

The Relationship between Iraqi EFL Learners' Vocabulary Learning Strategies Use and Their Receptive Vocabulary Size

Adil Muhammd Ameen MAHMOOD

English Language Teaching Department
Education Faculty, Gaziantep University
Gaziantep, Turkey

Fadime YALCIN ARSLAN

English Language Teaching Department
Education Faculty, Gaziantep University
Gaziantep, Turkey

Abstract:

This study investigated the relationship between Iraqi English as a Foreign Language (EFL) learners' vocabulary learning strategies (VLS) and vocabulary size (VS). Participants included 118 EFL learners at Sulaymaniyah University in Iraq, all of whom were studying in the School of Basic-Education English Department. Two instruments were employed to collect data: a VLS questionnaire designed by Schmitt (1997) was administered in order to determine the range and frequency of VLS use, and a four-level (2000, 3000, 5000 and academic word list) vocabulary learning test (VLT) designed by Schmitt, et al. (2001) was used to measure learners' receptive vocabulary size. The aim of this study was to determine the kinds of strategies learners utilized as well as their relationship to students' VS. The results demonstrated that students utilized consolidation more frequently than discovery strategies. Moreover, the most frequently utilized VLS was studying the sounds of new words, while the least frequent one was working in groups to discover the meanings of new words. In terms of total VLS, the students can be considered as moderate VLS users ($M= 3.003$). The results of correlation analysis revealed that there exist positive, negative and sometimes no relationships between learners' VLS and VS. Finally, the findings of multiple regression analysis concluded the R Square value to be (0.284), which means that the predicted variables could account for 28.4% of the participants' levels of receptive VS. This study concluded that systematic and appropriate strategies support learners to increase their VS.

Keywords: Iraqi English as a Foreign Language learners, vocabulary learning strategies, vocabulary level test, receptive vocabulary knowledge

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Introduction

Schmitt (1997) defines vocabulary learning strategies (VLS) as the processes by which vocabulary knowledge and information are obtained, stored, retrieved and used. In addition, VLS supports learners to take control of their learning processes while developing their VS. Anderson and Freebody (1981) define VS as the number of words known by a learner, meaning that they are familiar with some important aspects of the word meaning. They confirm that learners possessing high vocabulary knowledge can better utilize the language, while learners with relatively low vocabulary knowledge are likely to experience difficulties in communication. Vocabulary knowledge is essential to language acquisition, which involves the manipulation of writing, speaking, listening, and reading—all of which direct learners to have sufficient interaction (McCarthy, 1988). However, Hedge (2000) states that “in the literature of English language teaching and learning an occurring theme has been the neglect of vocabulary” (p.110). She also adds that this negligence diminishes for learners the important role of vocabulary. Moreover, the negligence of learning and teaching vocabulary causes a lack of comprehensible communication. Therefore, VLS can be regarded as the main tool for enhancing and improving learners’ VS (Nation, 2001).

Catalan (2003) explains that teachers’ effort and learners’ desire impact the processes of vocabulary learning and teaching. In addition, vocabulary learning and teaching in many classrooms is incidental. Among Asian university students, an *ad hoc* strategy of vocabulary learning likely leads to insufficient vocabulary knowledge on behalf of students. It has also been observed that educators at the University of Sulaymaniyah in Iraq often employ traditional methods of teaching vocabulary such as giving students list of words separately rather than utilizing authentic materials. The students always claim that they have limited vocabulary knowledge, which causes some obstacles in their acquisition of English. In addition, they are not familiar with appropriate ways to gain vocabulary knowledge. Fan (2003) also notes that inadequacy in vocabulary knowledge causes learners to receive unsatisfactory results on their exams. This inadequacy may also hamper students’ proficiency in the English language and on public exams. Therefore, teachers should focus on a wide range of VLS in order to enhance the vocabulary knowledge of their students. One of the problems observed at the University of Sulaymaniyah is that teachers either do not measure learners’ vocabulary knowledge or consider students’ knowledge levels while choosing vocabulary materials.

