiden kanssa, joiden äidinkieli on englanti.

1 2 3 4

11. Harjoittelen sanoja kavereiden kanssa.

1 2 3 4

12. Opin sanan, kun yhdistän sanan siihen liittyvään kuvaan.

1 2 3 4

13. Yhdistän sanan omaan henkilökohtaiseen kokemukseeni.

1 2 3 4

14. Yhdistän sanan samaa tarkoittavien sanojen kanssa tai sen vastakohtan kanssa.

1 2 3 4

15. Ryhmittelen sanoja omalla tavallani esim.

kirjaani/vihkooni/tabletilleni/tietokoneelleni, jotta muistaisin ne paremmin.

1 2 3 4

16. Keksin sanoista tarinoita, jotta muistaisin sanat paremmin.

1 2 3 4

17. Sanon sanan ääneen, kun opiskelen sanaa.

1 2 3 4

18. Mietin, miltä sana näyttää eli miten se kirjoitetaan.

1 2 3 4

19. Alleviivaan sanan ensimmäisen kirjaimen.

1 2 3 4

20. Mietin omin sanoin, mitä sana tarkoittaa.

1 2 3 4

21. Teen jotain fyysistä liikettä, kun opiskelen sanaa (esim. sanan näytteleminen).

1 2 3 4

22. Toistan sanan ääneen monta kertaa.

1 2 3 4

23. Kirjoitan sanan monta kertaa peräkkäin esim.

kirjaani/vihkooni/tabletilleni/tietokoneelleni.

1 2 3 4

24. Teen sanalistoja opetellessani sanoja esim.

kirjaani/vihkooni/tabletilleni/tietokoneelleni.

1 2 3 4

25. Käytän muistikortteja opitellessani sanoja (toisella puolella suomenkielinen sana ja/tai kuva ja toisella puolella englanninkielinen sana ja/tai kuva).

1 2 3 4

26. Teen muistiinpanoja sanoista oppitunnilla esim. kirjaani/
vihkooni/tabletilleni/tietokoneelleni.

1 2 3 4

27. Käytän tekstikirjani sanasto-osioita opitellessani sanoja.

1 2 3 4

28. Kuuntelen sanoja nauhalta, jotta muistaisin sanat paremmin.

1 2 3 4

29. Käytän englanninkielistä mediaa sanojen opetteluksessa (esim. laulut, elokuvat, uutiset,
sosiaalinen media).

1 2 3 4

30. Jätän välistä sanan, jos minusta tuntuu, että en opi sitä helpolla.

1 2 3 4

31. Testaan itseäni, miten olen oppinut uusia sanoja (esim. tekemällä omia sanakokeita).

1 2 3 4

32. Mitä muita strategioita, tekniikoita tai tapoja käytät, kun haluat varmistaa, että muistat
myös myöhemmin, mitä uusi sana tarkoittaa? Kirjoita vastauksesi alla oleville
viivoille.

B) Tehtävät. Vastaa kysymyksiin ohjeiden mukaan.

1. Valitse lauseeseen sopiva vaihtoehto tummennetun sanan/tummennettujen sanojen tilalle.
Ympyröi vastauksesi.

1. Have you studied for the test **sufficiently**?
 - a. too little
 - b. hard
 - c. enough

2. It seems that they have **constant** conflicts in the Harrison family.
 - a. at times
 - b. repeated
 - c. serious

3. Let's not park here. This is not a very **convenient** place to leave the car.
 - a. legal
 - b. handy
 - c. safe

4. I'm afraid the steak is **slightly** burnt.
 - a. totally
 - b. accidentally
 - c. a little

5. Old Mr Barnes, our history teacher, was ever so **forgetful**.
 - a. absent-minded
 - b. scary
 - c. gentle

6. I am **particularly** proud of my cooking skills.
 - a. actually
 - b. especially
 - c. usually

7. The oil tank **exploded**.
 - a. leaked
 - b. got empty
 - c. blew up

8. **Apart from** oranges, Lenny can't eat any citrus fruits.
 - a. Besides
 - b. Due to
 - c. Because of

9. Bill's brother was a **journalist**.
 - a. reporter
 - b. historian
 - c. lawyer

10. What are the **downsides** of being the youngest child in the family?

- a. consequences
- b. disadvantages
- c. benefits

11. Luckily, we had booked the tickets **in advance**.

- a. quickly
- b. beforehand
- c. soon

12. Billy will **try** to do his best in the exam.

- a. aim
- b. struggle
- c. attempt

13. Carrie **thinks** that she will finish her studies after five years.

- a. suspects
- b. wishes
- c. reckons

14. The food in that restaurant was just **inferior**.

- a. damaging
- b. second-rate
- c. harmful

2. Täydennä puuttuvat kohdat englanniksi suomenkielisten vihjeiden avulla.

1. The artist's tour _____ (*lopulta*) ended.
2. It had snowed the night before, so getting from place to place was _____ (*vaikeaa*).
3. All the trains and buses were on time which was really _____ (*yllättävää*).
4. I will _____ (*suositella*) the film that I saw last night to my friends.
5. I'm sure that John will _____ (*onnistua*) in the university entrance exam.
6. What kind of plans do you have for the _____ (*tulevaisuus*)?
7. _____ (*yhtäkkiä*), Sheila turned up to Carol's place.
8. Before the speech, Janet didn't feel _____ (*itsevarma*) at all.
9. What would it feel like to be a _____ (*julkisuuden henkilö*)?
10. Mike is definitely worried about the _____ (*ilmastonmuutos*).

Lähteet: Open Road 1, 2 ja 3, mukaeltu

Kiitos vastauksistasi!

Appendix 2. The survey conducted in upper secondary school

Kysely sanaston oppimisstrategioista ja kielitesti

Sanaston oppimisstrategiat ovat sanaston oppimisessa käytettäviä keinoja ja tekniikoita. Näitä ovat esimerkiksi sanakirjan käyttö ja avun kysyminen opettajalta, kun et tiedä, mitä sana tarkoittaa.

Kyselyn jälkeen löydät kaksi tehtävää. Vastaa niihin parhaasi mukaan.

Vastaa mahdollisimman rehellisesti, sillä jokainen vastauksesi on arvokas minulle. Kysely tehdään nimettömänä. Kaikki vastaukset käsitellään luottamuksellisesti.

Kiitos vastauksistasi ja tsemppiä vastaamiseen!

Vastaa jokaiseen kysymykseen.

Rastita viivalle sinulle sopiva vaihtoehto.

Olen
tyttö _____
poika _____

Olen
yläkoulussa _____
lukiossa _____

Käännä sivua!

A) Sanaston oppimisstrategiat. Vastaa alla oleviin väittämiin siten, kuinka usein käytät kyseistä sanaston oppimisstrategiaa (1 = en koskaan, 2 = harvoin, 3 = melko usein, 4 = usein). Ympyröi se numero, joka sopii sinuun parhaiten.

