



ENGLISH VOCABULARY LEARNING STRATEGIES PREFERRED BY L2 LEARNERS FROM DIFFERENT ACADEMIC MAJORS

Dr. Öğr. Gör. Tuğba AYDIN YILDIZ

Bülent Ecevit University, The School of Foreign Languages, Foreign Languages Department,
Zonguldak / TURKEY, ORCID: 0000-0001-5248-2484

ÖZET

Çalışma, ikinci dilleri İngilizce olan Türklerin özellikle kullandıkları bir kelime öğrenme stratejilerinin olup olmadığının ve kelime öğrenme stratejilerinin kullanımında, Sayısal, Sözel ve Eşit ağırlık gibi akademik ana dallarının farklı olmasının herhangi bir etkisi olup olmadığının araştırılması amaçlanmıştır. Veri, kelime öğrenme stratejileri anketi (Schmitt, 1997'den uyarlanmıştır) kullanılarak, kağıt-kalem ortamında toplanmıştır. Sonuçlar göstermiştir ki, L2 öğrencileri dil öğrenimi esnasında kelime öğrenme stratejilerini kullanmaktadırlar ve katılımcılar çoğunlukla bilişsel stratejileri kullanmayı tercih etmişlerdir, fakat ilginç şekilde, sayısal gurubu bahsi geçen strateji kadar üst bilişsel stratejileri de kullanmışlardır. Dahası, tüm katılımcılar için sosyal ve bellek stratejileri en az popüler stratejilerdir. Bu nedenle, akademik bölümler, kelime öğrenme stratejileri açısından etkili bir faktör olarak sonuçlandırılabilir.

Anahtar kelimeler: VLS, kelime öğrenme stratejisi, academic ana dal, L2 İngilizce.

ABSTRACT

The research aims to determine whether Turkish L2 learners of English use specific vocabulary learning strategies, and whether there is any effect in use of vocabulary learning strategies by the learners from different academic majors such as Social Sciences, Turkish-Math and Sciences. The data were collected by vocabulary learning questionnaire (adapted from Schmitt, 1997) in pen-and-paper environment. The results showed that the L2 learners used vocabulary learning strategies during language learning, and the participants preferred cognitive strategies more commonly, but interestingly, Science group preferred metacognitive strategies as much as the mentioned one. Furthermore, social and memory strategies were the least popular strategies for all participants. Thus, the academic majors can be concluded as an effective factor from the perspective of vocabulary learning strategies.

Keywords: VLS, vocabulary learning strategy, academic major, L2 English.

1. INTRODUCTION

Vocabulary is the main basis and is of great importance to second language learners (L2 learners). People use the words to term the objects, activities or opinions. To handle a foreign language effectively, vocabulary knowledge is one of the most fundamental components (Zimmerman, 1998). A variety of outstanding features of the vocabulary knowledge in L2 learning has been noticed as it provides a base for other learning skills such as speaking, listening, reading and writing (Orawiatnakul, 2011). For example, some major particles of the vocabulary knowledge such as; semantics, lexicon, morphology, word classification, acquisition or techniques and methods, have been familiarized to pattern the vocabulary teaching on something more professional and also more practicable (Hatch & Brown, 1995). Learning vocabulary consists of some challenges; motivation, tools, environment, addressee and etc., thus, for teachers, it should be shaped around not only teaching the word, but also helping individuals create their own vocabulary learning strategies, and for L2 learners, nevertheless the opposite is always the case, it should be shaped around overcoming the mentioned difficulties and identifying the strategies. Being conscious about the vocabulary strategies by L2 learners gain importance, moreover, the unknown

words encountered in various activities in the classroom may result in failure to acquire if the student is supported to learn on his own. Hague (1987) disaffirms many instances of so-called the traditional vocabulary learning strategies in the classroom consisting memorizing, word lists or dictionary usage. Anderson (1980) discriminates that knowing a word means far beyond L1 translation only, covers procedural knowledge at the same time.

Based on an inspection of different methods, a number of vocabulary learning strategies were revealed by researchers. Schmitt (1997) and Rubin (1987) described Vocabulary Learning Strategy as “the process by which the information is obtained, stored, retrieved, and used effectively”. In this context, the Vocabulary Learning Strategy taxonomy by Schmitt (1997) was used as the source of collecting the data by considering theoretical background of the previous studies. Thus, this study aims to explore whether there is any vocabulary learning strategy difference among the main academic majors, therefore, the main significance of this study is examining the direct effect of academic major and contributing the scarce amount of research in this field. In Turkey, only a few empirical studies on Turkish L2 learners of English from the perspective of academic major can be found in the field about vocabulary learning strategies, thus, solid results can be helpful for further investigations.

In the present study, the utility of vocabulary strategy use, assertive and contemporary strategies, academic majors (Science, Social Science and Turkish-Math departments) will be introduced in terms of vocabulary learning strategy use. In order to itemise the condition, In Turkey, high school students, from Science, Social Sciences, Turkish-Math and Language departments, enter the Student Selection and Placement Examination (annual university entrance examination), and are placed at universities considering these departments they selected during high school. More clearly, it is necessary to be a graduate from Science department to study engineering, or to be a graduate from Social Sciences department to study communication. In this study, Language department has been taken out from the investigation so as not to mislead the results.