As the concept of language-teaching shifted from a predominately teacher-oriented focus to a learner-oriented one, great emphasis has been placed on learners’ responsibilities for achieving their language-learning needs and becoming independent learners (O'Malley & Chamot, 1990; Oxford, 1990). Today, the communicative approach to foreign language learning plays a great role in ESL and EFL education, and this approach prioritizes vocabulary learning as a crucial component to language acquisition. Nowadays, most hiring organizations in Iraq prefer those who possess excellent communication skills in English. As a result, university syllabi in Iraqi universities focus on familiarizing students with English, motivating them to acquire it, and incorporating it at each education level. Nevertheless, despite these efforts, Iraqi EFL students remain unaware of adequate language-learning strategies (LLS), and they lack opportunities to practice their English outside of a university setting.

This study aims primarily to identify the frequency of VLS utilized by Iraqi EFL students as well as their VS in terms of receptive word knowledge. It also attempts to examine the relationship between VLS and VS in terms of receptive word knowledge. Therefore, the following research questions guide this study:

1. What are the most and least frequently used vocabulary learning strategies by Iraqi EFL learners?
2. To what extent do Iraqi EFL learners use vocabulary learning strategies: high, moderate, or low?
3. What is the vocabulary level of Iraqi EFL learners in terms of receptive word knowledge?
4. Is there a relationship between the use of vocabulary learning strategies and Iraqi EFL learners' receptive vocabulary size?
5. To what extent do vocabulary learning strategies contribute to the vocabulary size of Iraqi EFL learners?

Empirical Research on Vocabulary Learning Strategies

Schmitt (2014) has claimed that the study of VLS is in an embryonic state because there is no survey which includes the entire aspects of VLS. Therefore, some researchers focus on categorizing VLS and the usefulness of these strategies for increasing learners' proficiency. Some researchers also deal with specific kinds of VLS and whether they affect learners' vocabulary learning. In this regard, the following studies have been fruitful.

Ahmad (1989) administered a VLS survey to 300 Sudanese EFL learners to distinguish between "good" and "poor" students' approaches to lexical learning. This survey involved "good" learners and "low-achievers" based on their school records and subject assessments. The results of the survey indicated that good learners used more strategies; were more conscientious regarding what they could learn about new words; and paid more attention to collocations, spelling, and dictionary use. They were also more aware of contextual learning. In contrast, low-achievers utilized less VLS and tended to avoid active vocabulary practice. In addition, individual differences are identified among both good and poor learners. This study is significant because it helps teachers how to promote their poor-learners vocabulary proficiency.

Another study in the field of VLS by Gu and Johnson (1996) involved 850 Chinese EFL learners. A questionnaire was administered to understand better these learners' beliefs about vocabulary learning, their vocabulary levels, and their VLS. The results proved that the learners mostly preferred studying vocabulary in real contexts. Additionally, they believed that vocabulary should be carefully studied and used rather than simply memorized. This study is also important to support teachers what kind of activities learners prefer and enjoy while they are learning vocabulary.

Another significant VLS study which was conducted on a large scale is that of Schmitt (1997). His research involved 600 Japanese EFL learners who were divided into four groups (junior high school students, high school students, university students and adult learners). Schmitt administered a questionnaire including discovery and consolidation strategies to identify the types of VLS used by learners. The results indicated that Japanese EFL learners are more attracted to using a descending-order bilingual dictionary and guessing from lexical context, but they were less

prone to checking first language cognates. Pertaining to the consolidation category, the students mostly preferred verbal and written repetition, studying spelling, taking notes, and studying the sounds of words. The least frequent strategy was asking teachers for flash card accuracy. This study gives vital clues to teachers to get benefit from those kinds of strategies which have a better result to learners.

