Vocabulary Learning Strategies (VLSs) Preferred by Saudi EFL Students

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Abstract

The aim of this study is to identify Vocabulary Learning Strategies (VLS) that seem to be used more frequently by Saudi undergraduate English as a Foreign Language (EFL) students and to discuss the sub-strategies amongst the main five strategies identified by Schmitt's (1997) taxonomy of VLS. The population sample of 94 undergraduates was selected from Al Jouf University with the use of quantitative survey methodology. The questionnaire was designed based on Schmitt's (1997) taxonomy, with minor modifications. The findings reveal that Saudi undergraduate EFL learners highly preferred social strategies and, to a lesser degree, cognitive, meta-cognitive and determination strategies. It appears from this small sample size that memory strategies are the least preferred. From the sub-category strategies that appeared to be most preferred from the field work, our findings indicate that.

Keywords: vocabulary learning strategies (VLS), Saudi Arabia, Schmitt's taxonomy

1. Introduction

1.1 Language Learning in an EFL Context

In 1970, the paradigm of language learning was shifted from the traditional to communicative approach, which focused attention on the student-centered learning. This shift shed light on the language learning strategies as vital means to improve linguistic competency as many studies conducted (Cohen, 2007; Oxford, 2002; Prichard, 2008) indicated the importance of language learning strategies in the learning process (Besthia, 2018). Vocabulary learning strategies are considered subordinate to language learning strategies when "vocabulary is the biggest part of meaning of any language and it is the biggest problem for more learners" (Yaaccob et al., 2018).

The ability to use a rich vocabulary stock is most effective not only in the learning process, but also in real-life communication. As McCarthy (1990) pointed out,

"No matter how well the students learn grammar, no matter how successfully the sounds of L2 are mastered, without words to express a wider range of meanings, communication in an L2 just cannot happen in any meaningful way" (Carranza et al., 2015).

This attention for vocabulary learning was unexpected in its importance for an EFL context. In recent years, this issue has been paid closer attention by numerous scholars and researchers, including Schmitt (1997), Oxford (1990), Bristi (2015), Elzuber (2016), Rabdi (2016), and Alqarni (2018). These studies explore the use of vocabulary learning strategies in language learning, while examining the impact of specific actions, mental operations, cognitive psychology and language acquisition. In foreign language teaching, it has been found that it is very important to encourage students to vary their language strategies when learning vocabulary and to teach them how to use specific strategies targeted to enhance the quality of the learning process (Baskinet et al., 2017).

1.2 The Importance of VLS in Language Learning

Vocabulary learning strategies (VLSs) constitute knowledge that enables individuals to find out the meaning of new words and store them in their long-term memory. Most of the activities in an EFL context, such as guessing the meaning from context, using a dictionary, or preserving information in the memory, require knowledge of vocabulary strategies. Ruben (1987) defined vocabulary learning strategies as "the process by which information

is obtained, stored, retrieved, and used." Ruben, in contributing to the epistemology of vocabulary learning strategies, offers the following perspective:

"Techniques, attempts and mechanisms used by language learners to find out the meaning of new and confused words by involving mental, social, and cognitive processes."

Oxford (1990, p. 8) defined vocabulary strategies as "the operations employed by the learner to aid the acquisition, storage, retrieval, and use of information." She designed a taxonomy and divided strategies into six types: memory, cognitive, metacognitive, compensatory, affective and social strategies. These strategies are also divided into two groups: direct, which involve cognitive, memory, and compensatory strategies; however, indirect strategies are comprised of metacognitive, affective and social strategies (Kocaman et al., 2018).

Although many taxonomies of VLS have been designed and used, Schmitt's (1997) taxonomy remains more comprehensive and popular among scholars. He describes vocabulary-learning strategies as:

"… the processes by which a learner obtains, stores vocabulary items when encountering a word for the first time and retrieves, remembers and uses vocabulary items when communicating" (Elzuber, 2016, p. 513).