Esim. jos kysyt melko usein apua opettajalta, merkitset vastauksesi näin:

Kysyn apua opettajalta, jos en tiedä, mitä uusi sana tarkoittaa.

1 2 3 4

Kun kohtaan uuden englanninkielisen sanan, käytän alla olevia strategioita ymmärtääkseni, mitä uusi sana tarkoittaa:

1. Käytän tekstissä olevia kuvia, kun yritän ymmärtää, mitä uusi sana tarkoittaa.
1 2 3 4
2. Käytän tekstistä löytyviä ympärillä olevia sanoja, jotka auttavat minua ymmärtämään uuden sanan.
1 2 3 4
3. Yritän ymmärtää puhetilanteissa puhujan eleiden avulla, mitä uusi sana tarkoittaa.
1 2 3 4
4. Käytän englanti-suomi –sanakirjoja uuden sanan ymmärtämisessä.
1 2 3 4
5. Käytän englanti-englanti –sanakirjoja uuden sanan ymmärtämisessä.
1 2 3 4
6. Käytän sanalistoja (esim. oppikirjan kappaleiden sanalistoja) opetellessani uusia sanoja.
1 2 3 4
7. Kysyn opettajalta apua, jos en tiedä, mitä uusi sana tarkoittaa.
1 2 3 4
8. Kysyn luokkakavereiltani apua, jos en tiedä, mitä uusi sana tarkoittaa.
1 2 3 4
9. Mitä muita strategioita, tekniikoita tai tapoja käytät, kun haluat tietää, mitä uusi sana tarkoittaa? Kirjoita vastauksesi alla oleville viivoille.

Kun haluan varmistaa, että muistan myös myöhemmin, mitä uusi englanninkielinen sana tarkoittaa, käytän alla olevia strategioita:

10. Keskustelen henkilöiden kanssa, joiden äidinkieli on englanti.

1 2 3 4

11. Harjoittelen sanoja kavereiden kanssa.

1 2 3 4

12. Opin sanan, kun yhdistän sanan siihen liittyvään kuvaan.

1 2 3 4

13. Yhdistän sanan omaan henkilökohtaiseen kokemukseeni.

1 2 3 4

14. Yhdistän sanan samaa tarkoittavien sanojen kanssa tai sen vastakohtan kanssa.

1 2 3 4

15. Ryhmittelen sanoja omalla tavallani esim.

kirjaani/vihkooni/tabletilleni/tietokoneelleni, jotta muistaisin ne paremmin.

1 2 3 4

16. Keksin sanoista tarinoita, jotta muistaisin sanat paremmin.

1 2 3 4

17. Sanon sanan ääneen, kun opiskelen sanaa.

1 2 3 4

18. Mietin, miltä sana näyttää eli miten se kirjoitetaan.

1 2 3 4

19. Alleviivaan sanan ensimmäisen kirjaimen.

1 2 3 4

20. Mietin omin sanoin, mitä sana tarkoittaa.

1 2 3 4

21. Teen jotain fyysistä liikettä, kun opiskelen sanaa (esim. sanan näytteleminen).

1 2 3 4

22. Toistan sanan ääneen monta kertaa.

1 2 3 4

23. Kirjoitan sanan monta kertaa peräkkäin esim.

kirjaani/vihkooni/tabletilleni/tietokoneelleni.

1 2 3 4

24. Teen sanalistoja opetellessani sanoja esim.

kirjaani/vihkooni/tabletilleni/tietokoneelleni.

1 2 3 4

25. Käytän muistikortteja opitellessani sanoja (toisella puolella suomenkielinen sana ja/tai kuva ja toisella puolella englanninkielinen sana ja/tai kuva).

1 2 3 4

26. Teen muistiinpanoja sanoista oppitunnilla esim. kirjaani/
vihkooni/tabletilleni/tietokoneelleni.

1 2 3 4

27. Käytän tekstikirjani sanasto-osioita opitellessani sanoja.

1 2 3 4

28. Kuuntelen sanoja nauhalta, jotta muistaisin sanat paremmin.

1 2 3 4

29. Käytän englanninkielistä mediaa sanojen opetteluksessa (esim. laulut, elokuvat, uutiset, sosiaalinen media).

1 2 3 4

30. Jätän välistä sanan, jos minusta tuntuu, että en opi sitä helpolla.

1 2 3 4

31. Testaan itseäni, miten olen oppinut uusia sanoja (esim. tekemällä omia sanakokeita).

1 2 3 4

32. Mitä muita strategioita, tekniikoita tai tapoja käytät, kun haluat varmistaa, että muistat myös myöhemmin, mitä uusi sana tarkoittaa? Kirjoita vastauksesi alla oleville viivoille.

B) Tehtävät. Vastaa kysymyksiin ohjeiden mukaan.

1. Fill in the gaps by choosing the best alternative. Circle your answer.

Brothers (and sisters) in arms

It doesn't matter whether you believe in **1** _____ military service or not as long as you are prepared to **2** _____ your duty if the need **3** _____. Nevertheless, those young men who decide to **4** _____ the army will have a choice when it comes to the length of the service **5** _____, whereas conscientious **6** _____ will have no choice in the matter. Still, changes are underway even in something as traditional as the defence **7** _____. In the mid-nineties it also became possible for Finnish women to **8** _____ their applications and **9** _____ military service.

In the event of a conflict, **10** _____ – male or female – will be **11** _____ to help resolve it. **12** _____ the peace is one matter; keeping it is another. In this situation, military **13** _____ as well as those who **14** _____ to serving in the army will also play their part.

- | | | | |
|-----------|---------------------|----------------------|---------------------|
| 1 | A compulsory | B compelling | C compulsive |
| 2 | A do | B make | C take |
| 3 | A rises | B arisen | C arises |
| 4 | A join to | B join up | C join |
| 5 | A era | B term | C period |
| 6 | A objects | B objectors | C objections |
| 7 | A forces | B powers | C strength |
| 8 | A substitute | B subsist | C submit |
| 9 | A attend | B do | C go |
| 10 | A ranks | B convictions | C conscripts |
| 11 | A called off | B called out | C called up |
| 12 | A Resorting | B Restoring | C Settling |
| 13 | A drop-outs | B weapons | C courses |
| 14 | A object | B refuse | C deny |

2. Fill in the gaps in the right form in English based on the Finnish clues.

1. Many families suffer financial _____ (*vaikeus*) if one of the breadwinners is laid off.
2. It took us three years to pay off all our _____ (*velka*).
3. The government should do more to promote environmentally _____ (*kestävä*) ways of producing energy.
4. If we want to inhibit the spread of AIDS, health officials must raise _____ (*tietoisuus*) about the disease.
5. The salesperson couldn't _____ (*taata*) that the shaver could be recharged in the US.
6. The farmers' working conditions have improved _____ (*huomattavasti*) over the past few years.
7. Finally, after speaking for twenty minutes, the priest _____ (*julistaa*) them husband and wife.
8. Customers would _____ (*halukkaasti, mielellään*) pay higher prices for their coffee if they knew where the money was going.
9. The _____ (*viljely*) of different kinds of grains is increasing in many parts of Ostrobothnia.
10. The government will _____ (*panna täytäntöön*) certain actions concerning the national health care system.

