COMPARING THE VOCABULARY LEARNING STRATEGIES OF HIGH SCHOOL AND UNIVERSITY STUDENTS: A PILOT STUDY

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Abstract: The pilot study described in this paper aims to investigate the role of Vocabulary Learning Strategies (VLS) in Hungarian secondary and tertiary educational institutions. It intended to explore the strategies students apply in the final year of high school and 3 different years of university. The first part of the paper summarizes the most significant issues and research studies in the field of VLS. Following this, it describes the study itself, for the purpose of which a questionnaire was devised, based on Schmitt's (1997) taxonomy. As the findings show, social and metacognitive strategies are less frequently used by the participants. The higher the number of years of study, the less students pratise on a regular basis or use active strategies. However, they are more likely to skip a new word and they pay more attention to pronunciation. As regards the number of strategies used, it increases with time spent studying the language.

Keywords: vocabulary acquisition, learning strategies, vocabulary learning strategies, vocabulary

1 Introduction

Language learning strategies have long been recognized as processes of utmost importance when learning a second or a foreign language. They encompass those tactics and elements of the language learning process which depend on the learner and are related to personality factors, learning style, age, sex and cultural background. Vocabulary learning strategies, being a sub-category of learning strategies in general, are significant because the acquisition of vocabulary is a never-ending process and often poses insurmountable difficulties for language learners. Furthermore, Horwitz (1988) found that vocabulary acquisition was considered by learners to be the most crucial part of language learning.

Despite this finding, little attention has been paid to VLS either in general or in specific learning environments in Hungary. This is all the more unfortunate since the higher the level of the students, the more they will be in need of expanding their existing knowledge. As far as my experience goes, in the case of university students who major in English Language and Literature, it is not grammar, pronunciation or communicative competence that will enhance a deeper knowledge of the language but vocabulary acquisition, which is therefore clearly central to their language development, regardless of what they intend to use English for in the future. Still, the word *vocabulary* has long connoted word lists in different subject matters, and there has been no research carried out as regards the problems Hungarian university students have to face when learning vocabulary, their vocabulary learning strategies and how these techniques could be incorporated into language teaching. The rationale behind having secondary students participate

in the study is to gain some insight into any possible differences between the two educational contexts.

Since there is a lack of research in this area in Hungary, the aim of this study was to paint a preliminary picture of vocabulary learning strategies used by Hungarian students at various stages in their education so that in the future a well-constructed questionnaire could be devised with specific strategies in focus. As far as expectations are concerned, the initial hypothesis is that students in higher grades use fewer strategies and with experience they become less engaged in using these strategies. As there are no language practice classes in years 4 and 5 at university, these students have little access to formal language teaching, where various vocabulary learning strategies could be shown and practised regularly. Having taught courses in all of the years, I often encountered students in the upper years concentrating so hard on the content of a particular course that their vocabulary learning seemed to have been relegated to the background.

2 Review of Literature

2.1 Definition of key terms

Cohen (1998) defines learning strategies as "learning processes which are consciously selected by the learner" (p.4) and goes on to say that they must be processes that the language learner is at least partially conscious of, although he does not necessarily need to give full attention to them. In addition, strategies are used prior to, during, or after language performance in order to enhance the use and the learning of a second or a foreign language.

In Oxford's (1990) view, strategies are operations which the learner applies "to aid the acquisition, storage, retrieval, and use of information" (p.4). She expands this definition by stating that learning strategies are "specific actions taken by the learner to make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferrable to new situations" (p. 8). Furthermore, she points to the issue of effectiveness and the role of the individual learner in using second language strategies. There are many factors influencing the strategies individual second language learners choose to apply. According to Oxford (1990), firstly, learners who are more advanced in a language and are more aware of their language learning process use better strategies. Secondly, as expected, older learners use completely different strategies than younger ones, and females have a wider range of strategy use than males. Thirdly, other factors might have an impact on the choice of strategies: age, nationality, personality traits, level of motivation, the purpose for learning the language, task requirements and teacher expectations. The last two features strongly shape students' attitudes to strategy use.

2.2 Vocabulary learning strategies

If one attempts to distinguish vocabulary learning strategies (VLS) from language learning strategies, one can claim that they are a subclass of language learning strategies. Rubin (1987, cited in Schmitt, 1997), defines lexical strategies as "the process by which information is obtained, stored, retrieved, and used" (p.203), but Schmitt argues that in the case of lexical

strategies *use* should be defined as the practice of vocabulary rather than interactional communication. Even so, it can be stated that several of the general language learning strategies in the taxonomy of Oxford can be used as VLS, too (e.g., memory strategies).

Takač (2008) explains that VLS are "specific strategies utilised in the isolated task of learning vocabulary in the target language" (p.52) and adds that learners could, in fact, use them in any other field of language learning. He also points to four characteristics whereby VLS (1) require selection on the learners' part, (2) exhibit complexity and necessitate certain processes, (3) depend upon learners' understanding and can further develop through instruction, and (4) make learning and using vocabulary in L2 more efficient.