Schmitt's taxonomy is comprised of 59 items, which have been adapted by hundreds of subsequent studies. According to Schmitt (1997), strategies are divided into two domains in terms of discovery and consolidation. The discovery domain aims to uncover the meaning of unknown words without using the experience of another person. This domain comprises of two strategies: determination and social strategies. The determination strategy depends on the techniques used by learners to discover the meaning of a new word without recourse to help. It can be occurred through guessing the meaning of words. This kind of strategy can supports gaining knowledge of a new lexical component with the help of context. On the other hand, social strategy involves interaction and collaboration among groups, such as when learners interact with their teachers or other fellow students to discover the word meaning. This strategy can be observed in the classroom when teachers are asked by the students to clarify the meaning of a word or produce a translation from L2 to L1. Social strategies are commonly used in both domains.

Consolidation is used to remember the meaning of words and other aspects of vocabulary knowledge of a newly-learned word, and is comprised of three strategies: memory, cognitive and metacognitive.

Memory strategy involves relating the word to be retained with some previously learned knowledge, some form of imagery, or grouping (Huong, 2018). This strategy is the link between the processes of learning new vocabulary and mental processing when relating what is already known to the new meaning of vocabulary. Memory strategy can be practiced in the classroom by using retrieval techniques, such as pictures of word, or by using a dictionary. Cognitive strategy is a technique that enable learners to link information to discover the meaning of word, and can occur when students produce written repetitions of words, such as by using flash card or labels. Unlike memory strategy, cognitive strategy is not focused on the intellectual abilities to employ the language materials in direct ways, such as, note-taking, summarizing, and outlining. Finally, metacognitive strategy is a conscious process whereby the learner is able to make a decision to plan, monitor and evaluate the learning process using methodologies that support the learner to understand the way he or she best learns. In this strategy, the learners employ self-awareness and are able to "learn to think," as well as "think to learn" to control and evaluate their learning (Lai, 2016; Rabadi, 2016; Baskin et al., 2017).

The first research regarding learning strategies emerged as part of Schmitt's taxonomy (1997), when he conducted a study on Japanese learners. The study examined the strategies Japanese students used to learn and which they considered helpful, even if they did not use them. Schmitt carried out desktop research analyzing different types of books used by students before carrying out field work by asking students to write a report to describe how they study vocabulary. The other field work carried out by Schmitt included asking the participants to list the vocabulary strategies they thought to be productive (Risco, 2015). The results showed that when the students encountered a new word for the first time, all four groups of students looked for its meaning by using a mixture of approaches, such as consulting a bilingual dictionary, guessing the word meaning from context, and asking other students in the class for help. Schmitt referred to these approaches as discovery strategies. On the other hand, consolidation strategies involve remembering new words, focus on highlighting words using both verbal and/or written repetition by repeating words loudly, and making list of words.

Vocabulary learning is a crucial process of language learning, as cited by Yaacob (2018): "Vocabulary learning is at the heart of mastering a foreign language." Therefore, acquiring the strategies of vocabulary learning will lead to successful communication, as well as skilled and efficient learning of other aspects of a language. It is crucial to not only teach students the strategies for language learning, but also to enable them to make the conscious

choice of when and how to use them. Consequently, the appropriate use of vocabulary learning strategies results in improving language proficiency and increased self-confidence (Özgül & Üğüten, 2018).

1.3 Literature Review of VLS in the Context of EFL

VLS in the context of EFL has been the subject of numerous academic studies. Alqarni (2018) conducted his study on 81 Saudi male students during their first semester in the Department of English and Translation in the College of Language and Translation at King Saud University to explore the VLS employed by the students. As part of this study, he designed a questionnaire based on Schmitt's (1997) taxonomy. The results showed that the metacognitive strategy was the most preferred strategy amongst the respondents. Alqarni attributed this finding to students being relatively inexperienced at the beginning of their program, and not being aware of the learning process, which motivated them to predominantly rely on themselves. The memory strategy was the least used amongst the students, since they avoided rote learning methodology used in high school.

In his study, Besthia (2018) examined the vocabulary learning strategies used by EFL university students at Lampung University in Indonesia. He used a questionnaire based on Schmitt's taxonomy of VLS, which was conducted on male and female students. The researcher also used an interview to elicit the students' beliefs and attitudes about VLS. The result indicated the most frequently used strategy was determination strategy, social strategies were the least used learning strategies.

