



Investigating Vocabulary Learning Strategies: Master Students of the English Department of Meknes as a Case Study

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Received 5Apr. 2014, Revised 7 Apr. 2014, Accepted 10 Apr. 2014, Published 1Jul. 2014

Abstract: The present study aims at investigating threefold: (1) to identify vocabulary learning strategies which Moroccan Master students employ while learning their English vocabulary; (2) to explore frequency of students' strategy use and the independent gender variable. The research respondents of the present investigation were 60 Master students studying English at the School of Arts & Humanities within the English Department of Meknes in academic year 2011. Convenient sampling was used to select the respondents of the study. A vocabulary learning strategy questionnaire adopted from Schmitt's (1997) study was used as a tool for data collection. There are five different categories of vocabulary learning strategies as Determination, Memory, Social, Cognitive, and Metacognitive. These categories cover an overall of 56 strategies included in the vocabulary learning strategy questionnaire. The statistical tools used in order to help interpret data include descriptive statistics which makes use of frequencies, percentage, crosstabs, and chi-square tests for independence. The findings reveal that Master students use almost the same vocabulary learning strategies as demonstrated by their counterparts in the literature on second language acquisition. Additionally, Master students use deeper strategies more often, and shallow strategies less often. Finally, the independent gender variable is found to affect some students' vocabulary learning strategies. Bearing in mind the limitations (a small sample size of 60 Master students with unbalanced gender distribution, and the use of the questionnaire alone as a tool for data collection), the findings of this study led to some suggestions to enhance students' vocabulary learning, and subsequently develop their English learning.

Keywords: Vocabulary Learning Strategies, frequency of use, gender.

Introduction

Vocabulary is the basic cornerstone of language use. Without enough vocabulary, learners cannot communicate understandably. Having a limited vocabulary is also a barrier that hinders learners from learning a foreign language (Zhihong, 2000 as cited in Subekti and Lawson, 2007). Accordingly, attentions have been given to the investigation of vocabulary learning strategies in order to explore the specific actions or mental operations undertaken by language learners to develop their vocabulary learning (Oxford, 1990). While many research studies (Oxford, 1990; Stöffer, 1995; Gu and Johnson, 1996; Schmitt, 1997; Kudo, 1999; Nation, 2001) have been conducted on vocabulary acquisition or learner's strategies, little research (O'Malley *et al.*, 1985a) has been done to combine vocabulary learning with learner's strategies in one single study. Similarly, relatively few studies (Seffar, 2005; Kablani, 2006) have been conducted on vocabulary learning strategies (VLS) among Moroccan university students. Consequently, a research study is urgently needed on university students' vocabulary learning strategies.

Inspired by the two main research studies (1) Schmitt's (1997) survey on the vocabulary learning strategies of Japanese students, and (2) Jiménez-Catalan's (2003) study on gender differences in vocabulary learning strategies, the researcher in the present study investigates the use of vocabulary learning strategies by advanced learners, Master students. Studies affirm that complex strategy use which requires deep and active manipulation of information such as making associations, or the Key Methods (Pressley *et al.*, 1982) result into successful language learning. Based on what is stated above, apart from types of VLS use, frequency of use is the aim of the present investigation. This paper also examines gender differences in VLS use by Moroccan EFL Master students. The objectives of the present study are to be investigated in the light of the following formulated research hypotheses:

- 1) Moroccan EFL Master students will use the same vocabulary learning strategies used by their counterparts as highlighted in the literature on second language acquisition (SLA).



- 2) Moroccan EFL Master students will use “deeper” strategies more frequently, and “shallow” strategies less frequently for discovering and remembering words' meaning.
- 3) There will be a difference in vocabulary learning strategies between male and female Moroccan EFL Master students.

Review of Related Literature

“Vocabulary learning strategies are a part of language learning strategies which in turn are a part of general learning strategies” (Nation 2001, p. 217). As O'Malley and Chamot (1990) point out, VLS are the most recognized effective types of language learning strategies. Sökmen (1997) defines VLS as essentially actions undertaken by L2 learners so that they can comprehend the meaning of a lexical item, learn it and remember it for later use. Similarly, Schmitt (1997) uses Ruben's (1987, p. 29) definition as “the process by which information is obtained, stored, retrieved, and used”. Jiménez-Catalan (2003) employs the definitions of VLS adopted from different scholars (Ruben, 1987; Schmitt, 1997), and incorporates the following definition in her research study as “knowledge about the mechanism used in order to learn vocabulary as well as steps or actions taken by students (a) to find out the meaning of unknown words, (b) to retain them in long-term memory, (c) to recall them at will, and (d) to use them in oral or written mode” (p. 56). However, Intaraprasert (2004) refers to VLS as “any set of techniques or learning behaviors, which language learners reported using in order to discover the meaning of new words, to retain the knowledge of newly-learned words, and to expand their knowledge of vocabulary”(p.9). Vocabulary learning strategies enhance learners' responsibility of their own learning process. Specifically, the strategies foster “learner autonomy, independence, and self-direction” (Oxford and Nyikos, 1989 as cited in Hamzah *et al.*, 2009, p. 42). A good knowledge of different VLS and the ability to use them in meaningful contexts can make the learning of unfamiliar words easier. This means that the learner's choice of which lexical items to study results into a better recall, instead of the words being chosen by teachers (Ranalli, 2003 as cited in Hamzah *et al.*, 2009). Acknowledged by many scholars (Nation, 1990; Harmer, 1991; Nandy, 1994), vocabulary is a crucial part of language learning. Harmer (1991) highlights the crucial role of vocabulary in language learning. For this researcher, “If language structures make up the skeleton of language, then it is vocabulary that provides the vital organs and the flesh” (p. 153). For Nation (1990), vocabulary is the cornerstone of language acquisition. Likewise, Mayuree (2007) sees words as necessary means, and therefore learners use

them in their daily interaction, thinking and feelings. Learners also use words to discover the world, and analyze their environment. Consequently, a limited range of vocabulary knowledge constrains learners' thoughts, but a rich vocabulary repertoire helps learners express themselves understandably. This is consistent with Nandy (1994) who argues that “the more words one is able to use correctly, the better one will be able to express oneself easily, and to understand the world he lives in” (p. 1).