Lähteet: In Touch 8, mukaeltu

Kiitos vastauksistasi!

Appendix 3. Finnish summary

1 Johdanto

Sanasto on huomattava osa-alue toisen kielen oppimisprosessissa. Tämä voidaan perustella sillä, että sanasto tarjoaa merkittävän perustan kielen rakenteille. Kuuluisa sanaston tutkija Norbert Schmitt on myös todennut, että sanasto on tärkeä osa toisen kielen oppimista ja sanastoa tarvitaan, kun halutaan saavuttaa hyvä toisen kielen taitotasoa (Schmitt 2010b, 3–4). Oppimisstrategioita käytetään silloin, kun oppimisprosessia halutaan helpottaa eli kun sanaston oppimista halutaan tehdä helpommaksi. Oxfordin mukaan oppimisstrategiat ovat erilaisia tekniikoita tai työvälineitä, jotka helpottavat oppimisprosessia ja kannustavat oppijaa omaan aktiiviseen oppimiseen (Oxford 1990, 1). Tutkijan mukaan oppimisstrategioiden käyttö saattaa myös johtaa parempaan kielitaidon tasoon (Oxford 1990, 1). Tämä oppimisstrategioiden määritelmä voidaan myös laajentaa koskemaan sanaston oppimisstrategioita, joissa keskipisteenä on erityisesti sanaston oppimisen lisääminen. Suomessa vuonna 2014 tehty perusopetuksen opetussuunnitelma kannustaa myös oppijaa ottamaan vastuuta omasta oppimisestaan, jotta oppijan oma rooli olisi oppimisprosessissa aktiivinen (Opetushallitus 2014).

Tämä pro gradu -tutkielma käsitteli sanaston oppimisstrategioita. Sanaston oppimisstrategiat ovat osa yksilöllisiä eroja toisen kielen tutkimuskentällä. Tämän tutkimuksen kiinnostuksen kohteena olivat seuraavat tutkimuskysymykset: millaisia sanaston oppimisstrategioita oppijat käyttävät yläkoulussa ja lukiossa, onko tutkimusryhmien sanaston oppimisstrategioiden käytössä eroja ja millainen yhteys sanaston oppimisstrategioiden ja sanaston taitotasolla on. Tutkimuksen tekemisen perusteena oli saada lisää tietoa siitä, mitä ja miten sanaston oppimisstrategioita käytetään koulumaailmassa oppilaiden toimesta ja miten tätä tietoa voitaisiin hyödyntää koulutustieteellisessä kontekstissa. Tässä tiivistelmässä käydään läpi tutkimukseen perustuva teoreettinen viitekehys, joka perustuu Schmittin (1997) sanaston oppimisstrategioiden jaotteluun. Teoriaosuuden jälkeen tiivistelmä käsittelee tutkimuksen aineistoa ja käytettyjä menetelmiä, minkä jälkeen käsitellään tulokset ja pohdinta. Viimeisenä käydään läpi vielä johtopäätökset sekä ehdotukset koskien tulevaisuuden tutkimusta oppimisstrategioiden parissa.

2 Teoria

Oppimisstrategiat voidaan nähdä perusteena sanaston oppimisstrategioille, sillä nämä kaksi yksilöllisten erojen osa-alueita ovat hyvin lähellä toisiaan. Näin ollen yleiset oppimisstrategiat käydään ensin läpi, minkä jälkeen sanastoon liitetyt oppimisstrategiat käydään läpi. Tutkijat ovat jaotelleet eri tavoilla oppimisstrategioita ja todennäköisesti kuuluisimpia jaotteluja ovat Oxfordin (1990) sekä O'Malley ja Chamot'n (1990) oppimisstrategiatasonomiat. O'Malley ja Chamot jakavat strategiat metakognitiivisiin strategioihin, kognitiivisiin strategioihin sekä sosiaalisiin ja affektiivisiin strategioihin (O'Malley & Chamot 1990). Oxford puolestaan jakaa oppimisstrategiat suoriin ja epäsuoriin strategioihin (Oxford 1990, 17). Suoriin strategioihin kuuluvat muististrategiat, kognitiiviset strategiat ja kompensatiostrategiat (Oxford 1990, 37). Epäsuoriin oppimisstrategioihin kuuluvat metakognitiiviset strategiat, affektiiviset strategiat ja sosiaaliset strategiat (Oxford 1990, 135). Oppimisstrategioiden jaottelussa on ilmiselvästi päällekkäisyyksiä eri tutkijoiden välillä.

Aikaisempi tutkimus on tutkinut, millaisia strategioita eritasoiset oppijat käyttävät ja onko oppimisstrategioiden käytön ja toisen kielen osaamistason välillä jonkinlainen yhteys. Kazemi ja Kiamarsi (2017) käyttivät O'Malley ja Chamot'n (1990) teoreettista viitekehystä, kun he selvittivät, millaisia strategioita eritasoiset oppijat käyttivät luetunymmärtämistehtävissä. Korkeammalla tasolla olevat oppijat käyttivät enemmän metakognitiivisia strategioita kuin keskitason oppijat. Nämä keskitason oppilaat käyttivät puolestaan enemmän kognitiivisia, sosiaalisia ja affektiivisiä strategioita kuin edistyneemmät oppijat. Tulokset osoittivat, että strategioiden käytöllä ja niiden valinnoilla on yhteys kielitaidon tasoon. (Kazemi & Kiamarsi 2017, 156). On hyvin todennäköistä, että edistyneemmät oppijat käyttävät enemmän metakognitiivisia strategioita, sillä he ovat vanhempia, mikä viittaa korkeampaan kognitiiviseen kehittyneisyyteen. Näin ollen he ovat valmiimpia refleктоimaan omaa oppimistaan. Myös Green ja Oxford (1995) tutkivat yhteyttä strategioiden käytön ja kielitaidon menestyksen välillä. Tämä tutkimus puolestaan perustui Oxfordin (1990) aiemmin esiteltyyn strategiajaotteluun. Tulokset osoittivat, että menestyneemmät oppilaat käyttivät huomattavasti enemmän oppimisstrategioita. (Green & Oxford 1995, 286). Tässä tutkimuksessa edistyneemmät oppilaat käyttivät kuitenkin alemman tason oppijoita enemmän kognitiivisia strategioita, mitä voidaan verrata Kazemi ja Kiamarsin (2017) tutkimukseen, jossa alemman tason oppijat käyttivät enemmän kognitiivisia strategioita kuin edistyneemmät oppilaat.