Kocaman et al. (2018) conducted a study to investigate the vocabulary learning strategies employed by Turkish students in the first year of studies at the Turkish Language Center at Turkish state university. The students were divided into three levels of TOMER students. The result showed that the lower-proficiency group (A1) demonstrated higher frequency of use of memory and social strategies compared to the higher-proficiency (B2) group.

Susanti (2018) investigated the use of vocabulary learning strategies according to the gender of the students, and specifically, examined the way female and male students of IAIN Salatiga majoring in English employed VLS. The study authors collected the data using an open-ended questionnaire and an interview adopted from Schmitt's taxonomy. According to the study results, gender differences were observed in social strategies for discovery, whereas other strategies were equally used by both genders.

Balci et al. (2018) conducted a study with preparatory students at Necmettin Erbakan University as participants to investigate the relationship between foreign language achievement and VLS employed. The results revealed a correlation between the use of metacognitive and cognitive strategies and students' achievement. There were no significant differences in strategies employed by males and females, with the exception of memory strategies.

In their study, Baskin et al. (2017) investigated vocabulary learning strategies used by Turkish students at Gaziosmanpasa University Turkish Teaching and Application Center. The authors used a questionnaire based on Schmitt's taxonomy consisting of 25 items and a data sample size of 22 respondents. The results showed that the most prevalent vocabulary learning strategy was determination by using activities for guessing the meaning within a context, using a dictionary or vocabulary cards. The least popular strategies appeared to be cognitive strategies. The findings show that cognitive learning strategy requires some activities, such as verbal repetition, written repetition, and taking notes, but the students did not demonstrate the use of other materials.

Maghsoudi and Golshan (2017) investigated vocabulary learning strategy preferences amongst Iranian EFL learners. The instruments used in this study focused on an Inventory for Language Learning. The result of the study showed that Iranian EFL learners preferred meta-cognitive strategies, whilst social strategies were less favorable.

In his study on the Sudanese EFL context, Elzubier (2016) explored the types of VLS used by EFL students in Sudanese Universities using a questionnaire based on Schmitt's (1997) taxonomy. The results showed that the most-used determination strategies for the discovery of a new word meaning were predominantly those of guessing the meaning from using bilingual dictionaries. The most prevalent of social strategies used were asking someone, mainly teachers. It appears that most of the students rarely used memory strategies, such as semantic mapping.

In her study, Rabadi (2016) investigated the various vocabulary learning strategies used by undergraduate Jordanian students majoring in English language and literature in Jordanian Universities. Again, the prevalent instrument of study was Schmitt's taxonomy (1997), which covered the five categories of strategies used (memory, determination, social, cognitive, and metacognitive). The results showed that EFL Jordanian students were medium users of vocabulary strategies. The study revealed that memory strategies had a high frequency of usage and metacognitive strategies used to a much lesser degree.

Senser (2015) examined vocabulary learning strategy preferences and vocabulary size of pre-service English teachers at a state university in Turkey. The study used the questionnaire originally designed by Schmitt and McCarthy (1997). The result of the study revealed the most used vocabulary learning strategies were those involving guessing the meaning from textual context and interacting with native speakers. Repetition strategies such as 'word lists' and 'flash cards' were least frequently used by respondents to the survey.

Research carried out by Bristi (2015) explored VLS used by Bangladeshi undergraduate EFL students. The survey was conducted at the United International University with a sample of students. A questionnaire based on Schmitt's (1997) taxonomy was used, and the findings revealed that Bangladeshi undergraduate EFL students predominantly use determination learning strategies. Respondents indicated moderate use of social, memory, cognitive and meta-cognitive strategies. Amongst the sample group, cognitive strategy was the least used.

In their studies, Hadavi and Hashemi (2014) compared vocabulary learning strategies between freshmen and senior EFL medical science students across different fields. The study used a questionnaire to identify the various strategies used by the students. The result showed that freshmen students majoring in surgical technology were much more likely to use memorization techniques, such as using a dictionary and note taking, compared to senior students. The results also examined gender differences in the context of VLS use. It was revealed that female students used social strategies more requently than male students.

In the study by Balidede and Lokmaciogle (2014), elementary and intermediate-level EFL undergraduate students' preferences in the use of VLS were investigated. The study used a questionnaire adopted from Schmitt's taxonomy (1997). The finding of the study showed that VLS preferences of both groups were generally similar, although intermediate- level undergraduate respondents used a wider range of VLS compared to elementary-level students. Cognitive and metacognitive strategies had higher frequency ratings than other strategies.

