International Journal of Modern Languages and Applied Linguistics
e-ISSN: 2600-7266

Vocabulary Learning Strategies Among Undergraduate ESL Learners in Tertiary Education

Zarinatun Ilyani Abdul Rahman[1] & Nur Farhana Nasri[2]

[1]zarinatun@uitm.edu.my, [2]nfarhana@uitm.edu.my

Academy of Language Studies, UniversitiTeknologi MARA, Perak Branch, Tapah Campus, Tapah Road, 35400 Perak, MALAYSIA

Article history:
Received: 19 August 2020 *Accepted: 24 November 2020* *Published: 1 December 2020*

Abstract

Vocabulary learning strategies (VLSs) play a significant role in assisting language learners in the development of language learning. A quantitative study was conducted to explore VLSs employed by undergraduate ESL learners in a public university. Data were collected from a group of 197 ESL learners from three faculties–Accountancy, Applied Science, and Computer and Mathematical Science–in the university. An adopted VLSs questionnaire by Gu & Johnson (1996) was used to answer two research questions: (1) to find the most and least preferred strategies and 2) to identify if there is any significant difference between the ESL learners in three different faculties–Accountancy, Applied Science, and Computer and Mathematical Science - in terms of their vocabulary learning strategies preference. The results were gathered using descriptive analysis and one-way ANOVA followed by a post-hoc test. The results of the study revealed that note taking, memory and guessing using linguistic clues were the three most preferred strategies while guessing using background knowledge and activation were the least preferred ones. In addition, the data also unveiled that there was a significant difference between Accountancy students and Applied Science students as well as Computer and Mathematical Science students both in guessing strategies. It is hoped that the findings of this study can shed some light to the teaching and learning process whereby the educators could employ the best VLSs to assist students in vocabulary learning while learners could be aware of strategies that suit them best.

Keywords: *Vocabulary Learning Strategies; VLSs; ESL; Vocabulary*

INTRODUCTION

Vocabulary learning is a never-ending journey among L2 learners. In acquiring a language, vocabulary is considered as one of many elements that is needed in language learning as claimed by Ma (2009, p.21, as cited in Kulikova, 2015), "no linguist today would seriously contest the fact that, quantitatively, vocabulary dominates in the language field and that vocabulary acquisition is the main obstacle to language acquisition". The knowledge of one's vocabulary enables a successful language use which eases a person to listen, speak, read or write in the target language. Shortage of vocabulary knowledge will eventually lead to language problems (Savadkouhi, Hassani & Rahmani, 2013) and hinder one from being a competent language user.

Knowing how crucial vocabulary learning is to language learners, studies related to these strategies deserved in-depth analysis. Most importantly, students and educators should be aware on the strategies that they prefer. When students know what strategies they apply in language learning, they can easily control and facilitate themselves, making one becomes an active language learner. Educators, on the other hand, can wisely select and apply strategies that best suit their students according to their learning style or vocabulary size.

Though it seems daunting for L2 learners to acquire a large amount of vocabulary in the target language, Nation (2001) has faith in the practice of vocabulary learning strategies. Vocabulary Learning Strategies (VLSs, henceforth), a part of language learning strategies (Nation, 2001), has been widely researched and developed (Stoffer, 1995; Schmitt, 1997; Gu & Johnson, 1996; Nation, 2001; Fan, 2003). In 1993, Schmitt and Schmitt claimed that to learn vocabulary, language learners must first remember and learn a new word. Stoffer (1995) then developed Vocabulary Learning Strategies Inventory (VOLSI) of 53 items which comprises strategies used to organize words, overcome anxiety, create mental linkages and memorize. A year later, Gu and Johnson (1996) developed vocabulary learning strategies which are regarded as a pioneer study as they explore a list of VLSs which are metacognitive, cognitive, activation and memory strategies with an addition of beliefs about language and language learning (BALLL).

In 1997, Schmitt modified and introduced extensive VLSs that were formerly adopted by Oxford (1990). Schmitt defined VLSs by grouping them into two which are discovery strategies–used to discover new words–and consolidation strategies–used to consolidate word once it is used. He further subcategorized the strategies into five: determination, social, memory, cognitive, and metacognitive. Ma (2009) then suggested an alternative process-oriented approach of classifying VLSs. She believes that words are cyclic; thus, students can use one or more categories as word-acquisition has to go through stages across four categories: memory, metacognitive, cognitive, and social for words to be acquired effectively.

Undoubtedly, with a range of inventory, it has led to various studies on the usage and its relationship with other factors related to vocabulary learning such as beliefs (Kulikova, 2015), vocabulary knowledge (Nirattisai & Chiramanee, 2014) and gender (Fan, 2003; Ansari, Vahdany & Sabouri, 2016). In fact, some studies looked at fields of study as one of the factors in analyzing the significant difference of VLSs among groups of students. Boonkongsaen (2012) claims that

students of different fields of study are likely to apply VLSs that best suit their learning styles or courses. Thus, it demands for teachers' serious attention when VLSs are to be introduced. Hadavi and Hashemi (2014) further agree that students who learn in different majors prefer and apply different strategies. They believe that it is one of the aspects other than proficiency level and language learning environment which educators should pay attention to when teaching vocabulary.