2. BACKGORUND INFORMATION

Oxford and Crookall (1990) stated some techniques such as; decontextualizing techniques (word lists, flash cards, dictionary use), semi contextualizing techniques (word grouping, word and concept association, visual imagery, aural imagery, keyword, physical response, physical sensation, semantic mapping), fully contextualizing techniques (reading and listening practice, speaking and writing practice), adaptable techniques, classroom implications, can be conflicting that, for instance, word lists were found useful (Carter, 1987, Cohen & Apeh, 1980), and useless (Carrell, 1984; Hudson, 1982; Swaffar, 1988).

There are some previous vocabulary learning strategy studies which heavily relied on traditional techniques such as word definitions, word combinations, writing and memorizing (Cohen & Byrnes, 2007). However, it has been questioned that the traditional vocabulary learning strategies are enough to prepare the learners to a profound usage of words and to long-term retention. It has, finally, been understood that the explicit way of word instruction is not effective (Martinez-Lage, 1997, Constantinescu, 2007; Philips, Foote & Harper, 2008), on the other hand, if supported with appropriate and multi-dimensional instructions, it has been found to be a useful strategy (Taylor, Mraz, Nichols, Rickelman & Wood, 2009; Marzano, 2004; Biemiller, 2004).

Academic major has always been seen as amongst the crucial factors that affect the second language learning. In the study of Oxford and Nyikos (1989), the affecting factors such as academic major for the learners are connected to learning strategies, and somehow, to successful second language acquisition. They found out that academic major can directly affect the learners' strategy preferences.

In the study of Gu (2002), both gender and academic major factors have been analysed with adult Chinese EFL learners, and found out less strategy difference between science and arts students, on the other hand, gender seems to be the overwhelming factor containing the biggest difference in both of the academic major groups (similar results for Oxford, Nyikos & Ehrman, 1988).

In the study of Rao and Liu (2011), it has been indicated that, including diary keeping, there are significant differences between social science students and science students in learning strategies.

In the study of Rong (1999), the participants were from different majors; science, arts and English. Adapted questionnaire from Oxford's (1990) took part as a data collection tool and the findings revealed that the university students from English department preferred cognitive, compensation, affective and social learning strategies than the science students. Similarly, Mochizuki (1999) used the same adapted questionnaire and demonstrated in the mentioned study that the students from English language department utilized compensation, social and metacognitive strategies more frequently than the students from science and agriculture departments.

In the present study, the students from language departments were not included in the experiment in order to avoid any misunderstanding. Similarly, Peacock (2001) investigated the students only from science departments such as; physics, mathematics and engineering. The results demonstrated that mathematics and engineering students used more cognitive strategies than physics students, physics and engineering students used more metacognitive strategies than mathematics students. Another study of Peacock and Ho (2003), eight different academic major students were composed the participant group such as: building, business, computing, engineering, English, mathematics, primary education and science. The students from computing department used less metacognitive strategies and English students used the most according to the findings.

The study of Manzoor, Kazi, Naeem, Inayat and Muhammed (2017), focused on the Science, Humanities and Management Science departments. An adapted format of the questionnaire raised by Xhaferi and Xhaferi (2008) was selected as the data collection tool. The obtained findings from the students showed that, although the arts students preferred to use metacognitive and social strategies more, but with small differences, there is not significant difference between Science and Management Science students as they seemed to use almost the same amount of overall strategies (memory, cognitive, compensation, metacognitive and social vocabulary learning strategies).

Gu and Johnson (1996) studied whether language learning outcomes have any relation with vocabulary strategies, and consequently, it was revealed that self-initiation, selective attention and deliberate activation affected the process of vocabulary size and proficiency.

Limited amount of research as mentioned above indicate that academic major is one of the most influential factor in learning strategies. Science students are generally prone to use less strategies unlike the language and social science students.

There is limited amount of study is on L2 vocabulary learning strategies with Turkish participants. In the study of Demir (2012), the in-class and traditional vocabulary learning strategies were compared according to the obtained data from Turkish 8th grade English L2 learners, and revealed that there was a significant difference in favour of the in-class strategy group.

In the study of Çelik and Toptaş (2010), the results showed that 95 L2 learners of English did not use the vocabulary learning strategies sufficiently. Although Turkish L2 learners of English did not seem to utilize the vocabulary learning strategies at all, the intermediate level learners used memory and cognitive strategies more frequently, and upper-level learners preferred to use metacognitive strategies than the others.

3. METHODOLOGY

In order to benefit from effective communication, learners approach the vocabulary learning as the most necessary skill to have in learning language (Nyikos & Fan, 2007). Lexical errors seem to be much more than grammatical issues (Meara, 1984). In this case, Schmitt (2008) suggested to take some precaution about vocabulary for everyone who is interested in learning or teaching a language somehow. Thus, the aim of this study is to find out the students' (from different departments) vocabulary learning strategy preferences. In order to reach the mentioned goal, the researcher employed a quantitative research design, and the data was collected through survey method (by using questionnaires with five point Likert scale). To this end, the research questions conceived to ascertain vocabulary learning strategies of the participants are as follows:

1. Is there any difference among different academic majors in vocabulary learning strategy use?

2. What are the most and least frequently used vocabulary learning strategy types by the students from Science, Social Science and Turkish-Math departments?