Size and Depth of Vocabulary Knowledge

Vocabulary knowledge (size and depth) plays an important role in communication. The amount of vocabulary knowledge required by learners for using the target language for communication and comprehension is not fixed. According to Schmitt (2014), the measurement of VS is straightforward in that it denotes the amount of lexical items a learner possesses knowledge of. This conceptualization of VS is based on size rather than depth. The conceptualization of depth is related both to the knowledge of lexical aspects (e.g. knowledge of multiple polysemous meanings of words) as well as more holistic mastery (e.g. having a rich associative network formed around the word). Some scholars argue that there is little difference between vocabulary size and depth, but Qian (1999) asserts that depth typically adds unique explanatory power compared to size. This study mainly focuses on receptive vocabulary size of Iraqi EFL learners as they required understanding the meaning of the words while they read.

Receptive and Productive Word Knowledge

Meara (1997) claims that lexical organization is at the root of receptive and productive mastery. Similarly, Nation (2001) concludes that there are two types of word knowledge related to the mental processes involved in vocabulary learning. He describes these types of knowledge in the following way:

Essentially, receptive vocabulary use involves perceiving the form of a word while listening and reading and retrieving its meaning. Productive vocabulary use involves wanting to express a meaning through speaking and writing and retrieving and producing the appropriate spoken and written word form. (P.24-25)

Many researchers have compared the ratios of receptive and productive word knowledge, but few have investigated the types and amounts of lexical items necessary for enabling learners to become productive. According to Schmitt (2014), in terms of receptive knowledge, it is sufficient to know the form-meaning of the word, utilize these form-meanings in speaking and writing, and then recall the meaning to help learners to produce communication. On the other hand productive word knowledge includes parts of speech, derivation forms, and collocations, which are already provided by context to express word knowledge aspects. From this perspective, productive mastery is more difficult and advanced because 1) more word knowledge components are required and 2) many of these components are contextual in nature, thus taking a long time to be developed.

Vocabulary Frequency Levels

The number of unknown words in spoken and written discourse can affect learners' reading and listening skills. Regarding this case, researchers have examined learners' vocabulary size at various levels. Schmitt, et al. (2001) declares that vocabulary knowledge of 2,000-word families is sufficient for oral communication and that 5,000-word families are necessary for reading

authentic texts. Similarly, Laufer (1992) insists that a vocabulary size of around 5,000-word families permits learners to comprehend 95 percent of the running words in a text as well as enables students to read authentic texts independently.

Word frequency would be useful for both English language teachers and learners in determining the frequency of words used by native English speakers. With this purpose, Nation (1990) and West (1953) compile a list of high-frequency words at the 2,000-word level, which supports learners in realizing lexical knowledge and improving their everyday communication. Moreover, Singleton (1999) defines content words as “those which are considered to have substantial meaning even out of context” and function words as “those considered to have little or no independent meaning and to have largely grammatical role” (p. 11). Nation (1997) classifies vocabulary frequency into four categories: high-frequency words, academic words, technical words, and low-frequency words. According to him, high-frequency words are 2,000-word families, while low-frequency words extend beyond 8,000-9,000-word families. He also advises that 2,000 high-frequency word families be studied in the beginning stage of language learning. Finally, Nation differentiates between academic words, which are useful for learners who wish to study English in general, and technical words, which are beneficial for learners who want to study in a specific domain and purpose.

Vocabulary Learning and Teaching

Nation (2001) distinguishes between methods of vocabulary learning in terms of direct and indirect vocabulary learning. He explains this distinction in the following way:

In direct vocabulary learning, the learners do exercises and activities that focus their attention on vocabulary. Such exercises include word-building exercises, guessing word form in context, when this is done in class exercise, learning words in lists and vocabulary games. In indirect vocabulary learning, the learners’ attention focus on some other features usually the message convey by the speaker or the writer. If the amount of unknown vocabulary is low in such messages, considerable vocabulary learning can occur even though the learner’s attention is not directed toward vocabulary learning. (p. 2)

Teachers and tutors are responsible for providing systematic ways of teaching the target language and for supporting learners in achieving an independent language-learning approach. Nation (1990) proposes that a strong reason for teaching vocabulary in a systematic way is that research on vocabulary teaching has provided ample information regarding how teachers can teach VLS as well as what sorts of vocabulary they should focus on. Another reason is that research on VLS has shown that a diversity of strategies improve students’ vocabulary acquisition; thus, it is not necessary for teachers to favor particular strategies over others. Thirdly, teachers and learners should consider the unique role of vocabulary in language learning as a whole, and finally, learners with a lack of vocabulary knowledge experience additional difficulties in target-language communication.