Tietynlaisia ominaisuuksia voidaan liittää niin sanotusti hyviin kielen oppijoihin.

Menestys toisen kielen oppimisessa vaihtelee yksilöstä toiseen, joten on tärkeää tutkia, millaisia strategioita hyvät oppijat käyttävät. (Rubin 1975, 41). Joan Rubin on listannut seitsemän erilaista strategiaa, joita hyvät oppijat mahdollisesti käyttävät oppimisessaan. Näitä strategioita ovat *arvaaminen, kommunikointi, virheiden tekeminen, keskittyminen sanan muotoon, harjoittelu, monitorointi ja keskittyminen sanan merkitykseen*. (Rubin 1975, 45–48). Voitaisiin siis sanoa, että hyvät kielenoppijat ottavat riskejä esimerkiksi arvaamisen ja virheiden tekemisen muodossa ja he panostavat monipuolisesti kielenoppimiseen ottaen huomioon kielen eri osa-alueet. Oppimisstrategiat ovatkin osa yksilöllisiä eroja kielen oppimisen alueella. (Pietilä 2014, 45). Oppimisstrategioiden lisäksi myös esimerkiksi oppimistyylit ja motivaatio vaikuttavat toisen kielen oppimismuotoon ja saavutettuun kielitaidon taitotasoon. Motivaatio vaikuttaa esimerkiksi Rubinin (1975) listassa ilmenevään *harjoitteluun* eli kuinka sinnikkäästi oppija harjoittelee kielitaidon eri osa-alueita.

Koska yksi tutkimuskysymyksistä käsittelee sanaston taitotasoa, sitä esitellään seuraavaksi. Mearan mukaan sanaston taitotaso koostuu kolmesta eri tekijästä, joita ovat sanaston koko, sanaston osaamisen syvyys ja helppopääsyisyys sanoihin (Meara teoksessa ”Predicting Lexical Proficiency in Language Learner Texts Using Computational Indices” Crossley & al. 2010, 562). Schmittin (2010a) mukaan toisen kielen sanaston oppimisessa pitäisi ottaa huomioon viisi tekijää. Näitä ovat (1) sanaston laaja osaaminen, (2) monipuolinen sanaston tieto, (3) kohdesanan kohtaaminen usein, (4) sanan vahvistaminen muistissa ja (5) sanan vaiheittainen oppiminen alkaen sanan muodosta ja merkityksestä ja jatkuen sanan käyttämiseen kontekstissa (Schmitt 2010a 1–12). Toisen kielen sanaston taitotaso on merkittävä osa toisen kielen oppimisprosessia ja kielellistä kompetenssia. Oppimisympäristö vaikuttaa myös sanaston oppimiseen. (Niitemaa 2014, 150). Oppijan tulisi integroida sanaston oppimista myös koulun ulkopuolella olevaan ympäristöön, jolloin sanaston oppiminen tulisi tehokkaammaksi. Esimerkiksi kohdekielellä tapahtuva pelien pelaaminen, musiikin kuuntelu ja elokuvien katselu auttavat sanaston oppimisessa. (Niitemaa 2014, 150). Motivaatiolla on suuri osuus kohdekielen sanaston oppimisessa, jos oppija haluaa lisätä sanaston oppimista hänen vapaa-ajan aktiviteetteihinsa.

Sanaston oppimisstrategiat ovat osa oppimisstrategioiden laajempaa kokonaisuutta. Tutkielmassa käsiteltiin kolmen eri tutkijan sanaston oppimisstrategioiden luokitteluja. Schmittin (1997) taksonomiaa käsiteltiin kattavimmin, sillä hänen sanaston oppimisstrategioiden luokittelua käytettiin tutkimuksen teoreettisena viitekehyksenä. Paul Nationin (2001) sekä Vivian Cookin (2008) strategiataksonomit käytiin läpi, jotta sanaston oppimisstrategioista saisi perusteellisemmän kuvan ja jotta voitiin perustella, miksi

tutkimuksessa käytettiin juuri Schmittin (1997) taksonomiaa. Tässä tiivistelmässä käydään läpi ainoastaan Schmittin luokittelu, sillä se antaa perustan itse tutkimuksen käsittelylle. Schmitt jakaa sanaston oppimisstrategiat *havaintostrategioihin (discovery strategies)* ja *vahvistustrategioihin (consolidation strategies)*. Alkuperäisten englanninkielisten termien suomenkieliset vastikkeet ovat minun vapaita käännöksiäni. Havaintostrategiat viittaavat strategioihin, kun oppija kohtaa uuden sanan ja yrittää ymmärtää sanan merkityksen. Vahvistustrategiat tarkoittavat strategioita, kun oppija haluaa vahvistaa jo opitun sanan merkityksen mielessään. (Schmitt 1997, 8, 10–12). Näin ollen voitaisiin sanoa, että strategioiden käyttö perustuu lineaariseen aikakäsitykseen, sillä ensin oppija kohtaa sanan, jonka hän ymmärtää käyttämällä havaintostrategioita ja myöhemmin, kun hän yrittää painaa sanan merkityksen mieleensä, hän käyttää vahvistustrategioita. Havaintostrategiat jaetaan kahteen alaluokkaan, joita ovat *selvitysstrategiat (determination strategies)* ja *sosiaaliset strategiat (social strategies)*. (Schmitt 1997, 10–12). Termi ”selvitysstrategiat” on vapaa käännökseni. Selvitysstrategioihin kuuluvat esimerkiksi sanan merkityksen arvaaminen tekstin kontekstista ja sanakirjojen käyttäminen. Sosiaaliin strategioihin kuuluvat esimerkiksi avun kysyminen opettajalta esimerkiksi kysymällä sanan käännöksestä ja avun kysyminen luokkakavereilta esimerkiksi kysymällä sanan merkityksestä. (Schmitt 1997, 10–12). Vahvistustrategioihin kuuluvat *sosiaaliset strategiat (social strategies)*, *muististrategiat (memory strategies)*, *kognitiiviset strategiat (cognitive strategies)* ja *metakognitiiviset strategiat (metacognitive strategies)*. Ryhmässä työskentely ja kommunikointi natiivipuhujan kanssa ovat strategioita, jotka kuuluvat sosiaaliin strategioihin. Muististrategioihin kuuluvat esimerkiksi sanojen luokittelu ja sanan liittäminen johonkin henkilökohtaiseen kokemukseen. Esimerkiksi sanalistojen ja muistiinpanojen kirjoittaminen kuuluvat kognitiivisiin strategioihin. Viimeiseen strategia-alaryhmään eli metakognitiivisiin strategioihin kuuluvat esimerkiksi englanninkielisen median käyttäminen ja itsensä testaaminen omien sanakokeiden muodossa. (Schmitt 1997, 10–12). Çelik ja Toptaş (2010) tutkivat turkkilaisten englannin kielen oppijoiden käyttämiä sanaston oppimisstrategioita ja tutkijat käyttivät teoreettisena viitekehyksenään Schmittin strategiajaottelua (1997). Tutkimusryhmät olivat alemman tason oppijat, keskitason oppijat ja ylemmän tason oppijat. Tulokset osoittivat, että keskitason ja ylemmän tason oppijat käyttivät alemman tason oppijoita enemmän selvitysstrategioita. Çelik ja Toptaş (2010, 70). Toisaalta alemman tason oppijat käyttivät enemmän sosiaalisia strategioita kuin ylemmän tason oppijat (Çelik & Toptaş 2010, 66). Ylemmän tason oppijat käyttivät puolestaan enemmän muististrategioita kuin alemman tason oppijat. Ylemmän tason oppijat käyttivät myös enemmän kognitiivisia strategioita kuin alemman tason oppijat ja