Vocabulary and grammar are considered as crucial components in the learning process, still vocabulary is more emphasized. Allen (1983) stresses that vocabulary items should be taught before grammar. For the same reason, Lewis (1993) considers vocabulary as the core of language acquisition. He further claims that language learning consists of “grammaticalized lexis”, and grammar as a structure is subordinate to “lexis”. Obviously, learners can understand, and be understood though they pronounce their words incorrectly or use grammatical mistakes. To put it clearly, “without grammar, very little can be conveyed; without vocabulary, nothing can be conveyed” (Wilkins, 1972, p. 111). Ellis (1994) affirms Wilkins' (1972) statement and assures that lexical errors block learners' understanding more than grammar does.

Vocabulary is the key factor for effective communication in language learning. Lewis (1993) sees vocabulary as indeed important in daily interactions. He states that language learners are able to communicate only if they know the most of the words' meanings. Equally, Schmitt (2000) claims that vocabulary is a fundamental component to communicative competence. This means that there is no other type of knowledge that can be used in communication without the mediation of lexical items. For Davise and Pearse (2000), vocabulary is at the core of effective communication. Language learners are frustrated when they are unable to communicate effectively, possibly due to their lack of enough vocabulary knowledge. The same is expressed by McCarthy (1990), who argues that “no matter how well the student learns grammar, no matter how successfully the sounds of L2 are mastered, without words to express a wide range of meanings, communication in an L2 just cannot happen in any meaningful ways” (p. ix). Words are powerful means language learners use to reflect on their ideas and feelings.

Past research studies on vocabulary learning strategies reported to be used by different students in distinctive contexts. What follows is previous studies investigated by different researchers (Sanaoui, 1995; Stöffer, 1995; Gu and Johnson, 1996; Schmitt, 1997;



Fan, 2003; Jiménez-Catalan, 2003; Seffar, 2005; Mayuree, 2007).

Sanaoui (1995) conducted an exhaustive research on adults, non-native speakers of English studying English as a second language (ESL), and French as a second language (FSL). Her participants were beginners and advanced learners. The researcher used four case studies of non-native speakers of English learning ESL, and eight case studies of learners learning French as L2. The focus of the researcher was the effect of structured learning and unstructured learning approaches. According to Sanaoui (1995), the main results of the investigation revealed that structured learning approach proved to be more effective in retaining vocabulary taught in the classroom than unstructured learning approach for both beginners and advanced learners.

Stöffer (1995) conducted an in-depth research study on VLS use at tertiary level. The participants were non-native speakers of English learning other languages such as Spanish, Japanese, Russian, and English. Data was gathered based on Vocabulary Learning Strategy Inventory (VLSI), and Strategy Inventory for Language Learning (SILL). The questionnaire included fifty three strategies. More importantly, the researcher took into consideration the following investigated variables: previous language experience, course level, languages studied, age, gender, and instruction of VLS. The main findings can be summarized as that university foreign language learners' VLS use was effectively influenced by several individual learning variables investigated in the study. However, gender variable showed no significant difference in vocabulary learning strategy use employed by the participants.

Schmitt (1997) opted for EFL learners in the Japanese context. The focus of his study was overall vocabulary learning strategy use reported by lower and upper secondary, university, and adult students. A 58-vocabulary learning strategy questionnaire was used as a method for data gathering. Schmitt (1997) focused on no specific variables. The researcher came out with the following main findings: the most frequently used strategies for the discovery of the meaning of the word included guessing from context, using a bilingual dictionary, and asking classmates for the meaning of the word. However, the least frequently used strategy involved checking for L1 cognate. As for consolidating a word's meaning once it has been encountered, the most frequently used strategies were concerned with verbal repetition, studying the spelling, written repetition, saying the word aloud, taking-notes of the word in class, studying the sound of the word, and word lists. On the other hand, the least frequently used strategies comprised using physical action, using

cognates, using semantic maps, teachers check flashcards for learning, using a bilingual dictionary, written repetition, verbal repetition, saying the new word aloud, studying words' spelling. These strategies are believed to be the most useful for the participants.

Jiménez-Catalan (2003) investigated gender variable of a total number of 581 Spanish university learners learning English and Basque as FL. Her study was based on overall vocabulary learning strategies reported by the participants. Jiménez-Catalan's (2003) conclusion confirmed that the use of the number of vocabulary learning strategies by both males and females was found to be statistically significant. The small difference is in favor of female learners: $z=1,98$, $p=0,0239$ (2, 39%). As for the range of vocabulary learning strategies for both the Discovery, and Consolidation strategies, nine out of the ten most used strategies were commonly shared by the two genders. Likewise, the ten least frequently used strategies were almost of identical rankings, and percentages shared by both groups. However, clear differential patterns appeared at the level of overall vocabulary learning strategies reported to be employed by both males and females.

Fan (2003) studied overall vocabulary learning strategy use employed by university learners learning English as a foreign language. Fan (2003) employed vocabulary tests beside a vocabulary learning strategy questionnaire as a data collection tool. The variables under investigation included English language proficiency, age, and language spoken at home. The results of the study demonstrated that though language learners perceived vocabulary strategies as useful, they do not use them frequently. The most frequently used and perceived useful strategy was using the dictionary, while the least frequently used and perceived as least useful strategy involved the key word strategy.

Mayuree (2007) conducted an exhaustive research on 1481 learners learning English as foreign language. Her focus was mainly directed towards VLS use. The main participants were university students. The methods of data collection were vocabulary learning strategy questionnaire, semi-structured interviews and vocabulary tests. The main concern of Mayuree's (2007) exploratory and descriptive study was to investigate five variables. These included gender, major field of study, previous language learning experience, type of academic program, and level of vocabulary proficiency. Based on the research findings, there were significant relationships in terms of the frequency of strategy use and the five variables. The results revealed that the frequency of VLS use in terms of the three categories: (1) "The discovery of the word's meaning", (2) "the retention of the knowledge



of newly-learned vocabulary", and (3) "the expansion of the knowledge of vocabulary" changed significantly according to the five variables. Still, there was no significant difference in terms of frequency of vocabulary strategy use in relation to the second category. The chi-square tests for independence demonstrated patterns of significant variations at the level of individual strategy use between both males and females.