Relying on several vocabulary reference books and textbooks and a study involving Japanese intermediate students, Schmitt (1997) devised an extensive inventory of individual VLS, which contains 58 strategies. He then grouped them along two dimensions. The first one was adopted from Oxford (1990), who put learning strategies into four groups:
- *social (SOC)*: using interaction with other speakers to enhance the learning process;
- *memory (MEM)*: relating new material to previous knowledge;
- *cognitive (COG)*: "manipulation and transformation of the target language by the learner" (Schmitt, 1997, p.205);
- *metacognitive (MET)*: being aware of, planning, monitoring and evaluating the learning process.

To this, Schmitt added a fifth category, *determination (DET)* strategies, because he intended to include important lexically-focused strategies, such as the strategies learners apply when they are faced with new words without any additional help. The second classification dimension was based on Nation (1990, cited in Schmitt, 1997), who proposed the use of *discovery* strategies *(DISCOV)* when encountering new words and distinguished between strategies for remembering and *consolidating (CONS)* new words.

These major categories served as the basis for the taxonomy. Nonetheless, as Schmitt admits, there are some limitations of the taxonomy. On the one hand, it is impossible to differentiate between various strategies and their variations and the decision of which variation to include in which part is arbitrary. In addition, several strategies could be listed under more headings, depending on the learner's aims.

Sökmen (1997) summarized the trends of teaching vocabulary by emphasizing that students should be taught "how to acquire vocabulary on their own" (p.255). It is through their independent participation that they will recognize their own learning styles. Nevertheless, Schmitt and McCarthy (1997) questioned whether vocabulary learning strategies can be taught at all, saying that research studies could only prove some degree of success, if any. In their opinion, the proficiency of learners on the one hand, and the knowledge and acceptance of teachers on the other, might actually enhance development in lexical strategy use. However, in their conclusion they highlight the difficulty of regarding strategies as separate entities since most learners tend to use strategies together, as well as the need for more research in the field of the universal applicability of vocabulary learning strategies.

2.3 Research studies in the field of lexical strategy use

Huang and Van-Naerssen (1987) used a written questionnaire as well as an in-depth interview on the use of learning strategies to study 60 graduating English-major students in China who had already completed four years of university education. In order to help establish their oral communicative ability, the subjects also took an oral examination; on the basis of which they were put into two groups. The learning strategies the researchers aimed to classify were the following:

- *formal practice*, which included such activities as listening to and doing pattern drills, listening in order to improve pronunciation, memorizing and reciting texts, imitating, retelling stories, reading aloud, and reading in order to learn vocabulary items or grammatical structures;
- *monitoring*, which refers to the efforts made by the learner to pay attention to the use of linguistic forms and modify language responses.
- *functional practice*, which included activities mainly focusing on using language for communication, such as speaking with other students and native speakers, listening and reading for comprehension, attending lectures, watching films and TV programs, and thinking or talking to oneself in English.

The main findings of their research were two-fold. While no significant difference was found between the two groups of learners with regard to formal practice and monitoring strategies, the authors discovered significant differences between the high- and low-level proficiency students in some functional practice techniques, such as speaking with other students, native speakers or teachers and participating in group activities. Although no direct cause and effect relationship was established, Huang and Van-Naerssen concluded that the use of functional practice strategies might contribute to success in the development of oral communicative abilities.

Whereas Huang and Van-Naerssen (1987) were interested in the possible relationship between general language learning strategies and oral communicative proficiency, Lawson and Hogben (1996) were among the first to turn their attention to vocabulary learning strategies and language learning outcomes. In a somewhat different type of qualitative research study, they observed 15 Australian university students as they attempted to learn new Italian words, using the think-aloud protocol and interviews to find out what types of strategies experienced learners employed when they were given an explicit vocabulary learning task, how often they used these strategies and whether their success in recalling words depended on the strategies applied. Also, a further objective was to shed light on the ability to infer word meaning from context, depending on the degree of contextual cue. Their findings emerged as follows:

- students, as expected, regarded repetition as a technique of major importance when acquiring words deliberately;
- students paid little attention to the physical or grammatical features of words, nor did they apply more complex procedures for acquisition;
- although students did use context to establish the meaning of new words (with approximately one third of the words), they were unsuccessful in recalling word meaning later, which was all the more surprising since other, much less frequently used strategies (e.g. mnemonic or keyword procedures) resulted in more efficient recall.

In their conclusion Lawson and Hogben (1996) state that there is a need to differentiate between the use of context for generating the meaning of a word and the use of context for learning and recalling it. Also, they point to the discrepancy between processes of comprehension and learning, emphasizing that while the former may only last a minute and no exact word meaning may be necessary, the latter is a pivotal factor in teaching vocabulary.

Similarly to the above-mentioned two researchers, Gu and Johnson (1996) concentrated on the relationship between vocabulary learning strategies and their impact on learning, by studying 850 sophomore non-English majors at Beijing University, China. The instruments they employed included a vocabulary learning questionnaire, which was correlated to a *vocabulary size* test, the College English Test scores and the nation-wide college entrance English examination scores. The learning strategies Gu and Johnson aimed to clarify were grouped in the following way: metacognitive strategies (self-initiation and selective attention), guessing strategies, dictionary strategies, note-taking strategies, memory strategies (rehearsal and encoding) and activation strategies. The authors' aim was to shed light on the strategies learners were most likely to employ, whether any of the strategies worked better than others, and whether good strategies automatically led to L2 development.