keskitason oppijat. Keskitason ja ylemmän tason oppijat hyödynsivät enemmän metakognitiivisia strategioita oppimisessaan kuin alemman tason oppijat. (Çelik & Toptaş 2010, 70). Tutkijoiden mukaan sanaston oppimisstrategioiden opetusta tulisi kehittää ja oppijoiden yksilölliset erot tulisi huomioida paremmin. Opettajien tulisi enemmän auttaa oppilaita löytämään heille sopivia tapoja oppia, jotta oppimisesta tulisi tehokkaampaa. (Çelik & Toptaş 2010, 70). Zou ja Zhou (2017, 471) ovatkin sitä mieltä, että merkittävin tekijä sanaston oppimisstrategioiden käytössä on se, että oppilaat löytäisivät heille ominaisimmat strategiat. Opettajilla tulisi olla tietoa siitä, miten strategioita käytetään oppimisprosessissa (Ahari & al. 2014, 45). Opettajien merkittävää roolia oppimisstrategioiden kentällä on painotettu myös muissa tutkimuksissa (Zou & Zhou 2017, Khosravi 2012). Seuraavaksi käsitellään tutkimuksen aineistoa ja menetelmiä.

3 Aineisto ja menetelmät

Tämä tutkimus vastasi kolmeen tutkimuskysymykseen, jotka esitetään alapuolella.

- 1) Millaisia sanaston oppimisstrategioita yläkoululaiset ja lukiolaiset käyttävät?
- 2) Millaisia eroja sanaston oppimisstrategioiden käytössä ilmenee yläkoululaisten ja lukiolaisten välillä?
- 3) Millainen yhteys sanaston oppimisstrategioiden ja englannin kielen sanaston taistotason välillä on?

Ensimmäiseen tutkimuskysymykseen minulla ei ollut erityistä hypoteesia, mutta ensimmäiseen tutkimuskysymykseen liittyy olennaisesti myös avoimet kysymykset oppilaiden omista kokemuksista liittyen sanaston oppimisstrategioihin. Hypoteesini näihin avoimiin kysymyksiin oli, että oppilaat käyttävät paljon vapaa-ajan aktiviteetteja ja digitaalista mediaa, kuten videopelejä ja internetiä, kun he oppivat uusia sanoja. Hypoteesini toiseen tutkimuskysymykseen oli, että lukiolaiset käyttävät opinnoissaan enemmän oppimisstrategioita kuin yläkoululaiset ja että lukiolaiset käyttävät enemmän kognitiivisia ja metakognitiivisia strategioita kuin yläkoululaiset. Tämä johtuu siitä, että lukiolaiset ovat saaneet enemmän opetusta englannin kielestä ja näin ollen heillä on itse kielestä enemmän kokemusta. Perustin hypoteesini Waldvogelin (2013) tutkimustuloksiin, sillä hänen tutkimuksessaan ylemmän tason oppijat käyttivät enemmän sanaston oppimisstrategioita kuin alemman tason oppijat. Hypoteesini koskien yläkoululaisia oli, että he käyttävät enemmän

sosiaalisia strategioita ja muististrategioita kuin lukiolaiset. Tämä perustuu Kazemin ja Kiamarsin (2017) tutkimukseen, jossa alemman tason oppilaat käyttivät enemmän sosiaalisia strategioita kuin edistyneemmät oppilaat. Hypoteesini kolmanteen tutkimuskysymykseen oli, että strategioiden käytön ja sanaston taitotason välillä on positiivinen korrelaatio eli mitä enemmän oppija käyttää oppimisstrategioita, sitä parempi sanaston taitotasoa hänellä on. Kazemin ja Kiamarsin (2017) sekä Oxford ja Greenin (1995) tutkimukset osoittivat, että strategioiden usein tapahtuvalla käytöllä ja toisen kielen taitotasolla on positiivinen yhteys.

Tämä tutkimus pohjautui kvantitatiiviseen tutkimustapaan. Kvalitatiivinen tutkimusmetodologia oli myös läsnä avointen kysymysten muodossa. Kuitenkin suurin osa tutkimusmetodologiasta perustui kvantitatiiviseen tutkimustapaan, joten tutkimusta ei voida käsittää monimenetelmätutkimuksena. Kvantitatiivinen tutkimusmetodologia valittiin, koska se sopi yhteen tutkimuksen tavoitteiden kanssa ja suurin osa tuloksista olivat myös numeerisessa muodossa. Dörnyein (2007, 34–35) mukaan kvantitatiivinen tutkimus nähdään tarkkana tutkimusmetodologiana, sillä siinä käytetään numeroita, standardoituja menettelytapoja ja se tähtää yleistettävyyteen ja objektiivisuuteen. Schmittin (1997) sanaston oppimisstrategioiden jaottelua käytettiin tutkimuksessa, sillä hänen teoriansa on kattava ja monipuolinen. Strategioiden jaottelu havainto- ja vahvistusstrategioihin oli hyvin selkeä, mikä helpotti tutkimukseen liittyvän strategiakyselyn tekemistä. Näin ollen hyvin käytännönläheisistä syistä, Schmittin taksonomia valittiin tutkimuksen teoreettiseksi viitekehyyksi.