VLS can be regarded as the main tool for enhancing learners’ VS (Nation, 2001). Moreover, several researchers have investigated methods of developing VS within different L2 levels (Nation, 1990; Nation & Beglar, 2007). Their studies also have examined what, exactly,

constitutes a VS that is adequate for smooth reading and listening. In summary, in order to benefit the processes of second-language teaching and learning as well as to determine how learners' VLS use affects their VS, researchers have probed the relationship between VLS, VS and language proficiency. Nevertheless, Iraqi EFL researchers have neglected to study the relationship between learners' VLS use and VS. The current study is the first of its kind in Iraq, and it examines the relationship between Iraqi EFL learners' VLS use and their receptive word knowledge.

Methods

A quantitative paradigm was utilized in this study in order to analyze the data collected through VLS and VLT. Larsen-Freeman and Long (1991) stated that researchers prefer to conduct quantitative studies because they can best typify the test hypotheses through object tools and the data is analyzed by appropriate statistical analysis programs. In addition to this quantitative study, a descriptive research design was also employed in the current study. Descriptive study is a research paradigm that refers to investigating and utilizing already-existing data or non-experimental research as well as a preconceived hypothesis and research questions (Selinger & Shohamy, 1989). The research method of the present study utilized data collection instruments associated with descriptive research design (questionnaire and test). Descriptive statistics were applied in order to discover the range and frequency of VLS used by Iraqi EFL learners and to analyze the results of the vocabulary learning test (VLT). Moreover, inferential statistics were utilized to reveal which VLS of Iraqi EFL learners correlated with their receptive vocabulary size. A Pearson Product-Moment Correlation Coefficient was applied to examine the correlation between VLS used by Iraqi EFL learners and their VLT's. Standard multiple regression analysis was also employed in this study to determine the influence of each item of VLS which participants used for their VLT's.

Sampling

The population of the current study was comprised of EFL students at a university in northern Iraq. They were juniors attending the School of Basic-Education English Department who were training to become teachers. There were 118 participants, including 63 female and 55 male students. They were chosen from the population by using a convenience sampling method. All participants began learning English during primary school, and their ages ranged from 21 to 35 years.

Data Collection

Instruments

The data collection tools consist (1) Vocabulary Learning Strategies Questionnaire (VLSQ), which was composed by Schmitt (1997) and (2) Vocabulary Level Test (VLT) which was produced by Schmitt et al. (2001).

This VLSQ was conducted to discover the VLS used by Iraqi EFL learners. The items of VLSQ seek information within six categories of VLS: determination, social-discovery, and social-consolidation, memory, cognitive and metacognitive. The VLSQ was formulated as a Likert-scale. The format of this questionnaire is based on Schmitt's (1997) taxonomy of VLS, which was designed to elicit students' beliefs about vocabulary learning and their self-reported preferences of vocabulary learning strategies. The items of VLSQ was adapted by Aljdee (2007), he applied this questionnaire to identify the VLS use by Algerians' students.

The VLT was produced by Schmitt et al. (2001). It was considered as a tool for measuring participants' receptive VS. They proved that there is a positive correlation between the ability to use English in a variety of ways and learners' VS. The VLT of Schmitt et al. (2001) includes 60 words and 30 definitions. They are categorized into five groups and four respectively at each frequency level of 2000, 3000, 5000 and Academic Word List. However, this research excludes the 10,000-frequency word level which is not suitable for the participants' proficiency levels.