From these studies, it can be concluded that various VLSs are used in EFL learning contexts worldwide. It is clear that there is no overall consensus on the most-frequently used VLS, which varied in all studies, indicating that no strategy was considered to be superior to others. Most of the studies adopted Schmitt's taxonomy for questionnaire design. Some useful aspects of these studies' methodologies were implemented into the present study.

1.4 Problem Statement

It is currently perceived that Saudi students are not proficient in utilizing vocabulary learning strategies and possess insufficient vocabulary stock, which can hinder their communication skills. In his study, Alqarni (2018, p. 141) showed that Saudi students are low users of vocabulary learning strategies, as determined by the total mean score of the strategies used, despite the relatively long period of learning of the language. Therefore, the present study aims to examine the preferred VLS strategies for Saudi EFL students. The present study has significant applications in instruction of EFL in Saudi Arabia.

The main aim of the study is to identify the VLS preferred by Saudi EFL undergraduate students using Schmitt's taxonomy (1997) and identifying the most and least preferred strategies by survey respondents.

The present study is aimed to address the following research questions:

1). What are the preferred VLS by Saudi EFL students?

2). What are the most and least frequently used vocabulary learning strategies for each strategy used by Saudi EFL students?

2. Method

2.1 Participant Characteristics

The study participants included 94 male and female Saudi EFL undergraduate students in the English Language Department at Al Jouf University of Saudi Arabia. The participants were in their first, second and third semesters, and participated on a voluntary basis. As part of the study, the participants completed an electronic questionnaire, which was presented on the university's website. The responses were collected during a two-week period.

2.2 Research Design

The study implemented a questionnaire adopted from Schmitt's (1997) Taxonomy of Vocabulary Learning Strategies (VLS). This tool was used for two reasons:

1). Its wide and popular use in studies of similar scope (Rabadi, 2016; Elzubier, 2016; Alqarni, 2018);

2). Close fit with the purpose of the present study.

The questionnaire was modified to cover the strategies of vocabulary learning, as opposed to those used by participants learning vocabulary. These strategies were grouped under five main domains used in Schmitt's (1997) taxonomy: memory, determination, social, cognitive and metacognitive strategies. Thirty-four strategies under each domain of VLS were presented to respondents in statements with five answer options. The scale used in the questionnaire for each statement was: never (0 points), seldom (1 point), sometimes (2 points), often (3 points), and always (4 points).

3. Results

3.1 Statistics and Data Analysis

The data were collected and analyzed by using the Statistical Package for the Social Sciences (SPSS) program, and results were organized in tables. To support the reliability of the study, Cronbach's alpha estimation of of 0.899 was used. To test the range use of VLS, the study employed a five-point rating scale, starting from never (0 points) to always (4 points). The mean score of participants' responses for items in the survey was used as a measure point to interpret the participants' responses as illustrated in Table 1.

Table 1. Use of VLS strategies by Saudi students.

Use of Vocabulary Learning Strategies	
Decision	**Mean range**
never	0-0.80
seldom	0.81-1.60
sometimes	1.61-2.40
often	2.41-3.20
always	3.21-4.00

The mean scores of the vocabulary learning strategies used are reported in Table 2, with all means falling between 2.83 and 2.02 on a scale of 1 to 5. This range defined by Oxford (1990) is considered to be medium use.

In Table 2, the rank ordering of the strategies according to their frequency is presented. The students' responses to all of the strategies valued medium. The preference was for social strategy showing (often), with the mean of 2.8313 and standard deviation of .077654. The order of preference for the other strategies is as follows: cognitive strategies (mean of 2.3419 and standard deviation of .84144), metacognitive strategies (mean of 2.1330 and standard deviation of .79296), determination strategy (mean of 2.0912 and standard deviation of .77792). The least preferred strategy was memory, with a mean score of 2.0289 and standard deviation of .82094. Table 2: The mean and SD of participants' responses classified by domains.