Tutkimukseen osallistui yläkoululaisia yhdeksänneltä luokalta sekä lukiolaisia lukion ensimmäiseltä vuosikurssilta. Yläkoululaisia oli yhteensä 21 oppilasta ja lukiolaisia oli yhteensä 27 oppilasta. Näin ollen osallistujien kokonaislukumäärä oli 48 oppilasta. Tutkimus suoritettiin varsinaisuomalaisissa kouluissa. Tutkimuseettisistä syistä ennen itse tutkimuksen tekoa opettajilta, rehtoreilta ja oppilaiden vanhemmilta kysyttiin luvat tutkimuksen tekemiseen. Tutkimus suoritettiin nimettömänä, jolloin varmistettiin oppilaiden anonymiteetti. Jälkeenpäin osallistujat koodattiin numeroilla, mikä mahdollisti datan analysoimisen. Lukiolaisryhmässä jouduttiin poistamaan yhden oppilaan vastaukset datasta, sillä hän raportoi avoimissa kysymyksissä, että hän ei harjoittele englanninkielisiä sanoja, sillä englanti on hänen toinen kielensä. Näin ollen hänen vastauksensa eivät olisi palvelleet tutkimuksen tavoitteita, sillä tarkastelun kohteena oli tutkia englannin kieltä vieraana kielenä, jota opetetaan koulussa.

Tutkimus perustui kyselyyn ja kielitestiin, joka testasi sanaston osaamistasoa. Ennen varsinaisia kyselytutkimuksia näille kahdelle tutkimusryhmälle suoritettiin

pilottivaiheentutkimuksen yhdelle yläkoululaisryhmälle, minkä arvioin riittävän tämän laajuiseen tutkimukseen. Pilottivaihe paljasti tiettyjä puutteita kyselyssä ja kielitestissä, minkä perusteella tein lopullisen kyselytutkimuksen ja kaksi eri sanaston kielitestiä kahdelle eri tutkimusryhmälle. Niin pilottivaiheessa kuin itse todellisissa testitulanteissa tutkimuksen piti ottaa huomioon lupaprosessit, sillä kaikki vastaajat olivat alaikäisiä. Kirjoitin valmiit viestit koskien lupaa saada osallistua kyselyyn ja yhteyshenkilöni välittivät nämä viestit oppilaiden vanhemmille koulujen sähköisten viestintäjärjestelmien kautta. Olin itse läsnä jokaisessa testaustilanteessa, sillä oli tärkeää, että kerroin tutkimuksen tarkoituksen ja selitin kyselyn ja kielitestin rakenteen. Tutkimuksen suorittamiseen meni jokaisella ryhmällä noin 20-30 minuuttia.

Tutkimuslomake koostui kahdesta osasta, A- ja B-osasta. A-osa käsitteli strategiakyselyä, jossa oli 30 väitettä liittyen strategioiden käyttöön. Avoimia kysymyksiä oli kyselyssä kaksi kappaletta. Väitteet olivat jaoteltu Schmittin (1997) havaintostrategioihin ja vahvistusstrategioihin ja näiden alaluokkiin. Jokaisen väitteen alla oli neljän kohdan Likert-asteikko, joka mittasi määrää, kuinka paljon oppilas käyttää kyseessä olevaa strategiaa (1=en koskaan, 2=harvoin, 3=melko usein, 4=usein). Väitteet tehtiin mahdollisimman helposti ymmärrettäviksi, jotta oppilaat pystyivät pohtimaan omaa strategioiden käyttöönsä, eikä heidän keskittyminen väitteiden ymmärtämiseen veisi liikaa aikaa. Tutkimuksen B-osa oli sanastotesti. Testit olivat erilaiset näillä kahdella ryhmällä, sillä oletuksena oli, että lukiolaisilla olisi parempi sanaston osaamisen taso ja näin ollen heille tehtiin hieman vaikeampi kielitesti. Molempien ryhmien kielitestit olivat rakenteeltaan samanlaiset. Testissä oli kaksi tehtävää, joista toinen oli reseptiivinen tehtävä ja toinen oli produktiivinen tehtävä. Reseptiivinen tehtävä oli monivalintatehtävä, jossa oppilaan piti valita sopiva englanninkielinen vaihtoehto ja produktiivisessa tehtävässä oppilaan piti kirjoittaa englanniksi sana suomenkielisen vihjeen perusteella. Tehtävät otettiin lukion englannin kielen kirjoista ja näitä tehtäviä muokattiin sopiviksi jälkeinpäin tutkimusryhmille ja tutkimuksen tarkoitukseen. Testien maksimipistemäärä oli 34 pistettä. Produktiivisessa tehtävässä pisteytyssystemi oli todella tarkka ja mahdollisimman objektiivinen. Oppilaiden vastauksista löydettiin samankaltaisuuksia, mikä helpotti pisteytyksessä. Reseptiivisestä tehtävästä sai oikeasta vastauksesta yhden pisteen ja produktiivisesta tehtävästä sai oikeasta vastauksesta tai hyvin samankaltaisesta synonyymistä kaksi pistettä. Tulosten variaation kannalta myös neljäsosaopisteita ja puolikkaita pisteitä annettiin.

Tulosten analysoimisessa käytettiin tietojenkäsittelyohjelmia Microsoft Excel 2016 ja IBM SPSS Statistics 25. Ensimmäisen ja toisen tutkimuskysymyksen analysoimisessa

käytettiin keskilukuja eli keskiarvoa, moodia ja mediaania. Avointen kysymysten vastaukset olivat suomeksi, joten nämä vastaukset käännettiin englannin kielelle. Ryhmien eroja tarkastellessa käytettiin Mann-Whitneyn U-testiä sen ei-parametrisen luonteen vuoksi. Kolmannen tutkimuskysymyksen analysoinnissa käytettiin Spearmanin järjestyskorrelaatiota, sillä tämä korrelaatiotesti olettaa datan olevan ei-parametrinen.

4 Tulokset ja pohdinta

Tuloksien käsittely jaettiin siten, että kolmeen eri tutkimuskysymykseen vastattiin järjestyksessä. Ensimmäinen tutkimuskysymys käsitteli sitä, millaisia sanaston oppimisstrategioita yläkoululaiset ja lukiolaiset käyttävät. Tulokset perustuivat keskilukuihin sekä kahteen avoimeen kysymykseen, jotka käsittelivät oppilaiden subjektiivisia kokemuksia oppimisstrategioiden käytöstä. Keskiluvut perustuivat yksittäisiin väitteisiin strategiakyselyssä. Ryhmien välillä ei ollut oikeastaan eroja siinä, mitä yksittäistä strategiaa oppilaat käyttävät tietyssä strategia-alaryhmässä eniten. Selvitysstrategioista molemmat ryhmät käyttivät keskiarvollisesti eniten sanalistoja, esimerkiksi oppikirjoista löytyviä sanalistoja, opiskellessaan englannin kieltä. Sosiaalisista strategioista, jotka kuuluvat havaintostrategioihin, molemmat ryhmät käyttivät eniten strategiaa, joka viittasi avun kysymiseen muilta luokkatovereilta. Sosiaalisista strategioista, jotka puolestaan kuuluvat vahvistusstrategioihin, sekä yläkoululaiset että lukiolaiset käyttivät eniten strategiaa liittyen keskusteluun englanninkielisen natiivipuhujan kanssa. Sanan oikeinkirjoituksen pohdinta oli keskiarvollisesti käytetyin strategia muististrategioista molemmilla ryhmillä. Tekstikirjan sanasto-osoiden käyttö oli käytetyin strategia kognitiivisista strategioista molemmilla ryhmillä. Viimeisestä strategiaryhmästä eli metakognitiivisista strategioista keskiarvollisesti suosituin strategia molempien ryhmien kohdalla oli englanninkielisen median käyttäminen opiskelussa.