Process

The pilot study was administrated before conducting the main research to discover the reliability of the VLSQ and VLT. The participants chosen for the pilot study were students within the School of Basic Education English Department at the University of Salahadin in Erbil city. There were 55 participants, including 23 males and 32 females. The pilot study demonstrated that students can answer both the VLSQ and the VLT in a proper time without facing any difficulties. The reliability analysis of VLSQ was 0.85 and VLT was 0.92. Later, the students from the University of Sulaymaniyah School of Basic-Education participated in the data collection of the main study. Firstly, a VLSQ was administered, followed by a VLT on the next day.

Data Analysis

Descriptive analysis was used to determine the most and the least frequently utilized VLS. It was also applied to find out whether Iraqi EFL learners are high, moderate, or low VLS users. Moreover, descriptive statistics were also conducted to determine the learners' vocabulary levels. Pearson's Correlation was performed to investigate the relationship between participants' receptive VS and VLS. Finally, multiple regression analysis was applied to determine the contribution and influence of VLS on the VS of participants.

Findings

The first research question aimed to identify the most and the least frequently used VLS among Iraqi EFL learners. The mean and standard deviation of each individual strategy were considered and the results are presented in Table 1.

Table 1

Descriptive Statistics for the Most and the Least Used of VLS

Strategy	Strategy category	M	SD
Studying the sound of the new word.	Memory	3.79	1.131
Trying to develop my vocabulary knowledge by watching English TV channels.	Metacognitive	3.68	1.139
Repeating the new word over and over.	Cognitive	3.66	1.040
Studying the spelling of the new word.	Memory	3.62	1.116
Identifying the part of speech of the new word (verb, noun, adjective) to help me know Its meaning.	Determination	3.56	1.026
Saying the new word aloud when studying.	Memory	3.46	1.145

Asking a teacher for paraphrase of a new word	Social-discovery	2.49	1.976
Studying and practice meaning of the new words in a group of students.	Social-consolidation	2.46	1.145
Asking a teacher for a sentence including the new word.	Social-discovery	2.46	1.036
If you use word lists, do you ask a teacher whether they are accurate?	Social-consolidation	2.44	.082
Using the Keyword Method.	Memory	2.39	1.046
Working in group to discover meaning of a new word.	Social-discovery	2.21	1.013

As seen in Table 1, memory strategies such as *studying the sound of the new words* constituted the most frequently used VLS by Iraqi EFL learners compared with the other strategies (M=3.79), followed by metacognitive strategy such as *trying to develop vocabulary knowledge by watching English TV channels* (M=3.68) and cognitive strategy such as *repeating the new word over and over* (M=3.66). Besides, the results of the least frequently used VLS by Iraqi EFL learners indicated that all social strategies from the consolidation category were the least frequently utilized strategies. Social-discovery strategy such as *working in a group to discover the meaning of a new word* (M=2.21), memory strategy such as *using the Keyword Method* (M=2.39) and the social strategies belonging to the consolidation category such as *asking teachers to check word list accuracy* (M=2.44) were among the least frequently used strategies by Iraqi EFL learners.

The second research question aimed to identify to what extent Iraqi EFL learners' use VLS in terms of high, moderate and low frequencies. The mean and standard deviation of six sub-categories of VLS and all VLS were calculated to determine the total VLS use of participants. According to the scoring system constructed by Oxford (1990) and applied by Schmitt (1997, 2000), a mean score below 2.5 indicates low strategy use, a mean score between 2.5 and 3.5 indicates moderate strategy use, and a mean score above 3.5 indicates high strategy use. Table 2 shows the descriptive statistics used to determine whether Iraqi EFL learners were high, moderate or low VLS users.

Table 2
Descriptive Statistics to Analyze VLS Categories Use

VLS-categories	Minimum	Maximum	M	SD	VLS use
Determination	1.57	5.56	3.14	0.51	Moderate
Social-discovery	1.00	3.83	2.55	0.57	Low
Social-consolidation	1.00	5.00	2.88	0.92	Moderate
Memory	1.53	2.33	3.13	0.48	Moderate

Cognitive	1.83	5.00	3.25	0.63	Moderate
Metacognitive	1.67	4.33	3.05	0.53	Moderate
Total VLS	1.89	4.15	3.00	0.39	Moderate

As depicted in Table 2, the findings revealed that Iraqi EFL learners generally use VLS at a moderate level, except social-discovery strategies. However, the results showed that Iraqi EFL learners at Sulaymaniyah University employed the determination and memory categories at the same level. Additionally, the mean of total VLS use was (0.003); this indicated that Iraqi EFL learners were moderate strategy users during the process of language acquisition.