They came to the conclusion that the studied group of EFL Chinese learners "reported using more meaning oriented strategies than rote strategies in learning vocabulary" (p.668), and learners used combinations of strategies rather than single ones. Furthermore, the following strategies showed positive correlation with vocabulary size and general language proficiency: self-initiation, selective attention, contextual guessing, skilful use of dictionaries for learning purposes (as opposed to looking up for comprehension only), note-taking, paying attention to word formation, contextual encoding, and intentional activation of new words. Thirdly, they also found that oral repetition correlated with general language proficiency. Finally, Gu and Johnson identified five types of learners as regards lexical strategy use; however, they cautioned that this categorization might be somewhat speculative and more research is needed to confirm it:

- *readers* (they proved to be the most successful): those who believed in acquiring vocabulary in a natural way because they take initiatives as learners;
- *active strategy users* (the second best group): those who used a wide variety of strategies consciously;
- *encoders* (achieving similar results as non-encoders): those who used mnemonics to enhance their learning, but not to a great extent;
- *non-encoders*: those who are not very motivated;
- *passive strategy users* (the worst group): those who believed in memorization and a careful study of new vocabulary.

In a combination of quantitative and qualitative approaches, Wen and Johnson (1997) examined 242 second-year English-major students in five tertiary institutions in China. They looked at language learning variables and their relationship to English achievement in this context. They used a questionnaire and three nation-wide language proficiency tests to collect quantitative data, and interviews, diary studies and on-task observation (a reading task) in search of qualitative data.

Wen and Johnson (1997) divided L2 learning variables into two broad categories. Unmodifiable variables were those which are either environmental, instrumental or individual

constraints upon language learning, like sex, intelligence, aptitude and prior learning experience, whereas modifiable ones were those "which contribute most immediately and directly to the learning outcomes and are more open to external intervention" (Wen & Johnson, 1997, pp.28-30). Among the many variables examined, the following groups of learning strategies were established: vocabulary learning strategies, strategies for tolerating ambiguity, mother tongue avoidance strategies and management strategies.

The authors came to the following conclusions with regard to language learning strategies of the studied group of learners. First, vocabulary learning strategies and mother tongue avoidance strategies have a positive effect on English language proficiency. Second, tolerating ambiguity or risk-taking strategies have a negative effect upon general language proficiency. Third, management strategies, including planning, evaluation, study habits and affective control, play an important role in differentiating successful and unsuccessful learners. Fourth, belief variables, like learning purpose, attribution belief, management belief, form-focused belief, meaning-focused belief and mother tongue avoidance belief, have a strong effect on learning strategy variables.

Kemble (2003) reported on the preliminary findings of the first stage of a large-scale three-year project, the aim of which was to increase student and teacher awareness of vocabulary knowledge, use and strategies. The first year of the study aimed to discover characteristics in student behaviour when it came to vocabulary learning and acquisition. In the second stage, there was to be an attempt made by the teachers to improve their vocabulary teaching techniques and teaching, thereby raising the status of vocabulary learning among students, while in the third year teachers were to recommend changes to be implemented in the curriculum. The participants of the study were first-, second- and final-year students of Portsmouth University majoring in German. The measuring instrument was a questionnaire, in which both qualitative and quantitative question types were used. The questions focused mostly on conscious vocabulary learning techniques (e.g., note-taking, dictionary use, contextualization and structuring vocabulary items).

Kemble came to the following conclusions:
- Most of the students are ineffective vocabulary learners and have a limited understanding of what it means to 'know a word'.
- Certain vocabulary learning strategies developed at secondary school are transferred to Year 1 of undergraduate study but are gradually replaced by other kinds of strategy.
- As expected, Year 4 programmes offer the best structured vocabulary learning opportunities, as this is the time when there is a class specially assigned to vocabulary building.
- Websites are used by students for reading and acquiring new vocabulary.
- Whereas presentations are considered an important tool for practising new words classes aimed at enhancing oral skills are viewed as relatively unproductive in terms of lexis.
- Social skills are found to aid vocabulary acquisition.
- All learners showed differences in what they found useful lexical strategies.

2.4 Implications

Among the various strategies reported in the above-mentioned five studies, the following characteristics were highlighted:

- Reading stands out as one of the most important sources of language input, perhaps because this is the most traditional way of expanding vocabulary and the most suitable activity for research purposes.
- Guessing from context is another technique often applied; however, there seems to be a contradiction regarding the usefulness of this strategy in the retention of vocabulary (as risk-taking proved to be counter-effective). The final conclusion, based on qualitative data, might be that the difference lies between how, when and where learners use this strategy. Thus, L2 inferencing is an area in need of further research because we could benefit greatly from ascertaining what it is that students actually infer from a given text. Previous research studies (Bensoussan & Laufer, 1984; Haynes, 1984; Huckin & Bloch, 1993) indicated that students tended to rely on inferences based on word form associates rather than actual cues from the text, which often resulted in incorrect word-meaning determination.
- Dictionary use is closely linked to inferencing and, again, the way it is applied determines success in language retention but little has been done empirically to find out what dictionary strategies are applied by learners and whether and how these strategies influence learning outcomes.
- Memorization techniques are not as frequently used as one might expect. Apparently, there is a move away from rote-learning towards meaning-orientedness, although oral repetition was helpful in recalling new words.
- Surprisingly, self-management strategies (such as planning, evaluation, study habits, social skills and affective control) had a strong direct effect on most of the learning strategy variables and showed the largest indirect effect upon students' general language proficiency. This points towards the usefulness of elaborating on these strategies.
- There is a gap between lexical competence and performance, which needs to be addressed in the future.