There are a number of findings that looked at various disciplines and showed consistent results (Chiang, 2004; Zhang, 2009); however, there may be courses that have not been researched on and this present study may shed some light on the preference of VLSs the students likely to pursue when learning vocabulary. In terms of which strategies work best for ESL learners in general, some studies unveil that L2 learners apply various strategies when learning words (A.Mutalib, Abdul Kadir, Robani, A. Majid, 2014; Asgari & Mustapha, 2011) such as dictionary, guessing words, memory and metacognitive. Sadly, there are limited studies that emphasize on the usage of VLSs among ESL in contrast to EFL context; thus, making it quite difficult to gather data in order to recognize which strategies ESL students favor the most or vice versa.

As there have been inadequate past studies that put an emphasis on VLSs among ESL learners especially in tertiary level, this paper aims to provide such knowledge and therefore contribute significantly. In fact, strategies used by the students from different fields of study in this study could also add to the repertoire of vocabulary learning in the future. Therefore, this study has highlighted two research questions:

1) What are the most and least preferred Vocabulary Learning Strategies among the ESL students?

2) Is there any significant difference between the ESL students in three different faculties – Accountancy, Applied Science and computer and Mathematical Science - in terms of their vocabulary learning strategies preference?

LITERATURE REVIEW

Vocabulary learning strategies (VLSs) has a big role not only in facilitating the language learners to learn new words but also to acquire the skills of reading, writing, listening and speaking of the target language (Boonkongsaen, 2012). Other researchers also have the same view regarding this. Effective vocabulary learning strategies is not only important in acquiring new words but also

in improving other language skills (Kojic-Sabo & Lightbown, 1999 as cited in Zhang & Li, 2011). In fact, more strategies are applied by learners in vocabulary learning than in any other linguistic competence (Schmitt, 1997; Catalan, 2003 as cited in Zhang & Li, 2011). Catalan (2003 as cited in Zhang & Li, 2011) emphasized the importance of VLSs in facilitating the learners to find out the meaning of new words, to retain them and also to retrieve the words so that they can be used in oral or written.

Acquiring vocabulary knowledge undoubtedly requires a long process for the words to be processed in mind and registered in memory (Ma, 2014). In explaining vocabulary learning strategies, Zhang and Li (2011) used exploratory and confirmatory factor analysis which highlights cognitive factors as keys for learners to acquire new words. In classifying different vocabulary learning strategies, there are two dimensions of vocabulary learning strategies as highlighted by Gu and Johnson (1996 as cited in Zhang & Li, 2011) which are metacognitive and cognitive strategies. The cognitive strategies cover six categories: guessing, using a dictionary, note-taking, rehearsal, encoding and activating. The same dimensions classified by Oxford (1990 as cited in Craven, 2014) are memory strategies, cognitive strategies, metacognitive strategies, social strategies.

Many previous studies were conducted to look at the vocabulary learning strategies used by learners of different backgrounds. In a study of a group of elementary and high school students whose English is a foreign language (EFL), Knez (2018) discovered that the most frequently used VLSs among the respondents are picking up words from television programmes/internet and translating the words into their mother tongue to understand the meaning. Meanwhile, the least frequently used strategies are grouping words together to memorize them and write down the words (notetaking). In contrast, learners of higher educational level show a tendency to apply mental activity and processing in their vocabulary learning strategies (MPavicic, 2008 as cited in Knez, 2018). Kafipour and Naveh (2011) who looked at the VLSs among EFL undergraduates in Kerman Province revealed that most of the students are medium strategy users with the overall mean score of 3.06. Mean score of 3.06 showed medium use of strategies by the students. The results conclude that the use of variety learning strategies was not common among them (Kafipour & Naveh, 2011). The same result was also found in the previous study by Sarani and Kafipour (2008 as cited in Kafipour & Naveh, 2011) in which the medium use of strategies by Iranian students was due to their lack of awareness of VLSs.

However, looking at the most and the least frequently used VLSs, it was found that metacognitive and cognitive strategies are placed as the most frequently used strategies (Sarani & Kafipour, 2008 as cited in Kafipour & Naveh, 2011). Schmitt (1997 as cited in Kafipour and Naveh, 2011) revealed that Japanese EFL students were found to practice using bilingual dictionary and repetition most while least on imagery and semantic grouping strategies. Meanwhile, a study towards a group of low achieving Chinese EFL students found out that repeatedly spelling the words, taking notes, repeating and reviewing strategies and analyzing strategies as the most useful and frequently used strategies by the students (Lo, 2007 as cited in Kafipour and Naveh, 2011). Sahbazian (2004 as cited in Kafipour and Naveh, 2011) revealed that most Turkish learners followed more traditional rote memorization patterns that involved many mnemonic techniques in their VLS. Cusen (2005 as cited in Kafipour and Naveh, 2011) found that advanced learners of Romanian English major and minor undergraduates with professional interest at University of Brasov seem to use almost all types of VLSs. Interestingly, studies conducted to two different groups of EFL adult learners (one adult learners in Fiji and the other one EFL postgraduate students enrolling in English proficiency programme in UKM) show that repetition, memorization, dictionary strategies, use of translation and using background knowledge and linguistic clues are the strategies most frequently used by both groups (Goundar, 2015; Noor & Amir, 2009). This is aligned with a study by Jiang and Smith (2009, as cited in Ma, 2014) which explored VLSs among Chinese respondents from three different age groups. They adopted some similar strategies, but the oldest generation mainly used memorization or translation in learning vocabulary knowledge.