The third research question regarded the level of Iraqi EFL learners' VS in terms of receptive word knowledge. VS consists of four frequencies of VLT; the 2000-L, 3000-L, 5000-L, and Academic Level. The scores of VLT are out of 30 at each level and the overall score is out of 120. Table 3 represents descriptive statistics for VLT scores.

Table 3
Descriptive Statistics for Each Levels of VLT

VLT	Minimum	Maximum	Mean	SD
Level 2 000	5	30	19.92	5.992
Level 3 000	3	29	13.52	6.678
Level 5 000	0	30	7.41	5.479
Academic Level	2	30	13.25	6.676
Total levels	3.75	29.75	13.52	5.54

As seen in Table 3, the result showed that the learners knew a sufficient number of vocabulary terms at the 2000-level (M=19.92), and the score of the 3000-level was (M=13.52). However, they did not know a large number of vocabulary terms at the 5000-level (M=7.41); moreover, the academic level was close to the range of the 3000-level (M=13.25). The overall mean score of VLT was 13.52, and the standard deviation is 5.54.

Schmitt et al. (2001) described a criterion mastery level of receptive vocabulary knowledge of 87% for each frequency of VLT. The mean percentage of vocabulary knowledge in the current study for each frequency level includes the following: 2000L= 66%, 3000L= 45%, 5000= 24% and academic level= 44%. The percentage of vocabulary knowledge of Iraqi EFL learners was, to a great extent, below the criterion mastery level.

The research question four aims to find the relationship between VLS and the levels of VLT with the total VLT score. Table 4 presents the relationship between VLS and receptive vocabulary size.

Table 4

Relationship between VLS Categories and Levels of VLT

VLS categories	2000L	3000L	5000L	Academic Level	Total Levels
Determination	.02	-.02	-.01	-.12	-.04
Social-discovery	-.03	.10	.08	.03	.05
Social-consolidation	.00	.01	.05	.07	.02
Memory	.00	.07	.06	-.09	.03
Cognitive	-.06	-.06	-.06	-.05	-.05
Metacognitive	-.07	-.09	-.12	-.17	-.13
Total VLS	-.03	-.02	.01	-.07	-.02

As seen in Table 4, the determination category had negative relationships with the levels of receptive word knowledge except for 2000-L, it had no relationship with 2000-L ($r = .02$, $-.02$, $-.01$ respectively) opposite to social-discovery category which had a negative relationship with 2000-L and showed no relationships with the remaining levels ($r = -.03$, $.10$, $.08$ respectively). Besides, the social-consolidation category showed no relationships with all levels of VLT and the total levels ($r = .00$, $.01$, $.05$ respectively). However, memory strategies had no relationships with all levels of VLT except academic level which was a negative relationship ($r = .00$, $.07$, $.06$ respectively). Cognitive and metacognitive category showed negative relationships with all levels of receptive word knowledge and total VLT scores ($r = -.06$, $-.07$, $-.09$ respectively). Finally, the total VLS had negative relationships with all levels except 5000-L, which showed no correlation ($r = -.03$, $-.02$, $.01$ respectively).

The fifth research question regarded to what extent VLS contributes to the VS of Iraqi EFL learners. Multiple regression analysis was utilized to demonstrate whether there was a contribution between the independent variable (VLS) and dependent variable (total VLT scores). Table 17 represents the results of the multiple regression analysis of VLS which contributed to the receptive VS of Iraqi EFL learners

Table 5

Multiple Regression Analysis of VLS Which Contribute to VS

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin Watson
44 items of vocabulary learning strategies	0.533 ^a	0.284	-0.154	5.98	2.100

a.