Lastly, as a complement to the theoretical findings, I would like to rely on Gu (2003), who gave an overview of the issues concerning vocabulary learning strategies, which can be divided into two groups, one being a criticism of current research; the other relating to possible areas for future research. Gu criticized the following aspects of research studies:

- In the traditional approaches to research on vocabulary learning, memory strategies have been given too much attention at the expense of other vocabulary learning strategies. This might be due to the fact that vocabulary learning has largely been regarded as a memory problem.
- Learning lists of words and short-term recall tasks have been emphasized in the literature on intentional vocabulary learning instead of the learning of multi-word units.
- Most empirical research studies have focused on learning vocabulary in the short term (mostly basic recognition) instead of the long-term development of vocabulary. However, learning the vocabulary of a foreign language is a complex and gradual process, which should aim at establishing morphological, semantic, syntactic, pragmatic, and emotional connections; and it entails much more than being able to remember the list of words within a short period of time.

- Vocabulary acquisition research has adopted the top-down approach. The majority of research studies have been "experimental comparisons between some favored strategies and various combinations of control techniques" (p.19), relying mostly on learners' memory and recall strategies without questioning their authenticity in second or foreign language classrooms.
- There seems to be a controversy between strategies that are useful for meaning retention and overall proficiency. The reason for this is that "proficiency in a second/foreign language involves the automatic activation of individual words and the automatic contextual processing of these words during comprehension and production". However, if the learning task only focuses on the acquisition of the automaticity of vocabulary use, "strategies that focus on the frequency, recency, and regularity of practice will be most helpful" (p.19).

Gu's (2003) implications for future research are summarized below.

- Incidental vocabulary learning has not been clarified enough yet, even though a lot can be learned deliberately while reading with the help of a range of strategies (e.g., guessing, dictionary use, note-taking, activation, as well as intentional repetition).
- Current research on vocabulary learning strategies has shown that good learners pay attention to collocations, but more reasearch is needed to ascertain how exactly learners learn multi-word units and how these strategies correlate with language learning outcomes.
- One of the most important aims of research studies conducted so far has been to highlight the 'best' strategy for vocabulary retention. In reality, however, learners tend to employ a variety of strategies in combination, and in the future it may prove to be more worthwhile to observe learner styles than the task itself.
- Since there are cultural differences in lexical strategy use, more emphasis should be laid on observing learning factors influenced by different educational environments.

2.5 Research questions

Based on the literature, the following research questions arise for the present study:
- What kind of vocabulary learning strategies do the students of the present study use in high school and at university?
- Where and when do Hungarian high school and universtity students meet new words?
- How does the number of strategies change as the learner's language proficiency develops?

3 Method

3.1 Participants

The 84 participants of the present study were 18 high school students in their last year at Karinthy Frigyes Dual Language School in Budapest and 66 university students, all of whom were English majors at Eötvös Loránd University in Budapest. The reason for selecting students

from these institutions was partly easy accessibility. It must not be forgotten that students in their last year at Karinthy High School are in no way typical of other Hungarian secondary schools due to the fact it is a bilingual secondary school. However, for the purpose of this study they were suitable as vocabulary plays a significant role in their secondary education and their being at an advanced level (actually at least as advanced as, or perhaps in some cases more than first year university students) excluded the possibility that any differences in their strategy use would be due to language proficiency. Unfortunately, the access to high school students and first year university students was somewhat difficult and also, it was some of these students who either did not return the questionnaire or whose responses had to be disregarded.

Out of the 66 university students, 16 were in their first year, 23 either in their second or third, and 27 in their fourth or fifth years. The rationale behind grouping university students this way is the fact that the aim was to distinguish between students who are **newcomers** at the university (1st year), those who still **have language practice classes** every week, but have passed their first proficiency exam (2nd and 3rd year, where one of the major objectives is vocabulary expansion), and those who **have no more language practice seminars** because they have already passed their second proficiency exam and have specialized in a field where content is more important than vocabulary (4th and 5th year).

3.2 Instrument

According to Cohen (1998), there are several approaches to gathering information concerning learning strategies, depending on the specific research questions, the reliability and validity of the instrument as well as time constraints. If the researcher has a specific set of questions to be answered and is looking for problematic areas to emerge, written questionnaires are a suitable first step for testing different hypotheses. Therefore, in our case the instrument took the form of a questionnaire, and was based on the taxonomy of Schmitt (1997). The rationale behind choosing the inventory of Schmitt was three-fold. First of all, currently it is the most extensive one available. Moreover, the six categories are clearly defined and easy to work with; and, most importantly, since the present study is a pilot study intended to be narrowed down in the future, it suited the purpose best at this stage. However, due to the limitations of the taxonomy, that is, the difficulty of differentiating between certain strategies and the reappearance of other strategies in several cases, some statements have been joined or omitted from the final version of the questionnaire.