To my knowledge, Seffar (2005 as cited in Kablani, 2006) was the only researcher who conducted a research study in the Moroccan context. A total number of 100 participants, both fourth and first year university students, were surveyed in terms of their VLS use. The investigated variables were gender, and study level. The method used in the study was Oxford's (1990) Strategy Inventory for Language Learning (SILL) consisting of six strategy categories: Compensation, Cognitive, Meta-cognitive, Memory, Social, and Affective strategies. The findings revealed that the most frequently used strategies were Compensation strategies, while the least frequently used strategies were Affective strategies. As for gender, the findings indicated that females employed more frequent use of all the six strategy categories compared to their male counterparts. Concerning the study level, the research study demonstrated that while first year students employed Meta-cognitive, Cognitive, Affective, and Social strategies more often, fourth year students employed Compensation and Memory strategies more frequently.

Methodology

The targeted participants in the present research article are Master students within the English Department of Meknes, Morocco. They include a total number of 108 Master students. They are both males and females. All of them have been learning English for at least five years. Additionally, all participants belong to one of the Master programs including Applied Linguistics, Communication in Contexts and Business Communication. Master students in Applied Linguistics and Communication in Contexts are both first and second year students. Convenience sampling is a non-probability sampling technique where respondents are selected because of their convenient

accessibility. The researcher of the present study prefers this sampling technique because the sample size is small, and thus it is possible to include every individual since all of the 108 Master students are readily available. For convenience purposes, the researcher included all master students in the School of Arts & Humanities, the English Department of Meknes. The main reason for the researcher to intentionally choose Master students is because they have more or less the same experience of exposure, at least five years of studying English, and almost the same English proficiency.

The main instrument used for data collection in the present study is a vocabulary learning strategy questionnaire (VLSQ). It aims at surveying the participants' types of vocabulary learning strategies, and frequency of strategy use. The third purpose of making use of the written questionnaire is to look into whether the investigated gender variable is related to the students' reported strategy use obtained from the questionnaire. The written questionnaire is a popular means for data collection. It is the most widely used tool since it is economical and easy to fill in, namely the likert-scale questionnaire (Nunan, 1992). The VLSQ consists of two sections. The first section aims at gathering participants' background information such as gender, years of studying English, and students' motivation towards learning vocabulary. The second section includes 55 items of vocabulary learning strategies, which are grouped under two basic purposes (Jiménez-Catalan (2003): (1) Discovery strategies (items 1-14), and (2) Consolidation strategies (items 15-55). Among them items 1-9 are Determination strategies (DET), items 10-16 are Social strategies (SOC), items 17-42 are Memory strategies (MEM), items 43-50 are Cognitive strategies (COG), and finally items 51-55 are Metacognitive strategies (MET).

Discussion of the Results

The main findings of the research study are discussed and explained with reference to theoretical premises, and previous research findings. The heart of the discussion consists of the identification of vocabulary learning strategies, frequency of use, and gender differences in vocabulary learning strategies by Master students.



Table (1)
Identification of VLS Used by Moroccan Master Students

NO.	Discovery Strategy Item	Category
1	I analyze the parts of speech.	DET
2	I analyze the word affixes and roots.	DET
3	I check for a French cognate.	DET
4	I analyze any available pictures or gestures accompanying the word.	DET
5	I try to guess the word's meaning from the text/context.	DET
6	I look for the word's meaning in a bilingual dictionary.	DET
7	I look for the word's meaning in a monolingual dictionary.	DET
8	I use the Internet to see the word's meaning.	DET
9	I learn the word through English-Arabic word lists.	DET
10	I deduce the meaning of the word from flashcards shown by the teacher	DET
11	I ask the teacher for an L1 translation.	SOC
12	I ask the teacher for a paraphrase/ synonymy of the new word.	SOC
13	I ask the teacher for a sentence including the new word.	SOC
14	I ask my classmate for the meaning of the word.	SOC
15	I discover the new meaning of the word through group work.	SOC
NO.	Consolidation Strategy Item	Category
16	I study and practise meaning in pairs/groups in class and outside class.	SOC
17	I try to use the new word when interacting with native speakers.	SOC
18	I try to use the new word when I speak with my classmates.	SOC
19	I try to use the new word forming an image of it.	MEM
20	I connect the word meaning to a personal experience.	MEM
21	I form associations.	MEM
22	I connect the word to its synonyms and antonyms.	MEM
23	I use semantic maps (word trees).	MEM
24	I use "scales" for gradable adjectives, verbs, etc.	MEM
25	I use the Peg Method.	MEM
26	I use the Loci Method.	MEM
27	I group words together to study them.	MEM
28	I group words together spatially on a page, notebook, etc.	MEM
29	I learn the new word in an English sentence.	MEM
30	I group words together within a storyline.	MEM
31	I study the spelling of the word carefully.	MEM
32	I study the sound of the word carefully.	MEM
33	I say the word aloud when studying	MEM
34	I image word's form.	MEM
35	I underline the word form.	MEM
36	I configure the word.	MEM
37	I use the Key Word Method.	MEM
38	I try to remember the word affixes and roots.	MEM
39	I try to relate the word to its part of speech.	MEM
40	I paraphrase the word's meaning.	MEM
41	I connect the word to French cognates.	MEM
42	I learn words of an idiom together as if they were one word.	MEM
43	I use physical action to learn a new word.	MEM
44	I use semantic feature grids.	MEM
45	I use verbal repetition.	COG
46	I use written repetition.	COG
47	I use word lists and revise them.	COG
48	I use flashcards with representation of the word to consolidate meaning.	COG
49	I take notes of the word in class.	COG
50	I listen to tapes of word lists.	COG
51	I put English labels on physical objects.	COG



52	I keep vocabulary notebook.	COG
53	I write the new words on my cellphone	COG
54	I write words on papers, and stick them on the wall in my bedroom	COG
55	I use English-language media (songs, movies, etc.)	MET
56	I test myself with word tests.	MET
57	I use spaced word practice to revise vocabulary.	MET
58	I skip or pass the new word (I ignore it).	MET
59	I continue to study the word over time	MET

Note: DET= Determination strategies, SOC= Social strategies, MEM= Memory strategies, COG= Cognitive strategies, and MET= Metacognitive strategies.