Predictors: (Constant)

b. Dependent Variable: VS

As seen in Table 5, the value of R Square is (0.284); which signifies the obtained model explained 28.4% of the variance in Iraqi EFL learners' levels of receptive vocabulary size. In other words, it means the predictor variables were able to account for 28.4% of the variance of VLT scores. The findings of multiple regression showed that VLS was predicted a moderate extent to increase and contribute Iraqi EFL learners' receptive vocabulary size.

Discussion

The findings of research question one showed that memory strategies were employed most frequently by participants compared to other strategies. Schmitt (2000) claimed that learners with lower proficiency levels prefer to use memory strategies because memorization techniques will have better results for them. This indicates that the students continue to utilize rote memorization during the English language-learning process. The result is in alignment with those of Gu and Johnson (1996) as well as Schmitt (1997), who assert that repetition strategies are among the most frequently used strategies.

The findings, which showed that all social strategies were least used by Iraqi EFL learners, are in line with those of Zarafshan (2002) and Sarani and Kafipour (2008). Zarafshan (2002) investigated why Iranian EFL learners did not prefer to use social strategies. Zarafshan stated that curriculum design did not promote collaborative and social learning. One reason behind this could be the fact that their teachers adhered to traditional, teacher-centered methods rather than collaborating or group learning. Moreover, the number of students (40 or more) in one class could be a reason for the infrequent use of social strategies such as working in a group to discover the meaning of new words. Schmitt (1997) emphasized that social strategies often are not employed in an EFL environment in which communicative social situations do not occur. In sum, Iraqi EFL learners mostly prefer to use consolidation strategies rather than discovery strategies.

The findings of research question two revealed that the total level of students' VLS use in this study was moderate in all VLS categories, except in the social-discovery category. The cognitive category had a higher mean score when compared to the use of other VLS categories. These findings are inconsistent with the results of Zarafshan (2002), Kafipour (2010) and Kafipour et al. (2011), who investigated the use of VLS among Iranian undergraduates and Sahbazian (2004) who investigated VLS use among Turkish learners. They discovered that determination and memory strategies were most frequently used by their participants. Gu and Johnson (1996) mentioned that the learners whom prefer to use cognitive strategies have insufficient general language proficiency, which might affect the participants of the current study, as well. Cognitive strategies are similar to memory strategies, but they require less mental processes to memorize words, this might be a reason why students utilized this category, as teachers already provided the words and their meanings. The moderate usage level of Iraqi EFL learners concerning VLS does not exceed 3.0, and it is close to the low level. The finding of total VLS use is consistent with the findings of Zarafshan (2002), Kafipour (2010), who found that Iranian EFL learners moderately use VLS in the process of vocabulary learning.

The findings of research question three demonstrated that the learners' levels of VLT scores in this study declined across the frequency levels from highest to the lowest, as they were used to encountering more high-frequency words at the 2000 level and low-frequency words at

the 5000 level. This finding is consistent with those of Nation (1990) and Schmitt et al., (2001). According to Nation (1990), students who have sufficient knowledge of 2000-level and 3000-level word families are able to understand authentic material. They can also easily guess the meaning of unknown words from context. This might be a reason why Iraqi EFL learners did not prefer to use this strategy. The students in the present study had the least vocabulary knowledge at the 5000 level; besides, the students' academic level in the present study is below 50%, which means that the students could not understand half of the texts that were given to them by their university.

The findings of research question four showed that the memory strategy is mnemonic, as they aid students in learning the words and remembering them for later use in communication (Schmitt, 1997). This might be attributed to the fact that learners gain benefit from these strategies, such as passing their quizzes and exams. The findings of memory strategies are in line with those of Gu and Johnson (1996) who found that mnemonic devices were correlated with the VS of Chinese EFL learners.