In order for the questionnaire to be more detailed, two further categories were set up; namely, where and when students are aware of encountering new vocabulary and what aspects of vocabulary acquisition they find problematic. Consequently, the questions were grouped into 8 sections, although some of the sections contained statements from other categories as well, and overlapped with others (e.g., social strategies appear in both the first and the second sections). With the exception of the introductory questions on personal information, such as age, sex, place and year of study, all the questions, althogether 58, were yes-no questions. While this is relatively convenient for analysis, we must be aware of the fact that the anwers at this point are very general.

Another problematic issue with the present instrument is that it may well happen that students overestimate or underestimate the use of certain strategies. The English version of the questionnaire, which was originally in Hungarian, is presented in the Appendix.

3.3 Procedures

The questionnaires were distributed personally by the researcher. There was no fixed time for the subjects to answer the questions. Most of them returned the sheet within a week. The completion of the questionnaire took approximately 15-20 minutes and the return rate was 93.3%.

4 Results and Discussion

4.1 Analysis

Using the SPSS (version 11) programme, descriptive statistics were obtained first to see the overall patterns of VLS used by all the students regardless of the year of study. Then various types of analyses were performed between the independent variables (that is, the different groups) and the dependent ones (that is, the questions of the questionnaire) to examine how various strategies related to the group the students belonged to. Finally, there was an attempt to reveal not only who uses which strategies but also how many types of strategies were used by the students.

4.2 Discovery strategies

In terms of discovery strategies, that is, strategies for noticing new words, there was no significant difference between the ages. To the question 'When and where are you aware of meeting new vocabulary?', more than 95% of the students chose the options in seminars/lessons or when reading/preparing for seminars/lessons. The second most popular options were reading texts outside school and browsing through a dictionary (85%). Thirdly, they meet new words when they listen to English language media (79%) or browse the Internet (76%).

Having analyzed the first reactions of when the students meet new vocabulary, the following results were arrived at: there was no significant difference either between the different groups of students or between the strategies they listed. The majority (60%) either read with a monolingual dictionary, or ask the speaker to explain (54.7%). The next most frequently applied strategies were underlining the word and looking it up later (51%), reading with a bilingual dictionary (48.8%), and making a note and looking it up later (40.4%). Apparently, monolingual dictionaries are preferred to bilingual ones and underlining a word is more common than making a note on the handout, perhaps because of students' laziness.

4.3 Determination strategies

In Schmitt's (1997) taxonomy, strategies of determination are strongly linked with the discovery of a new word, notably, its meaning: these are the strategies learners apply when they are faced with new words. The highest score was achieved by contextual guessing, as 98% percent of the students apply this strategy. The popularity of inferencing from context is therefore in accordance with the literature and the research studies mentioned in the review of literature; nevertheless, at this point we cannot draw conclusions from this, as we do not know exactly what it is learners do when utilizing this strategy and with how much success. Secondly, 71.4% use a monolingual dictionary and 64.3% a bilingual one, which confirms the above-mentioned findings in reference to dictionary use. An equal number of students analyse the form of a new word and use a computer-based disctionary (40.4%).

4.4 Social strategies

Speaking or corresponding with native or non-native speakers of English seemed to be the strategies the least used when the aim is to discover new words. Table 1 below illustrates the percentages of the different ages regarding this strategy:

	High school students (%)	1st year univ. students (%)	2nd & 3rd year univ. students (%)	4th & 5th year univ. students (%)
speaking with native speakers	44.4	62.5	52.1	85.1
corresponding with native speakers in writing	22.2	43.75	34.7	63
speaking with non-native speakers	50	31.25	39.1	44.4
corresponding with non-native speakers in writing	33	43	26	44.4

Table 1. Social strategies used by students to discover new words

Interestingly, the use of this strategy increases with time: Year 4 and 5 students speak and correspond with native speakers significantly more than younger ones. However, if we take a look at the questions concerning non-native speakers, we find that it is the youngest group that uses this strategy most. This might be due to the fact that in the dual language schools most subjects are taught in English, therefore students are encouraged to communicate with each other using English. For some reason, year 2 and 3 students either do not communicate with native speakers or other non-native speakers or do not find this an important aspect. However, this could depend on whether they have access to native speakers.

When it comes to discovering new words, compared to the five other strategies listed under the heading *determination strategies*, asking a native speaker for a word in L2 is again the least used strategy; only 28 students resort to this out of 84 (33%). There were two other questions in relation to social skills: asking the speaker for an L1 equivalent of the word or a paraphrase, synonym, example sentence or a definition. Both of these proved to be considerably

more popular with students, while the former was selected by 80% of the students, the latter was somewhat less used and 69% opted for it. The reasons for relying relatively little on social strategies might be that students, especially younger ones, do not link social skills with vocabulary and do not consider it a possible way of encountering or discovering the meaning of new words.

4.5 Memory strategies

Altogether 12 sub-strategies were mentioned for memorizing new vocabulary. The analysis here was more detailed: first, the overall results were calculated and all of the students were ranked, the results were calculated for each group of students and finally, the number of strategies students applied were also counted. Considering all the students, the following list in Table 2 shows the strategies for memorizing new vocabulary from the most popular one to the least popular.