3.1. Participants

The target population of this study was three different university students from three main departments and nine sorts of sub-departments. The main departments are Science, Social Sciences and Turkish-Math. It is essential to give some feedback about the process of disunion of the student according to departments from high school to university. The students are separated into 4 main departments at high school in Turkey, and at the end of the high school, they enter the university selection and placement test which is organized once in a year. The students are placed to an appropriate department according to the scores they get and the options they select. For example, if a student wants to study maritime and management, he should be graduate from Turkish-Math department at high school. Thus, in the present study, three main departments that the students were involved at high school will be compared.

The main departments of the Turkish L2 learners of English were formed as follows:

1. Social Sciences Group: Public Relations, Communication, and Visual Arts.
2. Turkish-Math Group: Economics, Business, Maritime and Port Management.
3. Science Group: Civil Engineering, Mechanical Engineering, and Environmental Engineering.

160 participants attended to the experiment from three different public universities in Turkey: Social Sciences group included 40, Turkish-Math and Science groups comprised 60 participants for each as can be seen from the table 1.

Table 1: Department, Age and Gender of the Participants

<i>Department</i>	<i>Number</i>	<i>Mean Age</i>	<i>Females</i>	<i>Males</i>
Valid				
Social Sciences	40	19,5250	15 females	25 males
Turkish-Math	60	19,3833	25 females	35 males
Sciences	60	19,3167	14 females	46 males
Total	160			

All the participants had taken the exemption examination at the first semester of university, and only the intermediate level students were determined to be integrated in the study.

3.2. Instruments

The first material having used in the study is the language background questionnaire (adapted from Gürel, 2004). Some factors that seemed to be important for the researcher, like age or gender, took part in the table 1.

The second material is Schmitt's Vocabulary Learning Strategy (VLS) (1997) and based the Oxford's (1990) classification, composed of 5 main (adapted) strategies; Determination, Social, Memory, Cognitive and Metacognitive, furthermore, only 5 items of every strategy were included due to some limitations about time. Hence, 25 items were classified by 5 kinds of strategies. The items were not translated in the Turkish which is the native language of all participants. The main factors for implementing VLS are: (a) vocabulary learning is conducted especially with VLS; (b) the core competency of VLS is mostly suited to empirical studies especially for the quantitative ones.

The determination strategies are composed of discovering the meanings of a word by using dictionary, translation; the social strategies are including discovering the meaning of a word by consolidating a teacher, a friend in group activities; the memory strategies consisted of how to memorize or remember the word (by using synonyms, antonyms, personal experiences, connections and etc.), the cognitive strategies were mostly related to accomplishing the unknown word by using mental procedures such as note taking, repeating or writing, and the metacognitive strategies more depended on being aware and conscious on the process of vocabulary learning.

3.3. Procedure

To create a homogenous participant group, three different university students from different departments were determined to apply the questionnaires which took almost 30-35 min. All of the learners were informed about the questionnaire items, but not about the ultimate goal of the study. They performed the test in pen-and-paper environment (offline). After collecting the data, 13 of the respondents' questionnaires were excluded from the study because of the incomplete papers.

3.4. Data Analysis

The statistical package, SPSS program, was used to analyse the obtained data. Descriptive statistics were used for language background questionnaire, and to get the statistical information about the use of vocabulary learning strategies, one-way ANOVA was practised.

3.5. Results

The VLS questionnaire items were analysed by receiving support from the descriptive statistics. The respondents scored a five point Likert type from 1 to 5 (1= never, 2= seldom, 3= occasionally, 4= often and 5= always). The score averages are presented by calculating the mean scores of each department. Table 2 below, demonstrates the mean scores for each type of VLS by three participant groups.

Table 2: Mean Scores of VLS

VLSs	Departments	Mean Scores	Std. D.	F.	Sig.
<i>Determination Strategies</i>	Social Sciences n=40	4,5650	,26365		
	Turkish-Math n=60	4,3633	,32415		
	Science n=60	3,0367	,28162		
	Total	3,9163	,74748	434,667	,000
<i>Social Strategies</i>	Social Sciences n=40	1,9600	,33035		
	Turkish-Math n=60	1,6700	,25730		
	Science n=60	1,4967	,23719		
	Total	1,6775	,32349	35,264	,000
<i>Memory Strategies</i>	Social Sciences n=40	12.450	.26980		
	Turkish-Math n=60	13.233	.24172		
	Science n=60	13.266	.2469		
	Total	13.050	.2517	1,528	,220
<i>Cognitive Strategies</i>	Social Sciences n=40	4,9250	,18502		
	Turkish-Math n=60	4,9067	,14482		
	Science n=60	4,6867	,29312		
	Total	4,8288	,24556	19,991	,000
<i>Metacognitive Strategies</i>	Social Sciences n=40	2,1000	,42728		
	Turkish-Math n=60	2,3567	,33159		
	Science n=60	4,4833	,25054		
	Total	3,0900	1,13621	837,268	,000

3.5.1. The Determination Strategy Results

The Determination Strategy items, used in the study, are as follows:

1. I check for Turkish words that are similar in form and meaning to the new word.
2. I analyse any available pictures to help me understand new words.
3. I use a bilingual dictionary (English / Turkish).
4. I use a bilingual dictionary (Turkish / English).
5. I use a monolingual Dictionary (English / English).