Table 2. The mean and SD of participants' responses classified by domains

Strategies	N	Mean		Std. Deviation	Degree of use
MD1	94	2.0289	.08467	.82094	sometimes
DD	94	2.0912	.08024	.77792	sometimes
SD	94	2.8313	.08009	.77654	often
CD	94	2.3419	.08679	.84144	sometimes
MCD	94	2.1330	.08179	.79296	sometimes
Valid N (list wise)	94				

The frequency of use of each sub-strategy was measured as part of the strategy categorization explained in the following tables.

Table 3. Social strategies most and least preferred

	Items	N	Mean	Std. deviation	Degree of use
1	Cooperate with friends to find out the meaning of word	94	2.85	1.336	often
2	Practice the use of vocabulary with native speakers	94	2.72	1.111	often
3	Ask the teacher to compose the new word in a sentence	94	2.77	1.204	often
4	Ask teacher to clarify the meaning	94	2.95	1.158	often
5	Ask the classmate to highlight the difficult words to look for their meanings	94	2.84	1.100	often
6	Listen and watch films, songs, and T.V. programs to list the new words	94	2.78	1.028	often
7	Use internet facilities and applications to get meaning fast	94	2.91	1.094	often

As seen in Table 4, social strategies are used for consolidating the meaning of new words encountered. It required negotiating the meaning with others and working in groups. This strategy gives more attention to the interactions between classmates and teachers inside the classroom. According to the results, the most popular strategy preferred among social strategies was item (4) "Ask teacher to clarify the meaning," with the mean of 2.95 and standard deviation of 1.158. The strategy least preferred was item (2) "Practice the use of vocabulary with native speakers," with the mean of 2.72 and standard deviation of 1.111.

In fact, this finding is consistent with those of previous studies conducted in different global contexts. For example, Asgari and Mustafa (2011) mentioned in their findings in a study conducted on Malaysian students that "social strategies are emphasized positively because when the students failed the problem, they looked for the help." Schmitt (1997) also stated that Turkish students undertaking learning English in the UK used social strategies regularly by asking the teacher for a sentence using the word (cited in Senser, 2015).

4. Discussion

This study shows social strategies as the most frequently preferred of all five strategies or (domains) among Saudi EFL students, with the mean of 2.8313. We attribute this finding to the characteristics of social strategies, which enable the students to interact with each other and develop emotional skills, such as empathy. The most preferred sub strategy is "Ask teacher to clarify the meaning," with a mean value of 2.95 and standard deviation of 1.158. It concurs with Rabdi (2016), who considered the item "Ask instructors of English for Arabic translation of new lexical items," recording the highest frequency of social strategies used. The least preferred sub-strategy of social strategy was "Practice the use of vocabulary with native speakers," with a mean of 2.72 and standard deviation of 1.111. In accordance with Alzaharani's study (2016: 40), when commenting about some Saudi students, "… complained about his non-Saudi teacher, who he said made English harder to learn since his teacher's English pronunciation was tough to understand." In his study, Elzuber (2016) showed that Sudanese students used mostly social strategies, such as asking teachers for translation into Arabic.

Table 4. Cognitive strategies most and least preferred

	Items	N	Mean	Std. deviation	Degree of use
1	Use words through writing repeatedly	94	2.32	1.119	sometimes
2	Make lists of words with meaning and examples	94	2.37	1.270	sometimes
3	Keep note-book of new words	94	2.21	1.135	sometimes
4	Repeat the word with its meaning	94	2.45	1.232	often
5	Link words items with images and pictures in mind	94	2.38	1.201	sometimes
6	Guess the meaning of words from available information in context	94	2.40	1.238	sometimes
7	Switch the words from the second language to the first language	94	2.26	1.319	sometimes

As illustrated, the most preferred strategy is item (4), "Repeat the word with its meaning," with the mean of 2.45 and standard deviation of 1.232. The least preferred strategy is item (3), "Keep note-book of new words," with the mean of 2.21 and standard deviation of 1.135. The results also showed that other strategies were also preferred sometimes.

Cognitive strategies ranked as the second most preferred strategy preferred by the students, with the mean of 2.45 and standard deviation of 1.232.