Strategy	Percentage of students using it (%)
learning the words of an idiom together	73.8
making a note of the new word on the handout (underline, add L1)	71.4
studying the word in a dictionary	67.9
saying the word aloud	65.5
associating the word with a similar one in L1	63
studying the pronunciation of the word	50
learning vocabulary in short phrases	47.6
putting new words into sentences	44
studying the spelling of the word	40.4
writing vocabulary in context, adding new words with a definition, synonym or collocation	40.4
grouping words together to study them	34.5
putting the new word down with its pronunciation	15.5

Table 2. Strategies for memorizing new words

The most popular strategies were learning the words of an idiom together and making a note of the new word on the handout. Although students rarely use note-taking as a strategy when first discovering a new word, note-taking appears to be an important tool when the aim is to memorize this word. Studying the word in a dictionary, saying the word aloud, or associating it with a similar one in L1 are also techniques most students use. In spite of the fact that quite a lot of students say the new word aloud (65.5%), fewer of them study the pronunciation of a new word (50%), and hardly any of them make a note of the word with its pronunciation (15.5%). This might either be due to a lack of education in this respect or because students do not consider it vital. Also, although the majority of the participants make a note on their handout (71.4%), fewer of them learn vocabulary in short phrases (47.6%), put new words into sentences (44%), write vocabulary in context or add new words with a definition, synonym or collocation (40%) or group words together to study them (34.5%). Apparently, the more active the learner needs to be when using a strategy (and writing is involved), the lower the number of students who use it. Table 3 below shows the individual differences in percentages between the four groups.

	High school students (%)	1st year univ. students (%)	2nd & 3rd year univ. students (%)	4th & 5th year univ. students (%)
words of an idiom	77.7	62.5	69.6	81.5
make a note of the word	83.3	81.25	61.9	70.4
dictionary	66.6	81.25	65.2	67.9
say aloud	38.89	56.25	78.3	77.8
association with L1	83.3	56.25	52.2	70.8
study pronunciation	22.2	62.5	47.8	63
short phrases	38.9	50	56.5	44.4
put into sentences	16.7	37.5	52.2	59.3
study spelling	38.9	43.75	47.8	33.3
write in context	44.4	37.5	52.2	29.6
group words	38.9	43.75	34.8	26
put down pronunciation	0	6.25	17.4	30

Table 3. Types of memory strategies in the 4 groups

By taking the most interesting findings into consideration, we can see that the occurrence some strategies increases as students get older. These are: saying the word aloud for memorization, putting the new words into sentences, and noting the pronunciation. From this it can be deduced that the more experienced the students are, the more they value such properties of a word as pronunciation and context.

Interestingly, there are no strategies where there is a notable decrease in percentages so the hypothesis that older students use fewer strategies simply does not hold. Furthermore, although there are a few strategies that are popular with high school, year 1 and year 2 & 3 students, there are some that are avoided by year 4 & 5 students, such as grouping words, writing them in context, or studying the spelling. This might be because year 4 & 5 students are more confident in these strategies. When the different years are treated separately, it comes as a surprise that high school students completely disregard pronunciation, and 1st year students regard writing words in context as an important strategy. Most of the students use either 7, 6 or 5 out of the 12 strategies mentioned for memorizing new vocabulary, which means that either too many or too few strategies are avoided. Table 4 provides the data.

	High school students	1st year univ. students	2nd & 3rd year univ. students	4th & 5th year univ. students	Total
mean frequency of memory strategies	5.5	6.1875	6.3	6.4	6.143

Table 4. The average number of memory strategies the 4 groups used

In sum, the number of strategies students use increases with the years of study, which is tantamount to data supported by other research studies and this may result from their learning experience.

4.6 Cognitive and metacognitive strategies for consolidation

A similar approach was adopted with this section as with memory strategies: first, the overall results were calculated and the students were ranked, second, the results were calculated for each group of students and last, the number of strategies students applied was also counted. At first glance, it can be observed that cognitive strategies for conscious learning are much more valued by the participants than metacognitive ones related to planning and evaluating the language process. This reveals the fact that immediate goals are more important to students than general language learning aims, perhaps because they have not received any training in these metacognitive strategies. Table 5 shows the occurrence of cognitive strategies:

	High school students (%)	1st year univ. students (%)	2nd & 3rd year univ. students (%)	4th & 5th year univ. students (%)	Total (%)
make an effort to use in writing	88.8	93.75	82.6	96.3	90.5
repeat when speaking	88.8	93.75	73.9	85.2	84.5
make an effort to use in speaking	77.8	81.25	65.2	92.6	79.8
take notes in class	61.1	81.25	56.5	70.4	66.7
use word lists for revision	61.1	62.5	78.3	40.7	59.5
repeat words in writing	50	62.5	52.1	59.3	56
interact with natives and try to use new words	5.5	62.5	21.7	70.3	41.7

Table 5. Types of cognitive strategies in the 4 groups

Generally, it can be claimed that 1st and final year students use cognitive strategies more than high school or 2nd and 3rd year students. However, as regards using word lists, final year students are not nearly as active as the other age groups; the reason for which may be that they spend less time consolidating new vocabulary. The least used cognitive strategy is a social one (interacting with native speakers), which verifies what was mentioned earlier about the avoidance of these techniques, but there is a significant difference here: both 1st and 4 & 5th year students scored significantly higher than high school or 2nd and 3rd students, so the former two groups make an effort to use new vocabulary. Let us have a look at metacognitive strategies in Table 6:

	High school students (%)	1st year univ. students (%)	2nd & 3rd year univ. students (%)	4th & 5th year univ. students (%)	Total (%)
English language media	66.7	75	74	63	69
skip or pass a new word	22.2	37.5	36.4	40.8	35
continue to study a word over time	22.2	37.5	34.8	29.7	31
practise on a regular basis	44.4	37.5	17.4	18.5	27.4
test oneself with word tests	55.6	18.75	27.3	11.1	15.66
practice time scheduled and organized	5.5	0	4.3	7.4	4.76

Table 6. Types of metacognitive strategies in the 4 groups

First of all, making use of English language media as a metacognitive strategy seems most popular with 1st, 2nd and 3rd year students, perhaps because of the language practice classes, but its significance does not decrease. Another interesting fact is that the more advanced students are, the more they dare to skip or pass a new word, the less they practise on a regular basis and the less often they test themselves with word tests. However, it is surprising that the students' practice time is not at all scheduled and organized. Naturally, it is the worst for 1st year students, who have not got used to university and its expectations yet. Most participants reported using either six or seven strategies out of 13, which is similar to the number of memory strategies used: neither too many, nor too few. Table 7 summarizes the frequencies of the strategies.

	High school students	1st year univ. students	2nd & 3rd year univ. students	4th & 5th year univ. students	Total
Mean frequency of MET/COG strategies	6	7.44	6.22	6.85	6.6

Table 7. The number of cognitive and metacognitive strategies the 4 groups used

Interestingly, the highest number of strategies is used by 1st year university students, followed by year 4 and 5 students, while the two other groups scored nearly the same as each other. The reason why 1st year students use these strategies the most might be that they are new to the university and are quite conscious of their learning, whereas year 4 and 5 students base their learning on experience.

4.7 Problematic features of vocabulary

The participants face the most problems when establishing the exact meaning of a word (53.5% of students find this aspect problematic), followed by remembering collocations and idioms (51.1%), dealing with words with more meanings (49%), finding L1 equivalents (46.4%), syntactic properties (45%) and getting rid of L1 influence (44%). Fewer problems are caused by learning synonyms (40.4%), pronunciation (32.1%), spelling (30%) and morphology (24%). It seems that the students participating in the survey face more problems with meaning than with form. One reason for this could be that word meaning is more abstract and difficult to grasp (which is indicated by the fact that quite a few students left this question without any response). Another reason may be that students find it crucial to know the exact meaning of a word, as for them this is the primary aim of vocabulary acquisition and this is how they have been educated. Table 8 illustrates the differences in the four groups.

	High school students	1st year univ. students	2nd & 3rd year univ. students	4th & 5th year univ. students	Total
mean frequency: form	2	1.52	1.63	1.88	1.96
mean frequency: meaning	3	3	2.695	2.77	2.84

Table 8. Students' problems with word form and word meaning

Finally, the problems students experience with words appears to decrease over time, which is not surprising; however, this decline is not significant at all.

5 Conclusion, limitations and further research possibilities

Even though this is a pilot study, some preliminary conclusions can be drawn that can be taken into consideration when designing an improved version of the questionnaire.

The answer to research question 1 (*What kind of vocabulary learning strategies do the students of the present study use in high school and at university?*) appears to be that the number of strategies for practising on a regular basis and using word lists for consolidation decreases as the level of the students improves. In contrast, the strategies of skipping a new word, putting words into sentences and pronunciation become more important as students become more advanced. However, the students of the present study tend to avoid social and metacognitive strategies.

In response to research question 2 (*Where and when do Hungarian high school and universtity students meet new words?*), it has to be stated that there was no significant difference either between the different groups of students or between the strategies they listed for discovering new vocabulary, and the most popular strategy listed was guessing from context, followed by the use of monolingual dictionaries.

The results of research question 3 (*How does the number of strategies change as the level of the learner increases?*) showed that students at higher levels use more strategies, which is definitely a positive finding; however, possible reasons for this are still to be discovered.

Some of the findings raise certain questions in light of the literature mentioned. First of all, even though Huang and Van-Naerssen (1987) concluded that the use of functional practice strategies (referred to as social strategies in the present study) might contribute to success in the development of oral communicative abilities, therefore, we have yet to direct students' attention to the importance of this strategy. Also, in accordance with the findings of Lawson and Hogben (1996), as well as those of Gu and Johnson (1996), the students rely more on the meaning of a new word and pay relatively little attention to the physical or grammatical features of words, which again implies that there is a need for training in this respect. This is also confirmed by Takač (2008), who also called attention to the lack of relevant and recent research with regard to VLS use.

Naturally, there are some serious limitations in this study. First of all, it would be interesting to assess students' proficiency level and performance to determine how this is linked to their strategy use. Secondly, the number of students was not enough, the sizes of the groups were different, and only two possible answers (yes-no) were available, which did not give enough room for the participants to really elaborate on their opinion. Some of the questions might not have been answered because students did not know exactly what was meant by the question (e.g., syntactic properties in the case of high school students). Finally, there is also the danger of participants believing that they use a strategy but it might not necessarily be the case.