The research findings reveal that a total number of fifty nine VLS is reported to be used by Master students in order to achieve two different vocabulary learning purposes. In classifying vocabulary learning strategies for the present investigation, the researcher of the present study always recognizes that the vocabulary learning strategy items in both discovery and consolidation strategies are always supportive with each other. That is to say, the strategies reported to be used for the sake of discovering word's meaning may help learners remember the knowledge of the newly-learned vocabulary items. In the same way, the strategies reported to be employed in order to remember the knowledge of the Newly-learned English vocabulary may also help language learners in discovering the meaning of new vocabulary items.

Vocabulary strategies used by Master respondents in order to (1) discover and (2) consolidate a word's meaning, and the five main strategy categories are the same as highlighted by Schmitt (1997) and Jiménez-Catalan's (2003) research studies. However, the sole difference is embedded in the number of individual strategy items. In other words, few individual vocabulary learning strategies are specified by the sixty Master students are not specified by Schmitt's (1997), and Jiménez-Catalan's (2003) respondents. Such vocabulary learning strategy items include "using the Internet to see a word's meaning" (DET), "writing the new words on mobile phones" (COG), "writing words with meaning on papers and stick them on the wall" (COG), and "using the new word when interacting with classmates"(SOC). To illustrate, in addition to the use of a monolingual and bilingual dictionary, Master students resort to the Internet since it is very common, and easy for advanced learners to use this strategy as source for discovering and retaining word's knowledge without the mediation of the teacher's help or classmates. Furthermore, beside "verbal repetition", "written repetition", "take notes of the word in class", etc. Master students use other strategies such as "writing the new words on mobile phones" (COG), and "writing

words with meaning on papers and stick them on the wall" (COG). In addition to using the new word when interacting with native speakers, Master students also use the new word when interacting with their classmates to consolidate the meaning of the words. Thus, the rise of the new learning environments and technological advancement is evident in the results of the present study. This suggests that some students participating in the present study see second vocabulary acquisition as a part of their daily life instead of them being limited to classroom contexts.

In brief, vocabulary learning strategies used by Master students are the same as highlighted in the literature on second language acquisition as suggested by the hypothesis of the research study. Still, there are some interesting exceptions if we compare Schmitt's (1997) questionnaire to the one used in the present study. First, the new learning environments help advanced language learners to create new vocabulary learning strategies (e.g. using sticks on the wall and using the new word when interacting with classmates) to consolidate words' meaning without the mediation of teachers' expertise. Second, the advanced technology (e.g. the use of the Internet, and mobile phones) has a meaningful role in second vocabulary acquisition. Learners take the initiative to use their potentials, and benefit from the possibilities of the technological innovations in order to develop their vocabulary learning.

Frequency of Vocabulary Learning Strategy Use

Based on the research findings, the heart of the discussion consists of the following subsections: (1) frequency of use of the five main categories, and (2) frequency of use of the ten most and (3) the ten least commonly used individual vocabulary learning strategies.

The main findings of the present study reveal that Master students report to use all the five main categories. However, Determination category (28.34%) is the most frequently used by the research participants.



Table (2): Frequency of Use in the Five Main Categories

Strategy Main Category	Numbers of Students(n)	Numbers of Strategies	Percent
1.Determination Category	60	10	28.34
2.Memory Category	60	26	27.69
3.Cognitive Category	60	10	22.04
5.Metacognitive Category	60	05	17.00
4.Social Category	60	08	11.87

The use of the Determination as the most commonly used category is in agreement with Schmitt's (1997) study with his Japanese students. Such typical examples of vocabulary learning strategies as "analyze the parts of speech", "analyze the word affixes and roots", "guess the word's meaning from the text/context", "use a monolingual dictionary", etc. are possibly due to the growing focus on learner-centered approach. The present study suggests that postgraduate students are more conscious of assuming their responsibility of their own vocabulary learning. That is to say, students learn a word meaning without their recourse to others' help or expertise. The respondents prefer to solve their immediate language problems individually.

The results also indicate that Memory category (27.69 %) is the second most frequent category used by Master students. This category usually involves linking the word to some previous knowledge. For example, it includes studying the spelling and pronunciation of the word in order to create a lasting imprint into student's memory. Additionally, words' affixes and classes, and paraphrasing are found to be useful in remembering words' meaning. Memory strategies are "deeper" strategies since they concentrate on manipulative mental processing.

Cognitive strategies (22.04 %) are the third most frequently reported by the research respondents. Cognitive strategies concentrate on repetition and mechanical techniques in vocabulary learning. As evidenced by Oxford (1990), Cognitive strategies are typically found to be the most commonly used by second language learners. Nevertheless, Master students rarely use techniques such as written and verbal repetition, wordlists, flashcards, and study aids. However, taking notes of words in class is known to be frequently used by the 60 Master students.

Meta-cognitive strategies (17.00 %) are employed as the fourth most frequent category. They

are used by students to control and assess their vocabulary acquisition. Schmitt (1997) argues that effective meta-cognitive strategies are those which provide the learner with the maximum exposure to the second language (SL). Using English language media such as movies, songs, etc., the efficient use of time and knowing when to study a new word are useful Meta-cognitive strategies.

Differently, the Social category (11.87 %) as the last commonly used category consistently echoes the results found by Schmitt's (1997) research study with his Japanese EFL learners. This phenomenon may be due to the fact that English vocabulary learning tends to be viewed as an individual learning process. That is to say, postgraduate learners prefer learning vocabulary individually. Thus, when encountering unfamiliar words, Master students tend not to seek others' help. They don't necessarily need interaction with others, "ask the teacher for an L1 translation or a sentence including the word", "ask classmates for the meaning of the word", or "discover the new meaning of the word through group work.

Overall, Master students tend to employ "deep" strategy categories as the most commonly used categories. Such categories include determination and Memory categories. These categories require some deeper mental processing and high cognitive effort. As demonstrated by Schmitt (1997), deeper processing involves elaborative mental processing. One probable explanation for the use of the deeper strategy categories may be attributed to the Master students being cognitively mature enough, and have high proficiency level of the second language (L2).