Tulokset olivat melko arvattavissa, sillä esimerkiksi oppikirjat ovat hyvin keskeisiä työvälineitä oppilaiden jokapäiväisessä opiskelussa ja niitä käytetään huomattavan paljon. Englanninkielisen median käyttäminen oli myöskin hyvin ennustettavissa, sillä tieto- ja viestintäteknologia mahdollistaa nykyään oppimiselle monia kanavia. Avun kysyminen luokkakavereilta saattaa tuottaa pienemmän kynnyksen kysyä apua kuin avun kysyminen opettajalta ja tämän takia voi olla mahdollista, että oppilaat kysyvät mieluummin apua toisiltaan. Oli yllättävää huomata, että oppilaat käyttivät vahvistusstrategioiden sosiaalisista strategioista eniten strategiaa, joka viittaa natiivipuhujan kanssa puhumiseen. Oppilaat

saattavat olla kiinnostuneita kansainvälisten suhteiden luomisesta, mikä on hienoa oppimisen kannalta. Sanan oikeinkirjoituksen pohdinta ei ollut niinkään yllättävää, sillä oppilailla on usein esimerkiksi sanakokeita, joissa testataan sanojen oikeinkirjoitusta. Näin ollen sanan kirjoitusasun miettiminen saattaa saada todella ison roolin. Näiden kahden ryhmän ikäero on hyvin pieni, joten ei ole yllättävää, että oppilaat käyttävät hyvin samanlaisia oppimisstrategioita.

Avoimissa kysymyksissä oppilaat raportoivat käyttävänsä melko paljon digitaalista mediaa opiskellessaan uusia sanoja. Vastauksista nousi esimerkiksi internetin käyttö sanakirjojen muodossa, videopelien pelaaminen sekä elokuvien ja sarjojen katselu, mikä viittaa vahvasti digitaalisen median hyödyntämiseen sanaston opettelussa. Hypoteesini koskien avoimia kysymyksiä kävi näin ollen toteen, sillä hypoteesini oli, että oppilaat käyttävät paljon digitaalista mediaa, kun he haluavat ymmärtää, mitä uusi sana tarkoittaa tai kun he haluavat vahvistaa uuden sanan merkityksen mielessään. Oppilaat raportoivat käyttävänsä myös monia muita strategioita opiskellessaan vieraan kielen sanoja. Havaintostrategioihin liitettäviä strategioita olivat esimerkiksi avun pyytäminen opettajalta, vanhemmalta ja kaverilta sekä keskustelukontekstin hyödyntäminen sanan merkityksen arvaamisessa. Oppilaiden raportoimia vahvistusstrategioita olivat esimerkiksi sanojen muistamisen testaaminen esimerkiksi siten, että kaveri kysyy opeteltavia sanoja, sanaan liitettävän muistisäännön kehittäminen ja sanojen toistaminen. Myös sanojen käyttäminen, kirjoittaminen ja lukeminen mainittiin. Sanojen harjoittelu tulee selkeästi esille oppilaiden avoimista vastauksista, mikä onkin yksi ominaisuus hyvien kielen oppijoiden keskuudessa (Rubin 1975). Strategioiden moninaisuus osoittaa selkeästi sen, että oppimisstrategiat todella ovat osa yksilöllisiä eroja (Pietilä 2014). Oppilaiden vastauksista voidaan myös huomata, että he tiedostavat heille sopivimmat strategiat oppia sanoja, mikä on Zou ja Zhoun (2017) mukaan todella merkittävä tekijä strategioiden käytön osa-alueella. Oppilaat myös näyttävät opettelevan uusia sanoja vapaa-ajallansa, mikä luonnollisesti tehostaa sanojen oppimista (Niitemaa 2014).

Toinen tutkimuskysymys käsitteli sitä, millaisia eroja strategioiden käytössä ryhmien välillä on. Strategia-alaryhmiä käsiteltiin kokonaisuuksina, jotta ryhmien väliltä löydettiin eroja. Kuten ensimmäisen tutkimuskysymyksen kohdalla, myös tässä toisessa tutkimuskysymyksessä käytettiin keskilukuja, mutta tämän lisäksi myös U-testiä hyödynnettiin. Lukiolaiset käyttivät keskiarvollisesti enemmän selvitysstrategioita ja sosiaalisia strategioita, jotka kuuluvat havaintostrategioihin. Selvitysstrategioiden osalta tämä tulos oli samankaltainen kuin Çelikin ja Toptaşin (2010) tutkimuksen tulos, joka osoitti, että

keskitason ja ylemmän tason oppijat käyttivät enemmän selvitysstrategioita kuin alemman tason oppijat. Voi olla mahdollista, että lukiolaiset osaavat käyttää paremmin selvitysstrategioita, esimerkiksi sanakirjoja, sillä he ovat opiskelleet englannin kieltä kauemmin ja näin ollen vakiinnuttaneet tietyt tavat selvittää sanan merkitys. Yläkoululaiset saattavat olla vielä enemmän herkässä murrosiässä, mikä saattaa aiheuttaa sen, että apua ei kysytä niin herkästi. Lukiotason englannin kieli on toki myös vaativampaa, mikä saattaa aiheuttaa sen, että lukiolaiset kysyvät enemmän apua. Molemmat ryhmät käyttivät yhtä paljon sosiaalisia strategioita, jotka kuuluvat vahvistusstrategioihin. Yläkoululaiset käyttivät puolestaan enemmän muististrategioita, kognitiivisia strategioita ja metakognitiivisia strategioita. Muististrategioiden käytössä ei välttämättä tarvita niin kehittyneitä kognitiivisia kykyjä, joten muististrategioiden käyttö saattaa soveltua paremmin juuri peruskouluun kuin lukioon. Yläkoululaiset käyttivät myös enemmän kognitiivisia strategioita, mikä oli hyvin yllättävää. Kenties yläkoulussa keskitytään enemmän kognitiivisten strategioiden opettamiseen kuin lukiossa, jossa yleisesti ottaen on hyvin nopeampainen opiskelutahti ja näin ollen oppimisstrategioiden opetteluun ei välttämättä jää paljon aikaa. Oli hyvin yllättävää, että yläkoululaiset käyttivät myös enemmän metakognitiivisia strategioita. Täytyy kuitenkin muistaa, että jokainen oppilas on yksilö ja hallinnoi oppimistaan juuri omalla tavallaan, joten aina ei voida tehdä yleistyksiä ikäryhmän tasolla.