As can be seen from the table 2, the determination strategies were found to be quite frequently used by three groups of participants; Social Sciences group ($X=4,5650$), Turkish-Math group ($X=4,3633$) and Science group ($3,0367$), so the results are significantly different ($F=434,667$, $p=,00 < ,05$) and the variances are homogenous ($p=,564$, $>,05$). In addition, the relation between Social Science group and Turkish-Math group is slightly different ($p=,03<,05$), on the other hand the relation between Science group and Social Science group and the relation between Science group and Turkish-Math group has significant difference ($p=,00<,05$).

Table 3: Mean Scores for Each of the Determination Strategies of VLS

Departments	1 st Det. Strategy	2 nd Det. Strategy	3 rd Det. Strategy	4 th Det. Strategy	5 th Det. Strategy
Social Sciences n=40	4,7250	3,0000	2,5333	3,5500	2,6333
Turkish-Math n=60	4,6667	4,3333	3,9333	4,4000	4,2167
Sciences n=60	3,4667	4,7500	4,3750	4,6667	4,5750

According to the table 3, the Social Sciences group mostly seems to use the first determination strategy which is “I check for Turkish words that are similar in form and meaning to the new word” more frequently and the third determination strategy which is “I use a bilingual dictionary (English / Turkish)” rather frequently. Similarly, Turkish-Math group preferred to rely more on the first determination strategy on contrary to the third one. The Science group performed better at the second sentence which is “I analyse any available pictures to help me understand new words”, and least at the first sentence, however, the mentioned differences are rather slightly according to the statistics and not significant.

3.5.2. The Social Strategy Results

The Social strategies are as follows:

6. I ask a teacher for translation of the new word into Turkish.
7. I ask a teacher for a sentence including the new word.
8. I ask classmates for the meaning of the new word.
9. I discover new meanings through group work activity.
10. I study and practice meaning of the new words in a group of students.

As can be seen from the table 2, the social strategies were found to be used not very often by three groups of participants; Social Sciences group ($X=1,9600$), Turkish-Math group ($X=1,6700$) and Science group ($1,4967$), so the results are significantly different ($F=35,264$, $p=,00 < ,05$) and the variances are homogenous ($p=,256$, $>,05$). In addition, the relation between Social Science group and Turkish-Math group is different ($p=,00<,05$), the same as the Science group. On the other hand there is small difference between Science group and Turkish-Math group has significant difference ($p=,03<,05$).

Table 4: Mean Scores for Each of the Social Strategies of VLS

Departments	1 st Social Strategy	2 nd Social strategy	3 rd Social strategy	4 th Social strategy	5 th Social strategy
Social Sciences n=40	1,5250	1,0500	2,5250	2,4250	2,275
Turkish-Math n=60	1,1667	1,0500	2,9833	1,7000	1,4500
Sciences n=60	1,1833	1,1833	2,3667	1,5000	1,2500

According to the table 4, all participant groups mostly seems to use the third social strategy which is “*I ask classmates for the meaning of the new word.*” more frequently and the second social strategy which is “*I ask a teacher for a sentence including the new word*” rather. The mentioned differences are rather slightly according to the statistics and not significant.

3.5.3. The Memory Strategy Results

The Memory strategies are as follows:

11. I study the part of speech of the new word (verb, noun, adjective) to remember it.
12. I connect the new word to a personal experience (e.g. connecting the word research with the final project).
13. I paraphrase the meaning of the word I am learning in another way.
14. I connect the new word to its synonyms and antonyms.
15. I use the new word in sentences.

As can be seen from the table 2, the memory strategies were found to be used, rarely, by three groups of participants; Social Sciences group ($X=1,2450$), Turkish-Math group ($X=1,3233$) and Science group ($1,3266$), so the results are not significantly different ($F=1,528$, $p=,220 > ,05$). In addition, the relation between Social Science group and Turkish-Math group ($p=,313 > ,05$), the relationship between Social Science group and Science group ($p=,283 > ,05$), and the relationship between Science and Turkish-math group ($p=,997 > ,05$) are not statistically different from each other.

Table 5: Mean Scores for Each of the Memory Strategies of VLS

Departments	1 st Memory Strategy	2 nd Memory strategy	3 rd Memory strategy	4 th Memory strategy	5 th Memory strategy
Social Sciences n=40	1,2750	1,5000	1,2500	1,0750	1,1250
Turkish-Math n=60	1,5667	1,3833	1,4167	1,1000	1,1500
Sciences n=60	1,6667	1,2833	1,5500	1,0333	1,1000

According to the table 5, Social Science group favoured the second sentence which is “*I connect the new word to a personal experience (e.g. connecting the word research with the final project)*”, and Turkish-Math and Science group used the first Memory strategy which is “*I study the part of speech of the new word (verb, noun, adjective) to remember it*”. The least favoured Memory strategy is the fourth one which is “*I connect the new word to its synonyms and antonyms*” by all participants. Hence, The Memory strategies, clearly, are of the least popular VLSs for the participants.