First, the participants show a clear preference for "guessing a word's meaning from the context" (76.7%), an item which is the most frequently used, and "using a monolingual dictionary" (55.0%), which is the fifth most frequently used strategy by Master students.

**Table (3): The Ten Most Frequent Vocabulary Learning Strategies**

Rank	Individual Strategy Item	Category	Frequency	Percent
1	I try to guess the word's meaning from the text/context	DET	46	76.7
2	I study the spelling of the word carefully	MEM	39	65.0
3	I study the sound of the word carefully	MEM	38	63.3
4	I learn the new word in an English sentence	MEM	37	61.7
5	I look for the word's meaning in a monolingual dictionary	DET	33	55.0
6	I take notes of the word in class	COG	31	51.7
7	I say the word aloud when studying.	MEM	31	51.7
8	I try to relate the word to its part of speech	MEM	30	50.0
9	I use the new word when interacting with native speakers.	SOC	24	40.0
10	I paraphrase the word's meaning	MEM	24	40.0

Note: DET= Determination strategies, SOC= Social strategies, MEM= Memory strategies, COG= Cognitive strategies, and MET= Metacognitive strategies

It is probable that the use of the two vocabulary learning strategies is more convenient and time-saving. Generally, "guessing from the context" (76.7%) is more often used than "using a dictionary" (55.0%). This is consistent with the study findings of Fan (2003). A possible explanation may be linked to the fact that "guessing" does not interrupt the reading speed or the flow of processing. Besides, Master students are possibly more cognitively mature, and thus more relaxed to employ "guesses" since they do not have recourse to the dictionary. Rather, they like to solve their vocabulary learning problems by themselves.

Second, some Memory strategies are often popular among the participants because more than half of the ten most frequently used strategies are Memory strategies. Such strategies involve relating the word to some previously learned knowledge to be remembered. They are essential in learning a new language. Among the most Memory vocabulary learning strategies, preferred by Master students, are "study the spelling of the word" (65.0%), "study the sound of the word" (63.3%), "learn the new word in an English sentence" (61.7%), "say the word aloud" (51.7%), "relate the word to its part of speech" (50.0%), and "paraphrase the word's meaning" (40.0%). It seems that the high frequency of Memory strategies could be attributed to the influence of prior educational experience. In other words, 53.3% of the participants have been studying English more than 8 years. Thus, they are cognitively more mature. They are able to employ Memory strategies, which involve complex mental processing and require some cognitive effort. Thus, the participants could favor using determination by "guessing the word from the context" (76.7%), contextualization by "learning the new word in an English sentence" (61.7%), manipulation of meaning by "paraphrasing word's meaning" (40.0%), etc. This

suggests that Master students do not prefer mechanical strategies to complex ones. They also pay attention to the grammatical features of words in order to facilitate recall, and remember the words better. This is demonstrated by the item "relate the word to its parts of speech" (50.0%).

Third, the strategy "take notes of the word in class" (51.7%) is reported as the sixth most frequent Cognitive strategy. This strategy is often popular among advanced learners. Probably because it could be operated easily without the involvement of any complicated mental processing. Hence, students just write down what teachers have said or explained. If we compare the ten most used strategies in this study with those in Schmitt's (1997) study, the similarities are pertinent: "guess from context" (76.7%), "say the word aloud" (51.7%), and "take notes of the word in class" (51.7%) are shared by both research studies. Therefore, it seems that some vocabulary learning strategies appear to be universal. However, this is not conclusive enough since the present study is conducted on only 60 respondents.

In a nutshell, Master students tend to employ deeper strategies more often as suggested by our hypothesis of the research study. That is evident when we find that the characteristics of Master students employing deep strategies involve the use of determination (e.g. guessing from context with 76.7%), contextualization (e.g. learning the new word in a sentence with 61.7%), manipulation of meaning (e.g. paraphrasing a word's meaning with 40.0%), monolingual dictionary (55.0%), relating the word to its parts of speech (50.0%), and using the new word when interacting with native speakers (40.0%). All these strategies require some depth of processing, and constitute more than half of the ten most frequent strategies used by the respondents.



Table (4)
The Ten least Frequent Vocabulary Learning Strategies

Rank	Individual Strategy Item	Category	Frequency	Percent
1	I learn the word through English-Arabic word lists.	DET	33	55.0
2	I use the Peg Method.	MEM	28	46.7
3	I ask the teacher for L1 translation.	SOC	26	43.3
4	I skip or pass the new word.	MET	23	38.3
5	I put English labels on physical objects.	COG	19	31.7
6	I group words together within a storyline.	MEM	17	28.3
7	I use "scales" for gradable adjectives, verbs, etc.	MEM	16	26.7
8	I use physical action to learn a new word.	MEM	16	26.7
9	I listen to tapes of word lists.	COG	15	25.0
10	I use flashcards with representation of the word to consolidate meaning	COG	14	23.3

Note: DET= Determination strategies, SOC= Social strategies, MEM= Memory strategies, COG= Cognitive strategies, and MET= Metacognitive strategies.

First, the results shown in table (4) indicate that among the strategies, there are four unpopular Memory strategies employed by the participants of the present investigation. These four least used Memory strategies all have to do with "use the Peg Method" (46.7%), "group words together within a storyline" (28.3%), "use scales for gradable adjectives, verbs, etc" (26.7%), and "use physical action to learn the new word" (26.7%). According to Oxford (1990), Memory strategies can have a very significant contribution in language acquisition. However, the participants do not give much importance to strategies related to "grouping", "association", "imagery", namely "the Peg Method", and "the Loci Method though they are helpful for retaining vocabulary. It is likely that the use of these strategies is not difficult for advanced learners since they have high level of English proficiency, still they do not find such strategies as suitable as "guessing from context", "using the new word in a sentence", "using a monolingual dictionary", "study the spelling of the word carefully, etc., or they need some training. Thus, the findings may reveal that Master students are not trained to employ the least commonly used Memory strategies.

Second, the respondents do not prefer the use of ready-made study aids such as "English-Arabic wordlists" (55.0%), "flashcards" (23.3%), and "labels" (31.7%) to help themselves remember their English vocabulary. Possibly, they consider these vocabulary strategies as a waste of time and energy, or a short-term process. Therefore, learning vocabulary becomes ineffective process. Similarly, the low frequency of "physical action when learning a word" (26.7%) is probably attributed to the fact that only beginners can use this strategy through acting out.