Hypoteesini oli, että yläkoululaiset käyttävät enemmän sosiaalisia strategioita ja muististrategioita ja että lukiolaiset käyttävät enemmän kognitiivisia strategioita ja metakognitiivisia strategioita. Hypoteesini kävi osaksi toteen, sillä yläkoululaiset käyttivät enemmän muististrategioita, mutta tulokset yllättivät siinä mielessä, että he käyttivät myös enemmän kognitiivisia ja metakognitiivisia strategioita. Greenin ja Oxfordin (1995) tutkimuksessa todettiin, että edistyneemmät oppilaat käyttivät enemmän kognitiivisia strategioita, mutta Kazemin ja Kimarsin (2017) tutkimus osoitti, että alemman tason oppilaat käyttivät enemmän kognitiivisia strategioita. Kazemin ja Kiamarsin (2017) tutkimus osoitti myös, että edistyneemmän tason oppijat käyttivät enemmän metakognitiivisia strategioita. Näin ollen tämän tutkimuksen tulokset ovat osittain samankaltaisia aikaisemman tutkimuksen kanssa. Oletuksena oli, että koska lukiolaiset ovat iältään vanhempia ja he ovat opiskelleet kauemmin englannin kieltä, heidän kognitiivinen kapasiteetti olisi korkeammalla tasolla. Näin ollen, lukiolaiset olisivat automaattisesti käyttäneet myös enemmän kognitiivisia ja metakognitiivisia strategioita. Lukiolaiset käyttivät enemmän sosiaalisia strategioita, joten hypoteesini ei saanut kannatusta tältä osin. Lukuunottamatta selvitysstrategioita, tämän tutkimuksen tulokset eivät osoittaneet samanlaisia tuloksia kuin Çelikin ja Toptaşin (2010)

tutkimus. Toinen hypoteesini oli, että lukiolaiset käyttävät yleisellä tasolla enemmän sanaston oppimisstrategioita kuin yläkoululaiset. Tämä hypoteesi sai kannatusta ja on linjassa aiemman tutkimuksen kanssa (Waldvogel 2013). Erot eivät kuitenkaan olleet U-testin mukaan merkittäviä ja näin ollen erot eivät olleet suuria ryhmien välillä.

Kolmas tutkimuskysymys käsitteli yhteyttä sanaston oppimisstrategioiden ja englannin kielen sanaston taitotason välillä. Hypoteesini oli, että korrelaatio on positiivinen eli mitä enemmän käyttää sanaston oppimisstrategioita, sitä paremmat tulokset saa kielitestistä eli sanaston osaamistaso on korkea. Spearmanin korrelaatiotesti osoittautui kuitenkin negatiiviseksi molempien ryhmien kohdalla. Tämä viittaa siihen, että mitä enemmän oppilas käyttää strategioita, sitä huonommat tulokset hän saa kielitestistä. Näin ollen hypoteesisini ei saanut kannatusta. Aiempi tutkimus on kuitenkin näistä tuloksista poiketen osoittanut, että strategioiden käytön ja kielitaidon taitotason välillä olisi positiivinen yhteys (Green & Oxford 1995 ja Kazemi & Kiamarsi 2017). Lukiolaisten kohdalla korrelaatiotestin tulokset osoittautuivat merkittäviksi, joten tulokset voidaan yleistää laajempaan kontekstiin. Negatiiviseen korrelaatioon löytyy joitain mahdollisia syitä. Strategiat saatetaan nähdä kompensatiostrategioina, joten oppilaan täytyy käyttää strategioita pärjätäkseen edes jollakin osaamisen tasolla eli tässä tapauksessa saadakseen edes joitain pisteitä sanastotestissä. Täytyy myös muistaa, että oppimisstrategiat ovat vain yksittäinen muuttuja yksilöllisten erojen joukossa, sillä esimerkiksi motivaatio ja oppimistyylit (Pietilä 2014) vaikuttavat myös oppimiseen. Voi olla, että oppilaat käyttävät myös vääränlaisia strategioita, jotka eivät edistä heidän omaa oppimistaan. Tämän näytteen perusteella korrelaatio osoittautui negatiiviseksi, mutta jonkun toisen ryhmän kohdalla yhteys saattaisi hyvinkin olla positiivinen.

5 Johtopäätökset

Tällä tutkimuksella oli tiettyjä rajoitteita. Tutkimus perustui suurimmaksi osaksi kvantitatiiviseen tutkimusmenetelmään, joka numeerisen luonteensa vuoksi ei kerro syvällisiä taustoja oppilaiden strategisesta käyttäytymisestä. Kvalitatiiviset haastattelut oppilaiden kanssa olisivat antaneet lisää syvyyttä pohdintaan ja todellisia syitä strategiseen käyttäytymiseen olisi voitu analysoida paremmin. Kyselytutkimuksella on myös tiettyjä haittapuolia. Vastaajat eivät välttämättä ole motivoituneita vastaamaan kyselyyn, sillä tutkimus suoritettiin anonymisti ja kielitestin tulokset eivät vaikuttaneet kurssiarvosanaan.

Tulisi muistaa, että strategioiden käyttö ei määrittele oppijaa hyväksi tai huonoksi oppijaksi. Strategioiden käyttö on vain osa yksilöllisiä eroja toisen kielen oppimisprosessissa

ja monet muut tekijät saattavat vaikuttaa jopa strategioiden käyttöä enemmän oppimisprosessin laatuun. Sanaston oppimisstrategioita tulisi kuitenkin tuoda esille ja opettaa koulumaailmassa, sillä osalle oppilaista nämä saattavat helpottaa oppimista. Opettajien tulisi auttaa oppilaita löytämään juuri heille sopivat strategiat (Çelik & Toptaş 2010). Tulevaisuuden tutkimus sanaston oppimisstrategioiden kentällä voisi keskittyä enemmän strategioiden kvalitatiiviseen puoleen. Haastattelut opettajien ja oppilaiden kanssa eri kouluasteilla auttaisivat saamaan tietoa asenteista oppimisstrategioita kohtaan. Pitkittäistutkimus, jossa sanaston oppimisstrategioita integroitaisiin opetukseen ja oppimiseen, antaisi myös lisää tietoa sanaston oppimisstrategioiden tehokkuudesta. Sanaston oppimisstrategioita ja oppimisstrategioita yleisellä tasolla tulisi integroida oppimistilanteisiin, jotta niiden käyttö oppimisessa tuntuisi oppilaista luontevalta.