3.5.4. The Cognitive Strategy Results

The Cognitive strategies are as follows:

16. I repeat the new word over and over.
17. I write the new word many times.
18. I make my own lists of new words.
19. I keep a vocabulary notebook for expanding rehearsal.
20. I take notes of the newly learned words in class.

As can be seen from the table 2, the cognitive strategies were found to be, strongly, used by three groups of participants; Social Sciences group ($X=4, 9250$), Turkish-Math group ($X=4, 9067$) and Science group ($X=4, 6867$), so the results are not significantly different ($F=19,991, p=,0 < ,05$). In addition, the relation between Social Science group and Turkish-Math group ($p=,968 > ,05$) is not clear, but, the relationship between Social Science group and Science group ($p=,00 < ,05$) and the relationship between Science and Turkish-math group ($p=,00 < ,05$) seem to be different from each other. Apparently, the most frequently used VLS is the Cognitive strategies by the three main academic majors.

Table 6: Mean Scores for Each of the Cognitive Strategies of VLS

Departments	1 st Cognitive Strategy	2 nd Cognitive Strategy	3 rd Cognitive Strategy	4 th Cognitive Strategy	5 th Cognitive Strategy
<i>Social Sciences</i> <i>n=40</i>	4,8000	4,9500	4,9250	4,9750	4,9750
<i>Turkish-Math</i> <i>n=60</i>	4,8333	4,8000	4,9667	4,9667	4,9667
<i>Sciences</i> <i>n=60</i>	4,5833	4,7833	4,6167	4,6000	4,8500

According to the results of mean scores, as shown in the table 6, all the participants strongly, preferred to use five types of the Cognitive strategies overwhelmingly.

3.5.5. The Metacognitive Strategy Results

The Metacognitive strategies are as follows:

21. I try to develop my vocabulary knowledge by watching English TV channels (e.g. movies, songs, documentary).
22. I try to develop my vocabulary knowledge by using computer programs (e.g. internet).
23. I try to develop my vocabulary knowledge by listening to English radio programs (songs, news).
24. I revise the newly learned words using spaced repetition.
25. I try to assess my vocabulary knowledge (e.g. with word tests).

As can be seen from the table 2, the metacognitive strategies were found to be used rarely by two groups of participants; Social Sciences group ($X=2,1000$), Turkish-Math group ($X=2,3567$) in spite of this, more commonly by Science group ($X=4,5233$), so the results are significantly different ($F=837,268, p=,00 < ,05$). In addition, the relation between Social Science group and Turkish-Math group ($p=,01 < ,05$), and the relationship between Social Science group and Science group ($p=,00 < ,05$) were found to be significant, similarly, the relationship between Science and Turkish-Math group ($p=,00 < ,05$) was statistically different. In the Metacognitive strategies, the Science group behaved different as they used the metacognitive strategies much more often than the others.

Table 7: Mean Scores for Each of the Metacognitive Strategies of VLS

Departments	1 st Metacognitive Strategy	2 nd Metacognitive Strategy	3 rd Metacognitive Strategy	4 th Metacognitive Strategy	5 th Metacognitive Strategy
<i>Social Sciences</i> <i>n=40</i>	2,1000	2,5000	1,9250	1,3500	2,6250
<i>Turkish-Math</i> <i>n=60</i>	2,4500	2,6333	2,9333	1,4000	2,3667
<i>Sciences</i> <i>n=60</i>	4,8833	4,9333	4,5000	4,2833	4,0167

According to the Table 7, it seems that Science group did prefer to use the metacognitive strategies, at least, as much as the cognitive strategies, unlike the Social Science and Turkish-Math group.

To sum up, this study investigated five types of vocabulary learning strategies (adapted from Schmitt, 1997): determination, social, memory, cognitive and metacognitive strategies. Depended on a Likert-

type scale, there were five possible responses for each item: 1=never, 2=seldom, 3=occasionally, 4=often, 5=always.