Finally, the item "ask the teacher for L1 translation" (43.3%) is the third least frequent Social

vocabulary learning strategy. It is likely that advanced learners' command of the target language enables them learn their vocabulary by themselves. However, "asking the teacher for L1 translation" (43.3%) could be used by beginners since they have a limited command of the target vocabulary. The participants generally know how to organize their vocabulary learning, and see vocabulary learning as a long-term process. This is consistently maintained by the participants' use of the continuous study of words over time, occasionally review learnt vocabulary items, and plan vocabulary on their own. That is why Master students never "skip or pass the new word" (38.3%), which is the fourth least frequent Meta-cognitive vocabulary learning strategy.

Concisely, as hypothesized by the research hypothesis of the present study, there is a tendency on the part of Master students to employ "shallow" vocabulary learning strategies least frequently. In fact, such uses include wordlists, flashcards, labels, tapes of word lists, and social strategies such as asking the teacher for L1. Master students do not prefer processing words at superficial levels, and concentrate only on the form of the words. In the same line of thought, some deep Memory strategies such as the Key Method, the use of scales, and grouping words together within a storyline would be very helpful for vocabulary retention. However, the results in the present study indicate that Master students do not use them more often. Possibly, there should be some kind of vocabulary learning strategy training.

Gender Differences in VLS Use Among Master Students.

The chi-square tests results exhibit four out of twenty strategies for which statistical significance is



found according to gender. Among the vocabulary learning strategies, male students reported significantly to “relate the word to its part of speech” ($p=0.02$) most frequently, and “put English labels on physical objects” ($p=0.03$) least frequently. On the other hand, females reported significantly to “use the Peg Method” ($p=0.05$), and “skip or pass the new word” ($p=0.04$) least frequently. Apart from these four strategies, no other strategy has exhibited any significant gender difference.

The crosstab of table (5) indicates that 60.9% of male subjects “always” relate the word to its part of speech, still only 14.3% of female subjects “always” relate the word to its part of speech. i.e., males are more likely to say that they always relate the word to its part of speech in this selection. However, when we look at the second row labeled “sometimes”, we notice

that the difference is reversed. A greater portion of females (50.0%) said that they “sometimes” relate the word to its part of speech compared to their male counterparts (32.6%). However, the row labeled “rarely” indicates that the difference is relatively high across the two genders. 35.7% of females said they “rarely” relate the word to its part of speech compared to only 4.3% of their male counterparts.

The chi-square test (see table 6) for independence result ($X^2=14.90$; $df=0, 3$) indicates that the relationship between “relating the word to its part of speech”, and gender variable is statistically significant since the Sig value ($p=0.02$) is less than the theoretical value (0.05). Thus, the Null hypothesis is rejected as there is dependence between relating the word to its part of speech, and gender.

Table (5): I relate the word to its part of speech*Are you male or female?

		Are you male or female?		Total	
		Male	Female		
I relate the word to its part of speech	Always	Count	28	2	30
		% within Are you male or female?	60.9%	14.3%	50.0%
	Sometimes	Count	15	7	22
		% within Are you male or female?	32.6%	50.0%	36.7%
	Rarely	Count	2	5	7
		% within Are you male or female?	4.3%	35.7%	11.7%
	Never	Count	1	0	1
		% within Are you male or female?	2.2%	.0%	1.7%
Total	Count	46	14	60	
	% within Are you male or female?	100.0%	100.0%	100.0%	

Table (6): Crosstab of Gender and Relate the Word to its Part of Speech?

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	14.900 ^a	3	.020
Likelihood Ratio	14.600	3	.020
N of Valid Cases	60		

a. 3 cells (37.5%) have expected count less than 5. The minimum expected count is .23.

The crosstab (table 7) shows that no male participant chose “always” for the strategy “put English labels on physical objects”, whereas 14.3 % of female respondents chose “always” for the same vocabulary learning strategy. That is to say, female respondents are more likely to say that they always put English labels on physical objects. The statistical difference, in the second row “sometimes”, is relatively small. This means that 32.6 % of male respondents said that they “sometimes” put English labels on physical

objects, and 35.7% of female respondents said that they “sometimes” use the same strategy. Nevertheless, in the last row labeled “never”, the difference is reversed compared to the first row labeled “always”. To illustrate, 39.1% of male respondents said that they “never” put English labels on physical objects, while 14.3% of female respondents said that they “never” use the same VLS. Hence, males are more likely to say that they never put English labels on physical objects while learning their vocabulary.



The chi-square test for independence result ($X^2=8.78$; $df=0, 3$) illustrates that the relationship between "putting English labels on physical objects", and gender variable is significant due to the Sig value

($p= 0.03$) which is less than the theoretical value (0.05). Hence, the Null hypothesis, which says that there is dependence between gender, and "putting English labels on physical objects", is rejected.

Table (7): I put English labels on physical objects.*Are you male or female?

			Are you male or female?		Total
			Male	female	
I put English labels on physical objects.	Always	Count	0	2	2
		% within Are you male or female?	.0%	14.3%	3.3%
	sometimes	Count	15	5	20
		% within Are you male or female?	32.6%	35.7%	33.3%
	Rarely	Count	13	5	18
		% within Are you male or female?	28.3%	35.7%	30.0%
	Never	Count	18	2	20
		% within Are you male or female?	39.1%	14.3%	33.3%
Total	Count	46	14	60	
	% within Are you male or female?	100.0%	100.0%	100.0%	

Table (8): Crosstab of Gender and Put English Labels on Physical Objects

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.789 ^a	3	.032
Likelihood Ratio	8.426	3	.038
N of Valid Cases	60		

a. 5 cells (62.5%) have expected count less than 5. The minimum expected count is .47.

Table (9): I use the Peg Method. * Are you male or female?