There are several steps that could be taken to increase the validity and reliability of the research to follow, such as the extension of the question types, perhaps using Likert-type questions to make it more elaborate and asking students not only about the strategies they use, but also about the ones they find more useful. Furthermore, it would be interesting to see how teachers relate to the problems of vocabulary strategies found so far, how they teach words, how they assess students' knowledge and whether they teach or apply any of the strategies in their own classrooms. With reference to the literature on VLS, it can be stated that the research topic has to be narrowed down in order to observe one or two aspects (e.g., collocations, social or metacognitive strategies) in more detail.

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APPENDIX

The English translation of the
Questionnaire on Vocabulary Learning Strategies

Dear university/college/high school student,
The questions below intend to find out about your habits and strategies concerning vocabulary learning. As a PhD student, I would like to ask you to fill it in and provide as genuine responses as you can. Thank you,

Brigitta Dóczi

Part 1

Age:

Sex (*circle the answer*):   M   F

Where do you study? (*circle the answer*): University   College   High school

Year of study at university/college/high school:

Number of years studying English:

Part 2

*In this part I would like to ask you to decide whether the statements are true or false. If the statement is true for you, please circle **Y** (which stands for **yes**), if not, then circle **N** (which stands for **no**). For example, if you like chocolate, please circle Y like this:*

I like chocolate.   Ⓨ   N

2.1.a Where and when are you aware of meeting new vocabulary?
1. in seminars and lectures/lessons   Y   N
2. when reading texts for my university/high school courses   Y   N
3. when reading texts outside university/high school   Y   N
4. when listening to and watching English-language media (e.g. songs,   Y   N
   TV, movies, newscasts)
5. when speaking with native speakers of English   Y   N
6. when corresponding with native speakers of English in writing   Y   N
7. when speaking with other non-native speakers of English   Y   N
8. when corresponding with other non-native speakers of English in writing   Y   N
9. when browsing the internet   Y   N
10. when browsing through a dictionary or a thesaurus   Y   N

2.1.b. In which of the above contexts does vocabulary cause a problem? (*Please write the suitable number(s) here*):
_____
_____

2.1.c. In which of the above contexts do you think you acquire the most vocabulary? (*Please write the suitable number(s) here*):
_____
_____

2.1.d. What do you do first when you meet new words?
1. ask the speaker at once to explain   Y   N
2. make a note and look them up afterwards   Y   N
3. read with a bilingual dictionary   Y   N
4. read with a monolingual dictionary   Y   N
5. underline the word and look it up later   Y   N
other:_____

2.2 How do you discover the meaning of new vocabulary?
1. I analyse the form of a new word.   Y   N
2. I try to guess from context.   Y   N
3. I use a bilingual dictionary to find out the meaning of a new word.   Y   N
4. I use a monolingual dictionary to find out the meaning of a new word.   Y   N
5. I use a computer-based dictionary to find out the meaning of a new word.   Y   N
6. I ask a native speaker for the meaning of a word in L2 (e.g. English).   Y   N
other:_____

2.3 Who do you turn to when you need help with new vocabulary?

1. I ask my teacher, a classmate or someone else for the L1 (e.g. Hungarian)   Y   N
translation of a new word.
2. I ask the speaker for a paraphrase or synonym of a new word, an example   Y   N
sentence, or a definition, etc.

2.4 How do you memorize new vocabulary?

1. I make note of a new word on my handout – underline, add L1   Y   N
   equivalent, etc.
2. In my vocabulary notebook I write vocabulary in context, or add   Y   N
   new words with a definition, synonyms or collocations.
3. I write the new word down together with its pronunciation.   Y   N
4. I tend to learn vocabulary in short phrases.   Y   N
5. I group words together to study them.   Y   N
6. I put the words into sentences.   Y   N
7. I study the spelling of a new word.   Y   N
8. I study the pronunciation of a new word.   Y   N
9. I say the word aloud when studying.   Y   N
10. I learn an idiom as a whole.   Y   N
11. I study the word in a bilingual/monolingual dictionary.   Y   N
12. When possible, I associate it with a similar word in my L1.   Y   N
other:_____

2.5 What strategies do you find effective for consolidating new vocabulary?

1. I say the word aloud.   Y   N
2. I repeat words in writing.   Y   N
3. I use word lists for revising.   Y   N
4. I take notes in class.   Y   N
5. I make an effort to use new vocabulary when speaking.   Y   N
6. I make an effort to use new vocabulary in writing.   Y   N
7. I interact with native speakers and try to use new words.   Y   N
8. I use English-language media (e.g. songs, movies, newscasts).   Y   N
9. I test myself with word tests.   Y   N
10. I practise new vocabulary on a regular basis.   Y   N
11. My practice time is scheduled and organized.   Y   N
12. I skip or pass a new word.   Y   N
13. I continue to study a word over time and revise old vocabulary   Y   N
    regularly.
other:_____

2.6 What aspect of vocabulary acquisition/knowledge do you find problematic?

1. Word form
a. pronunciation   Y   N
b. spelling   Y   N
c. morphology   Y   N
d. syntactic properties   Y   N

2. Word meaning
a. to establish the exact meaning   Y   N
b. to get rid of L1 influence   Y   N
c. to learn more synonyms   Y   N
d. to deal with words which have several meanings   Y   N
e. to remember collocations/idioms   Y   N
f. to find L1 equivalents   Y   N
other: _____

List any other strategy you do not use but find useful:
_____
_____

Add any other comments here:
_____
_____

Thank you for your participation!