These results contradict the results obtained in the study carried out by Baskin et al. (2017), which found cognitive strategy being the least preferred strategy among Turkish students. As illustrated, the sub-strategy highly preferred was item (4), "Repeat the words with its meaning," with the mean value of 2.45 and standard deviation of 1.232. This finding is similar to the results obtained in Alqarni's study (2018), which investigated the top ten strategies employed by Saudi students. One of the strategies proposed included: "Repeat orally a single word with its meaning to learn it." Cognitive strategies concentrate on repetition and mechanical techniques in vocabulary learning, as previously stated by El Ghouati (2014). However, the researcher emphasizes the effect of teaching traditional method (repetition), which is familiar to the students.

Our findings agree with those of Elzubher's study (2016), which stated that Sudanese students used mostly verbal repetition as a cognitive skill, and Bristi's study (2015), which asserted that cognitive strategy was predominantly used by Bangladeshi students who stated, "I say the new word again and again." In contrast, "Keep note-book of new words" is the least preferred strategy, with the mean of 2.21 and standard deviation of 1.135. This finding is similar to several studies, including studies by Bristi (2015), Elzubher (2016), and Yeh and Wang (2004). In her study, Bahanshal (2015) stated that most Saudi students "Did not show much interest in cognitive strategy," and approximately 19 students used book margins to write the Arabic translation of some difficult words. This might be explained to the little interest in productive learning, and the difficulties of spelling and pronunciation, as previously mentioned in Senser (2015).

Table 5. Metacognitive strategies most and least preferred

Items		N	Mean	Std. deviation	Degree of use
1	monitor vocabulary comprehension when communicate	94	2.16	1.176	sometimes
2	Conscious of the use of various vocabulary strategies	94	1.88	1.199	sometimes
3	Revise the new words when writing e-mails, articles, or short story	94	1.93	1.166	sometimes
4	Self -evaluate of words use	94	2.29	1.206	sometimes
5	Assess the use of words according to the context	94	2.16	1.289	sometimes
6	Practice the new words when play on line games	94	2.38	1.279	sometimes

As shown in Table 6, the most preferred sub-strategy is item (6), "Practice the new words when play on line games," with a mean of 2.38 and a standard deviation of 1.279, while the least preferred one is item (2), "Conscious of the use of various vocabulary strategies," with a mean of 1.88 and a standard deviation of 1.199. The other metacognitive sub-strategies were also sometimes used.

"Practice the new words when play on line games" was the most used sub-strategy, which is a finding similar to findings in Bristi (2015), who found the item "I watch English movies, cartoons, news to learn new words" to be the most frequently used sub-strategy by Bangladeshi students. Elzubir (2016) has also listed the item "I use language media, for example, songs, movies, and newscasts" as the most used strategy by Sudanese students, who learned the language subconsciously through playing games, watching TV or listening to songs. On the other hand, the least used sub-strategy was "Conscious of the use of various vocabulary strategies," since the awareness of VLS is not an easy task for the students and requires raising awareness through training to increase the employment of other strategies, as previously stated in Alqarni (2018: 104) in a study to measure Saudi EFL students' awareness of VLS. The third rank of metacognitive strategy as the preferred strategy is similar to Rabdi's study (2016), but is contradictory to the results found in Alqarni's study (2018), which determined metacognitive strategy as the most preferred strategy by the participants.

Table 6. Determination strategies most and least preferred

Items		N	Mean	Std. deviation	Degree of use
1	Use an English-Arabic dictionary to find out the meaning of new vocabulary	94	2.80	1.333	often
2	Check if the same word used in Arabic language	94	2.13	1.109	sometimes
3	Use an English-English dictionary to find out the meaning of new vocabulary	94	1.85	1.278	sometimes
4	Use the context clues to find out the new words	94	1.97	1.371	sometimes
5	Illustrate pictures in the textbook to find the meaning of words	94	1.83	1.170	sometimes
6	Analyze vocabulary prefixes, roots and suffixes	94	1.96	1.244	sometimes
7	Use grammatical structure to guess the meaning	94	2.11	1.265	sometimes

As illustrated in Table 6, "Use an English-Arabic dictionary to find out the meaning of new vocabulary" was the most preferred sub-strategy in this domain, with a mean of 2.80, and standard deviation of 1.333. However, the least preferred sub-strategy was "Illustrate pictures in the textbook to find the meaning of words," with a mean of 1.83 and standard deviation of 1.170. The frequency of use of "Use an English-Arabic dictionary to find out the meaning of new vocabulary" was similar to the findings described in Schmitt (1997), Bristi, (2015), and Elzubir (2016). Using a dictionary to discover the meaning of a word was the preferred strategy by the most EFL students over the world. It is interpreted that this strategy is often used by the students to look for the new word's meaning when it is discovered for the first time.