			Are you male or female?		Total
			Male	female	
I use the Peg Method.	Always	Count	3	0	3
		% within Are you male or female?	6.5%	.0%	5.0%
	Sometimes	Count	14	0	14
		% within Are you male or female?	30.4%	.0%	23.3%
	Rarely	Count	11	4	15
		% within Are you male or female?	23.9%	28.6%	25.0%
	Never	Count	18	10	28
		% within Are you male or female?	39.1%	71.4%	46.7%
Total	Count	46	14	60	
	% within Are you male or female?	100.0%	100.0%	100.0%	

**Table (10): Crosstab of Gender and Use the Peg Method**

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.666 ^a	3	.053
Likelihood Ratio	11.297	3	.010
N of Valid Cases	60		

a. 4 cells (50.0%) have expected count less than 5. The minimum expected count is .70.

As seen in table (9), 6.5% of male subjects said that they “always” use the Peg Method, whereas none of female subjects (0.0%) said that they “always” use the same strategy. Thus, males are more likely to say that they always use the Peg Method in this selection. However, this difference is reversely indicated by the last row labeled “never”. To illustrate, only 39.1% of male respondents said that they “never” use the Peg Method, while 71.4% of female respondents said that they “never” use the same VLS. Accordingly, males are less likely to say that they never use the Peg Method.

The chi-square test for independence result ($X^2=7.66$; $df=0,3$) (table 10) demonstrates that the relationship between using the Peg Method, and gender variable is significant since the Sig value ($p= 0.05$) equals the theoretical value (0.05). Therefore, the Null

hypothesis, which says that there is dependence between gender and the use of the Peg Method, is rejected.

The crosstab (table11) shows that 6.5% of male participants “always” skip or ignore the new word, while none of female respondents (0.0%) said that they “always” use the same VLS. Hence, males are more likely to say that they always skip or ignore the new word when dealing English vocabulary. However, in the last row labeled “never”, we notice the inverted relationship. That is to say, 57.1% of female respondents said that they “never” skip or ignore the new word, while 32.6% of male respondents said that they “never” skip or ignore the new word. In other words, males are less likely to say that they never skip or ignore the new word in vocabulary acquisition

Table (11): I skip or pass the new word * Are you male or female?

		Are you male or female?		Total	
		Male	female		
I skip or pass the new word	Always	Count	3	0	3
		% within Are you male or female?	6.5%	.0%	5.0%
	sometimes	Count	8	5	13
		% within Are you male or female?	17.4%	35.7%	21.7%
	Rarely	Count	20	1	21
		% within Are you male or female?	43.5%	7.1%	35.0%
Never	Count	15	8	23	
	% within Are you male or female?	32.6%	57.1%	38.3%	
Total	Count	46	14	60	
	% within Are you male or female?	100.0%	100.0%	100.0%	

Table (12): Crosstab of Gender and Skip or Pass the New Word

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.310 ^a	3	.040
Likelihood Ratio	10.109	3	.018
N of Valid Cases	60		

a. 4 cells (50.0%) have expected count less than 5. The minimum expected count is .70.



The chi-square test for independence result ($X^2=8.31$; $df=0, 3$) (table 12) reveals that the relationship between the dependent variable "skip or ignore the new word", and the independent gender variable is significant because the Sig value ($p= 0.04$) is less than the theoretical value (0.05). Hence, the Null hypothesis, which says that there is dependence between gender and "skipping or passing the new word", is refuted.

There appear to be some gender differences in vocabulary learning. The significant differences reported by both females and males are possibly attributed to the fact that human beings, males and females, are different because of the innate and social causes. For example, gender differences are attributed to brain hemisphericity, cognitive style and socialization differences between the two genders (Oxford, 1995). Nevertheless, this is not conclusive enough to determine different ways of vocabulary learning for both genders. Patently, it is demonstrated that males appear to appreciate facility with visual and spatial information, while females give importance to verbal expressions (Nyikos, 1990). In fact, based on these differences, the findings of the present study are in contradiction with the results of some research studies carried out in the field of vocabulary learning. As evidenced by Stöffer's (1995) research study, the results indicate that gender variable failed to reveal any effect on vocabulary learning strategy use. However, the findings of Jiménez-Catalan (2003), and Mayuree (2007) show that the choice of vocabulary learning strategies by both males and females is found to be statistically significant. Accordingly, the only factors that could possibly explain the effect of gender on strategy use are learning styles and preferences. This has been confirmed by the results of the present study that males report significantly to "relate the new word to its parts of speech" ($p=0.02$). Male participants find using this strategy more suitable and a part of their preferred vocabulary strategies since they appear to appreciate facility with visual and spatial information in vocabulary learning (Nyikos, 1990). On the other hand, 39.1% of male respondents said that they "never" put English labels on physical objects, while only 14.3% of female counterparts said that they "never" use the same vocabulary learning strategy. i.e., males are more likely to say that they never put English labels on physical objects. Therefore, this is not males' preferred VLS.

However, females employ two Memory strategies least frequently for which significant difference is determined according to gender (the use of the Peg Method, and skip the new word). In fact, if we included a larger and balanced sample of respondents, and applied the crosstabs and chi-square

tests for independence for all the 59 vocabulary learning strategies in the questionnaire, females could have reported significantly to employ social strategies more frequently than their male counterparts. Such significant differences would be linked to the learning styles and preferences. Females appear to employ more social vocabulary learning strategies while interacting in both the classroom, and real world, as shown by the study of Oxford and Nyikos (1989).

Conclusion

The purposes of the research article was to investigate VLSs used by Master students within the English Department of Meknes: (1) the identifications of VLS use, (2) frequency of use, and (3) gender differences. One of the main contributions of the present investigation was the taxonomy of VLSs, which Master students reported to use in the questionnaire. The VLSs were identified based on two vocabulary learning purposes: Discovery strategies and Consolidation strategies as reported by the research respondents. The questionnaire was further classified into five main strategy categories: Determination, Memory, Cognitive, Social, and Metacognitive strategies. The results indicated that Master students used Determination and Memory categories most frequently, and Metcognitive and Social categories least frequently. At the level of frequency of use in terms of individual VLSs, Master students used deep strategies such as guessing the word's meaning from the context, using the new word in an English sentence, using a monolingual dictionary, relating the word to its parts of speech, using the new word when interacting with native speakers, and paraphrasing the word's meaning most frequently. On the other hand, wordlists, flashcards, labels, tapes of word lists, scales, physical action and social strategies were employed least frequently. Of the variables explored, gender had an effect on student's strategy use. The chi-square tests results indicated that males reported significantly to relate the word to its part of speech most frequently, and put English labels on physical objects least frequently. Differently, females reported significantly to employ two VLSs least frequently. They include using the Peg Method, and skipping the new word.