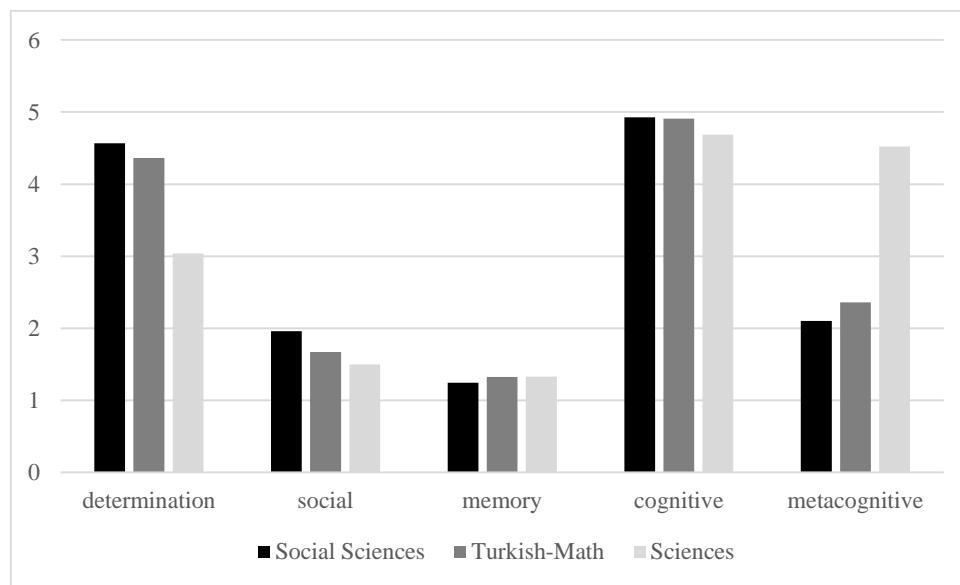


Figure 1: The VLS Mean Scores of the Departments

Each strategy type included five items for each. The overall results demonstrated that the three of the participant groups mostly preferred to use cognitive strategies for vocabulary learning, and slightly used the memory strategies. More detailed, in the presented VLS strategies, Social Science group, Turkish-Math group and Science group were found out to prefer cognitive strategy more commonly, and memory strategy was the least popular VLS for them, but it has to be mentioned that the Science group performed, unlikely, cognitive strategies as better as metacognitive strategy with statistic difference.

4. DISCUSSION AND CONCLUSION

The learners and teachers become more aware of the necessity of vocabulary learning recently (Laufer, 2006; Nation, 2001; Schmitt, 2008). It has been indicated that language learning is affected by vocabulary learning strategies (Fraser, 1999; Hulstijn, 2000; Gu & Johnson, 1996; Li, 2009; Nyikos & Fan, 2007; Webb, 2005). Saeed (2012) stated how vocabulary knowledge is an essential factor in people's defence of their views, declaring their ideas and saying what they believe in. Some of the previous studies remarked the importance of the vocabulary learning that insufficient vocabulary knowledge provokes the learner to be failure in developing the learning skills (Kırmızı, 2014; Asgari & Mustapha, 2011).

The sole element for a real communication is having contentful vocabulary knowledge (Ghazal, 2007). Thus, the main goal of the study is to find out which VLSs are used by Turkish L2 learners of English from different academic majors (English department was excluded from the study in order not to effect the results either positively or negatively), and whether there is any difference among three main different academic majors in using VLSs.

For implementation of the newly-learned words, the L2 learners should utilize some specific techniques in acquiring vocabulary (Gu, 1994), at the same time, these techniques or strategies used for expressing actions, subjects or ideas, promote the L2 learner to attain edutainment, at least, in vocabulary learning (i.e., Scarcella & Oxford, 1992; Rebecca, 2003). As all vocabulary learning strategies cannot be applied to L2 learners, there needs to be some explanations and examinations to identify which strategy is used more by which type of learners.

The study favoured to use quantitative questionnaires for data collection and data analysis. Two offline questionnaires; (a) the language background information task, (b) the VLS questionnaire (Schmitt, 1997), were administered to the same groups of participants from three different universities. The participant groups were formed as Science, Social Science and Turkish-Math groups. Social Sciences group included Public Relations, Communication and Visual Arts department, Turkish-Math group

consisted of Economics, Business, Maritime and Port Management, and the last group, Science department was constituted from Civil Engineering, Mechanical Engineering, and Environmental Engineering departments. They were all intermediate level university students determined by the scores of the universities' own exemption examination in Turkey. The mean age of the participants was 19, and none of them was a speaker of a third language. The questionnaires were analysed with the descriptive statistics, and one-way ANOVA in SPSS. The results revealed the vocabulary learning strategies by the participants and the relationships among them.

The results discovered that the participants generally prefer to use VLS in English learning. However, some strategies such as cognitive and determination are more popular strategies and the L2 learners of English are keen on using them. Dictionary usage, as a determination strategy, has always been thought to be the most frequently used in VLSs (Gu, 2003; Gu & Johnson, 1996). On the other hand, strategies which require interaction or communication like social strategies, and also, connection the new word to its synonyms, antonyms or morphological structures as in memory strategies were least frequently used by the participants. In some of the previous studies, the memory strategies were found to be the least frequently VLSs, especially repetitions (Lawson & Hogben, 1995; Meara, 1995; Schmitt, 1997; Schmitt, 2000). Additionally, the descriptive statistics show that the L2 learners who were trying to develop the vocabulary knowledge, handle more than one strategy together. Vocabulary acquisition is found to be successful when supported with a variety of vocabulary learning strategies (Sanaoui, 1995; Gu, 2003). Word lists, as a cognitive strategy, were found to be more effective on retention of vocabulary for long-term rather than more advanced vocabulary knowledge grasping methods (Laufer & Nation, 1999; Prince, 1996). For example, in the present study, it seems that Social Science and Turkish-Math students were better at determination and cognitive strategies, nevertheless, Science students were preferred to use cognitive and metacognitive strategies more frequently. Metacognitive strategies or being conscious about which and how to use the VLSs may be fruitful about the process of learning a new language (i.e., Oxford & Nyikos, 1989; MacIntyre & Noels, 1996).