The least preferred strategy was "Illustrate pictures in the textbook to find the meaning of words," and this finding agrees with the results obtained by Baskin et al. (2017), who stated, "This finding shows that learners benefit from the dictionaries rather than the pictures in the book while learning vocabulary," and it is also attributed to the lack efficiency to communicate successfully.

According to the statistical results, the determination strategy is ranked as the fourth frequently used strategy, with a mean of 2.0912 and standard deviation of .77792. This result is inconsistent with some previous studies, such as Schmitt (1997), Asgari and Mustapha, 2011, El Ghouati, 2014, and Bristi (2015), who ranked determination strategy first. As mentioned before, social strategy was the most preferred strategy, which depended on interaction, whereas determination strategy let the students to be autonomous to discover the meaning of new words by themselves.

Table 7. Memory strategies most and least preferred

Items		N	Mean	Std. deviation	Degree of use
1	Classify new words according to their synonyms and antonyms	94	1.54	1.357	seldom
2	Classify new vocabulary according to similar pronunciation and spelling	94	1.93	1.468	sometimes
3	Repeat new words loudly to be memorized	94	2.28	1.248	sometimes
4	Use rhymes to remember new words	94	1.65	1.381	sometimes
5	Make repetition to learn word	94	2.44	1.187	often
6	Draw an image to the form of word in mind	94	2.07	1.305	sometimes
7	Connect the new words with life situations and experiences	94	2.30	1.260	sometimes

As seen in Table 8, item (5), "Make repetition to learn word" is the preferred sub-strategy in this domain, with the mean of 2.44 and standard deviation of 1.187. This result is likely due to the traditional method employed in the EFL context, when students repeated new vocabulary orally. In contrast, the least preferred strategy was item (1), "Classify new words according to their synonyms and antonyms." The mean of 1.54 and standard deviation of 1.357 are consistent with Alqarnik's study (2018), which listed "Categorize new words according to their

synonyms and antonyms" in the ten top strategies employed by Saudi students. However, this sub-strategy required expanding the size of words through keeping alternative words, which require a higher level of cognitive processing. Therefore, ranking memory strategy as the least preferred one by the Saudi students mean is consistent with the results obtained by Alqarni's (2018), but is contradictory with Rabdi's study (2016), which ranked this strategy as the highest-used strategy by Jordanian students.

As shown by the results illustrated above, these finding indicate that social strategy was the least preferred strategy, and allows the creating of an interactive environment and receiving help from others. In his study, Altan (2003, cited in Kocaman et al., 2018) revealed that intermediate-level learners frequently employed social strategy. Surely, the correlation between proficiency and VLS should be taken into consideration. In this study, the research was conducted without implementing any procedure to assign the students' levels. Although the results were consistent with those of previous studies, the overlap among some variables had an impact on the results. The gender of the students also should have been taken into consideration, as the researcher did not split the students according to their gender. This was inconsistent with Alqarni's results (2018), where only male participants were used. The role of gender in the choices of VLS could not be overlooked, as many previous studies (Kocaman et al., 2018) and (Besthia, 2018) proved. Additionally, the researcher should use interview instrument with the questionnaire to be sure of their choices and took their opinions about VLSs learning.

Further studies should be conducted to reinforce VLS teaching and learning the language as helpful for the both teachers and students. This awareness is also important for the policy makers, course designers and developers. Increasing students' and teachers' knowledge of VLS are necessary issues and should be investigated.

This study investigated the most and least frequently used strategies of vocabulary learning strategies employed by Saudi EFL students. The major finding of this study was that social strategy was the most preferred strategy. The other preferred strategies were ranked in the following order: cognitive strategies; metacognitive strategies; determination strategy. The least preferred strategy was memory strategy. These finding contributed further to existing research aimed to reinforce the use of VLS in EFL context.

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