Finally, the researcher of the present study believes that with a careful research design and appropriate tools, a researcher can gain insights into how students deal with their vocabulary learning, and how VLSs are employed by different students in different learning contexts. Overall, vocabulary learning is lifelong process. Definitively, students have to assume their responsibility to learn their vocabulary independently.



REFERENCES

- Allen, V. F. (1983). *Techniques in teaching vocabulary*. Oxford: Oxford University Press
- Davies, P., and Pearse, E. (2000). *Success in English teaching*. Oxford: Oxford University Press.
- Ellis, R. (1994). *The study of second language acquisition*. Oxford: Oxford University Press.
- Ellis, G., and Sinclair, B. (1989). *Learning to learn English: A course in learner training*. Cambridge: Cambridge University Press.
- Fan, M. Y. (2003). Frequency of use, perceived usefulness, and actual usefulness of second language vocabulary strategies: A study of Hong Kong learners. *The Modern Language Journal*, 87 (2): 222-241.
- Gu, P. Y., and Johnson, R. K. (1996). Vocabulary learning strategies and language learning outcomes. *Language Learning*, 46 (4): 643-679.
- Hamzah, M.S.G, Abdullah, S.K, and Kafipour, R. (2009). Vocabulary learning strategies of Iranian Undergraduate EFL students and its relation to their Vocabulary Size. *In European Journal of Social Sciences* Vol. 11 No. 1 (2009):39-50.
- Harmer, J. (1991). *The practice of English language teaching*. London: Longman.
- Intaraprasert, C. (2005). A preliminary investigation of vocabulary learning strategies employed by EST students. *Suranaree Journal of Science and Technology*, 12 (2):163-171.
- Jiménez -Catalan, R. M. (2003). Sex differences in L2 vocabulary learning strategies *International Journal of Applied Linguistics*, 13, 1: 54-77.
- Kablani, R. (2006). *Frequency of Use and Perceived Usefulness of Vocabulary Learning Strategies by Moroccan University EFL Students*. Unpublished Master thesis, Faculty of Education, Rabat, Morocco.
- Kudo, Y. (1999). *Second language vocabulary learning strategies*. Available: <http://scholarspace.manoa.hawaii.edu/handle/10125/8951?show=full>. Accessed on June 12, 2011.
- Lewis, M. (1993). *The lexical approach: The state of ELT and a way forward*. Hove: Language Teaching.
- Mayuree, S. (2007). *English vocabulary learning strategies employed by Rajabhat university students*. Available: <http://hdl.handle.net/123456789/284>. Accessed on March 16, 2011.
- McCarthy, M. (1990). *Vocabulary*. Oxford: Oxford University Press.
- Nandy, M. (1994). *Vocabulary and grammar for G.C.E. 'O' level English*. Singapore: Composite Study Aids.
- Nation, P. (1990). *Teaching and learning vocabulary*. Boston: Heinle & Heinle.
- Nation, P. (2001). *Learning vocabulary in another language*. Cambridge: Cambridge University Press.
- Nyikos, M. (1990). Sex-related differences in adult language learning: Socialisation and memory factors. *The Modern Language Journal*, 74 (3): 273-287.
- O'Malley, J.M., Chamot, A.U., Stewner-Manzanares, G., Kupper, L. and Russo, R. (1985a). *Learning strategies used by beginning and intermediate ESL students*. *Language Learning* 35 (1), 21-46.
- Oxford, R. (1990). *Language learning strategies: What every teacher should know*. New York: Newbury House
- Oxford, R. (1993). Instructional implications of gender differences in L2 learning styles and strategies. *Applied Language Learning* 4.1-2: 65-94.
- Oxford, R., and Nyikos, M. (1989). Variables affecting choice of LLS by university students. *The Modern Language Journal*, 73 (3): 291-300.
- Pressley, M., Levin, J. R., Kuiper, N. A., Bryant, S. L. and Michene, S. (1982).
- Mnemonic versus nonmnemonic vocabulary-learning strategies: Additional comparisons. *Journal of Educational Psychology* 74, 693-707
- Ranalli, J. (2003). *The Treatment of Key Vocabulary Learning Strategies in Current ELT Coursebooks: Repetition, Resource Use, Recording*. Unpublished MA thesis. University of Birmingham, Birmingham, United Kingdom.
- Rubin, J. (1987). Learner strategies: theoretical assumptions, research history and typology. In A. Wenden & J. Rubin, *Learner strategies in language learning*. New York: Prentice Hall.
- Sanaoui, R. (1995). Adult learners' approaches to learning vocabulary in second language. *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. 198-227). Cambridge: Cambridge University Press.
- Schmitt, N. (2000). *Vocabulary in language teaching*. Cambridge: Cambridge University Press.
- Seffar, S. (2005). *Second Language Vocabulary Acquisition and Learning Strategies: The case of Moroccan University Students*. Unpublished Master thesis. Faculty of Education, Rabat, Morocco.
- Sökmen, A. J. (1997). Current trends in teaching second language vocabulary. In N. Schmitt and M. McCarthy (Eds.), *Vocabulary: Description, acquisition and pedagogy* (pp. 237-257). Cambridge: Cambridge University Press.
- Stöffer, I. (1995). *University foreign language students' choice of vocabulary Learning strategies as related to individual difference variables*. Unpublished Doctoral Dissertation, the University of Alabama, USA.
- Subekti, N.B. and Lawson, M.J. (2007). Vocabulary acquisition strategies of Indonesian postgraduate students through reading. *International Education Journal*, 8 (2), 484-496. Available: <http://iej.com.au>. Accessed on March, 24, 2011.
- Tuchman, B. W. (1972). *Conducting Educational Research*. New York: Harcourt Brace Jovanovich, Inc.
- Wilkins, D. A. (1972). *Linguistics and language teaching*. London: Edward Arnold.
- Zhihong, Y. (2000). Learning words. *Forum*, 38(3). Available: <http://exchange.state.gov/forum/vols/vol38/no3/p18.htm>. Accessed on June, 2010.