Cognitive and metacognitive categories demonstrated negative relationships with the levels of VLT and total VLT. This might be due to the fact that participants are still dependent learners and they must be taught how to best develop their methods for learning vocabulary terms. While cognitive strategies were used more frequently by participants, this might be due to their using these strategies insufficiently and in unsystematic ways (O'Malley and Chamot, 1990).

The findings of research question five revealed that to what extent Iraqi EFL learners' VLS use predict and contribute learners' receptive vocabulary size. The findings indicate that VLS contribute an average extent to Iraqi EFL learners' receptive word knowledge. Fan (2015) found that VLS used by Chinese EFL learners predict lower extent toward VS which is inconsistent with the finding of this study. Vocabulary knowledge of students can be increased quickly by correct and extensive use of VLS (Schmitt, 1997). Cognitive, memory and determination strategies were the most frequently employed strategies of participants in the current study, and they were moderate VLS users. However, this might not cause learners' VLS to have a positive relationship or contribute to learners' total VS. Such findings are one of the reasons why Oxford (2001) claimed that the frequency use of strategy and its contribution and percentage should be determined at the beginning of the course to enable teachers to gain the best outcomes of their instruction. She also emphasized making students aware of the strategy use as well as to use those strategies effectively help them to manage their strategy use and improve their learning process.

Conclusion

The findings of this study demonstrated that the most frequently used strategies were consolidation strategies and the least frequently employed strategies were social discovery and social consolidation strategies. The findings showed that Iraqi EFL learners at the University of Sulaymaniyah are moderate VLS users. This indicates that they require more training on VLS, especially in terms of discovery strategies since an active learner is someone who prefers all strategies during his or her learning process to a high degree (Oxford, 2001). The findings indicated that Iraqi EFL learners had sufficient vocabulary knowledge at the 2000 levels, 3000 levels, and academic levels, but they had insufficient vocabulary knowledge of 5000-level word families.

The findings demonstrated that Iraqi EFL learners' VLS were negatively, moderately and positively in correlation with their VLT. However, there is not a strong positive correlation between Iraqi EFL learners' VLS use and their VLT. Besides, memory and social-discovery category indicated that there are better correlations with VS when compared to other strategies. The findings also indicated that to what extent VLS predict and contribute Iraqi EFL learners VS. It showed that the VLS predict an average extent to learners' receptive word knowledge. As a result, learners can utilize to diversity of VLS to have better extent for increasing their VS

Implications of This Study

The results of this study showed that Iraqi EFL learners use VLS moderately. A valuable recommendation for these learners is to be aware of the advantages of using different kinds of VLS. Moreover, Iraqi EFL learners can attempt to use various VLS in order to enrich their vocabulary knowledge. This study also has pedagogical implications related to Iraqi EFL learners' vocabulary knowledge. According to the findings of this study, the participants' vocabulary knowledge is low; therefore, a recommendation for Iraqi EFL learners is to concentrate on learning high-frequency words. These words can be included in their curriculum through daily texts and discourse in order to develop their receptive vocabulary knowledge. Another possible recommendation for the learners whom have low levels of vocabulary knowledge is that they should try to maximize their VS through using direct VLS such as word lists of frequency words.

The results also demonstrated that the learners' VLS use was not sufficiently correlated with their vocabulary knowledge. As a result, this study suggests that more strategic training should be included in curriculum and learners should be taught VLS in a systematic way. Nation (1990) suggested a strong reason for teaching vocabulary in a systematic and principle way. The findings also showed that social strategies and memory strategies had a better relationship with VS compared to other strategies. In addition, the total VLS showed a moderate contribution to VS. These strategies are considered as good and appropriate strategies for learners to increase their vocabulary knowledge.

Note: This article is extracted from a MA thesis written by the first and supervised by the second author.

About the Authors:

Adil Muhammd Ameen Mahmood was graduated from faculty of education at Garmian University in 2011. He has been working as a volunteer teacher in his district.

Fadime Yalcin Arslan holds a PhD degree from Çukurova University. Currently she is a teaching staff at University of Gaziantep. Her research interests include language learning, teacher education, language teaching and professional development.

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