Based on these results, it can be concluded that different academic majors may potentially affect the vocabulary learning strategies.

REFERENCES

- Anderson, J., R. (1980), *Cognitive psychology and its implications*. San Francisco: Freeman
- Asgari, A., and Mustapha, G., B., (2011), *The Type of Vocabulary Learning Strategies Used by ESL Students in University Putra Malaysia*, Vol. 4, No. 2.
- Biemiller, A. (2004), *Teaching Vocabulary in the Primary Grades: Vocabulary Instruction Needed*, In J.F. Baumann & E.J. Kame'enui (Eds.), *Vocabulary instruction: From research to practice* (pp. 159–176). New York: Guilford Press.
- Carrell, R. (1984), *Schema theory and ESL reading: Classroom implications and applications*. *Modern Language Journal*, 68 (4), 332-343.
- Carter, R., (1987), *Vocabulary and second/foreign language teaching*. *Language Teaching*, 20 (1), 3-16.
- Cohen, L., Byrnes, K., (2007), *Engaging Children with Useful Words: Vocabulary Instruction in a Third Grade Classroom*. *Reading Horizons Journal*, 47(4), 271-293.
- Cohen, A., & Apeh, E., (1980), *Retention of second-language vocabulary over time: Investigating the role of mnemonic associations*. *System*, 8 (3), 221-235.
- Constantinescu, A., I., (2007), *Using technology to assist in vocabulary acquisition and reading comprehension*. *The Internet TESL Journal*, 13(2). Retrieved February 28, 2013.
- Çelik, S., & Toptaş, V., (2010), *Vocabulary learning strategy use of Turkish EFL learners*. *Procedia Social and Behavioral Sciences* 3. 62–71
- Demir, Y. (2013), *The Role of In-class Vocabulary Strategies in Vocabulary Retention of Turkish EFL Learners*. *İlköğretim Education Online*. 12(4), 1173-1187.

- Fraser, C. (1999), *The role of consulting a dictionary in reading and vocabulary learning*. The Canadian Journal of Applied Linguistics, 2, 73–90.
- Ghazal, L. (2007), *Learning vocabulary in EFL contexts through vocabulary learning strategies*. Novitas-Royal, 1(2), 84-91.
- Gu, P., Y. (1994), *Vocabulary Learning Strategies of Good and Poor Chinese EFL Learners*. The Twenty-Eighth Annual Convention and Exposition (p. 27). Baltimore.
- Gu, P., Y. (2002), *Vocabulary Learning in a Second Language: Person, Task, Context and Strategies*. TESL-EJ. Volume 7, Number 2, p.1-25.
- Gu, Y. (2003), *Fine brush and freehand: The vocabulary learning art of two successful Chinese EFL learners*. TESOL Quarterly, 37, 73-104.
- Gu, Y., & Johnson, R., K. (1996), *Vocabulary learning strategies and language learning outcomes*. Language Learning 46 (4), 643 – 79.
- Hague, S., A. (1987), *Vocabulary learning: The use of grids*. English Language Teaching Journal, 37 (3), 243-246.
- Hatch, E., & Brown, C. (1995), *Vocabulary, Semantics, and Language Education*. New York: Cambridge University Press.
- Hudson, T. (1982), *The affects of induced schemata on the 'short-circuit' in L2 reading performance: Non-decoding factors in L2 reading performance*. Language Learning, 32; 1-31.
- Hulstijn, J. (2000), *Mnemonic methods in foreign language vocabulary learning: Theoretical considerations and pedagogical implications*. In J. Coady & T. Huckin (Eds.), *Second Language Vocabulary Acquisition* (pp. 203–224). Cambridge: Cambridge University Press.
- KIRMIZI, O. (2014), *Measuring Vocabulary Learning Strategy Use of Turkish EFL Learners in Relation to Academic Success and Vocabulary Size*, World Journal of Education, Vol. 4, No. 6; 2014.
- Laufer, B. (2003), *Vocabulary acquisition in a second language: Do learners really acquire most vocabulary by reading? Some empirical evidence*. Applied Linguistics, 19, 255-271.
- Laufer, B. and P. S. N. Nation. 1999. 'A vocabulary-size test of controlled productive vocabulary. Language Testing 16/1: 33-51.
- Lawson, M., & Hogben, D. (1996), *The vocabulary-learning strategies of foreign language students*. Language Learning, 46, 101–135.
- MacIntyre, P., & Noels, K. (1996), *Using social-psychological variables to predict the use of language learning strategies*. Foreign Language Annals, 3, 373–386.
- Manzoor S., Kazi A., Naeem R., Inayat N., Muhammad N., (2017), *Undergraduate students' use of vocabulary learning strategies*. Journal of Arts and Social Sciences 4 (2), 11-21
- Martinez-Lage, A. (1997), *Hypermedia technology for teaching reading*. In M. Bush & R. Terry (Eds.), *Technology enhanced language learning* (pp. 121-163). Lincolnwood, IL: National Textbook Company.
- Marzano, R. (2004), *Building background knowledge for academic achievement: Research on what works in schools*. Alexandria, VA: Association for Supervision and Curriculum Development
- Meara, P. (1984), *The study of lexis in interlanguage*. In A. Davies & C. Criper & A. P. R. Howatt (Eds.), *Interlanguage* (pp. 225–235). Edinburgh: Edinburgh University Press.
- Meara, P. (1995), *The importance of an early emphasis on L2 vocabulary*. JALT, 19, 8– 11.
- Mochizuki, A. (1999), *Language learning strategies used by Japanese university students*. RELC Journal 30, no. 2: 101–13.
- Nation, I., S., P. (2001), *Learning Vocabulary in Another Language*. Cambridge: Cambridge University Press.

- Nyikos, M., & Fan, M. (2007), *A review of research on vocabulary learning strategies*. In A. Cohen & E. Macaro (Eds.), *Language learner strategies: 30 years of research and practice* (pp. 251–273). Oxford: Oxford University Press.
- Orawiwatnakul, W. (2011), *Impacts of Vocabulary Acquisition Techniques Instruction on Students' Learning*. *Journal of College Teaching & Learning*. Volume 8, Number 1 pp.47-53).
- Oxford, R., & Crookall, D. (1990), *Vocabulary Learning: A Critical Analysis of Techniques*. *TESL Canada Journal*, 7(2), 09-30.
- Oxford, R., & Nyikos, M. (1989), *Variables affecting choice of language learning strategies by university students*. *MLJ*, 73(iii),291-300
- Oxford, R. L., Nyikos, M., & Ehrman, M. (1988), *Vive la difference? Reflections on sex differences in use of language learning strategies*. *Foreign Language Annals*, 21(4), 321–329.
- Peacock, M. (2001), *Language learning strategies and EAP proficiency: teacher views, student views, and test results*. In *Research Perspectives on English for Academic Purpose*, ed. J. Flowerdew and M. Peacock, 268–85. Cambridge, UK: Cambridge University Press.
- Peacock, M. and B. Ho. (2003), *Students' strategy use across eight disciplines*. *International Journal of Applied Linguistics* 13, no. 2: 179–200.
- Phillips, D., C., K., and Foote, C., J., & Harper, L., J. (2008), *Strategies for Effective Vocabulary Instruction*. *Reading Improvement*, 45(2), 62-68.
- Prince, P. (1996), *Second language vocabulary learning: The role of context versus translations as a function of proficiency*. *Modern Language Journal*, 80, 478–493.
- Rao, Z., & Liu, F. (2011), *Effect of academic major on students' use of language learning strategies: a diary study in a Chinese context*. *Language Learning Journal*, 39(1), 43–55.
- Rebecca L. (2003), *Language learning styles and strategies: an overview*, *Learning Styles & Strategies/Oxford*, GALA.
- Rong, M. (1999), *Language learning strategies of a sample of tertiary-level students in the P.R. China*. *Guidelines* 21, no. 1: 1–11.
- Rubin, J. (1987), *Learner Strategies: theoretical assumptions, research history and typology*. In A. Wended and J. Rubin (Eds.), *Learner Strategies and Language Learning* (pp. 15-29). New Jersey: Prentice Hall.
- Saman Saeed, S., Muhammad Uzair, M and Mahmood. A, (2012), *Teaching Thematically Related Vocabulary through Authentic Material*, *IJPSS* Volume 2, Issue 5 ISSN: 22495894.
- Sanaoui, R. (1995), *Adult learner's Approaches learning vocabulary in second languages*. *The Modern Language Journal*, 79 (1), 15 – 28.
- Schmitt, N. (1997), *Vocabulary learning strategies*. In N. Schmitt & M. McCarthy (Eds.), *Vocabulary: Description, acquisition and pedagogy* (pp. 199-227). Cambridge: Cambridge University.
- Schmitt, N. (2000), *Vocabulary in language teaching*. New York: Cambridge University Press.
- Schmitt, N. (2008), *Instructed second language vocabulary learning*. *Language Teaching Research*, 12, 329–363.
- Scarcella, R., & Oxford, R., (1992), *The Tapestry of Language Learning: The Individual in the Communicative Classroom*. Boston: Heinle & Heinle
- Swaffar, J., K. (1988), *Readers, texts, and second languages: The interactive processes*. *Modern Language Journal*, 72 (2), 123-149.
- Taylor, D.B., Mraz, M., Nichols, W.D., Rickelman, R.J. & Wood, K.D. (2009), *Using Explicit Instruction to Promote Vocabulary Learning for Struggling Readers*. *Reading & Writing Quarterly: Overcoming Learning Difficulties*, 25(2-3), 205-220.

- Webb, S. (2005), *Receptive and Productive Vocabulary Learning the Effects of Reading and Writing on Word Knowledge*. *SSLA*. 27, 33-52.
- Xhaferi, B., and Xhafer, G., (2008), *Vocabulary learning strategies used by students at SEEU in terms of gender and teachers' attitudes towards teaching vocabulary: Research Project, SEEU, Tetovo, Macedonia*, p. 119.
- Zimmerman, B., J. (1998), *Academic studying and the development of personal skill: a self-regulatory perspective*. *Educational Psychologist*. 33, 73-86.