On the other hand, there are only a few studies on VLSs among ESL learners. Asgari and Mustapha (2011) conducted a study on the type of vocabulary learning strategies used by Malaysian ESL students majoring at Teaching English as a Second Language (TESL) in UPM. The data was collected through an individual interview session with 10 respondents using Schmitt (1997)'s taxonomy of vocabulary learning strategies. Most of the respondents are not aware of most of the VLSs. However, they usually use the strategies in a medium and low frequency. The findings discover that the most common strategies used are determination (guessing from contextual clues–using newspaper, using monolingual dictionary), metacognitive (learning through media such as TV programmes, internet, video games) and social strategies (respondents applied the new English words while interacting with friends or native speakers and asking questions in class).

Another study was done by A.Mutalib, Abdul Kadir, Robani and A. Majid (2014) who examined the preference of VLS among Malaysian TEVT students in German-Malaysian Institute (GMI). The results reveal that among the most favourite strategies are discovery strategies such as referring to dictionaries, guessing words, asking friends and teachers with the mean score ranging from 3.26 to 3.71 for the responses of often to always. However, neither memorizing nor cognitive strategies were utilized in learning new vocabulary among the students in GMI. Mokhtar, Rawian, Yahaya, Abdullah & Mohamad (2009) conducted a study with 360 students from five diploma programmes using a questionnaire developed by Gu and Johnson (1996) and the results show that guessing and using dictionary are the most preferred strategies among the students while the other five (metacognitive, note-taking, rehearsal, encoding, and activation strategies) are less preferred. Gu and Johsnson (1996 as cited in Mokhtar et al, 2009) classified those using these strategies (guessing and using dictionary) as "passive strategy users" since not using metacognitive strategies might cause the learners to miss an opportunity to be independent learners – not in command of their own learning and depend more on class materials (Sanaoui, 1995 as cited in Mokhtar et al, 2009).

Another aspect that the current study is looking at is the different vocabulary learning strategies employed by learners of different programmes or fields of study. Previous studies have shown that students of different fields employ different elements of VLSs to match their learning style and preferences (Boogkonsaen, 2012 as cited in Hadavi & Hashemi, 2014). The VLSs incorporated by medical and sciences students are slightly different than the ones used by arts students (Mingsakoon, 2002; Bernardo & Gonzales, 2009 as cited in Hadavi & Hashemi, 2014). In addition, the findings from Hadavi & Hashemi (2014) reveal that memorization, dictionary and note-taking strategies are mostly preferred among freshmen science students majoring in surgical technology as opposed to the senior students in the other major. However, guessing and dictionary strategies are the most frequently used among the students of medical, dentistry, anesthesiology, medical laboratory, midwifery, surgical technology, radiology and nursing. Another study by Nayan and Krishnasamy (2015) towards students of Faculty of Accountancy reveals the following results. Two VLSs with the highest percentage among the respondents are learning vocabulary through communication (games and interaction with teachers and native speakers of English) and learning vocabulary through listening (English songs). However, there is no study that clearly indicates any absolute strategies used for students of any fields of study.

Since there is inadequate discussion regarding the VLSs among ESL learners of different fields of study at tertiary level, thus the current study will look at the most preferred VLSs among them and to see if there is any significant difference in the VLSs used.

METHODOLOGY

A. Participants

A total of 197 students of first year diploma students at a public university were selected through the purposive sampling method. During the data collection, the students were enrolled in an English course. They were from three different faculties: Faculty of Accountancy, Faculty of Computer and Mathematical Science and Faculty of Applied Science. Their ages ranged from 18 – 22 years old.

B. Data Collection

The questionnaire was given to the students during their English course class. The procedure was carried out in the first week of the second semester before the English lesson started. The students were explained on the objectives of the study and were asked to answer as honestly as possible. The questionnaire was kept anonymously as to ensure that they did not answer in a way they think the researcher would like. The duration to fill out the question was around 15 minutes. Upon completion, the researcher collected all the answered questionnaires.

C. Data Instrument

An adapted version of the vocabulary learning strategies questionnaire proposed by Gu & Johnson (1996) was used to answer both research questions. The questionnaire consisted of two parts. Part A was formed to collect the participants' background information which contained gender, age, faculty, and reading material. Part B, on the other hand, consisted of 48 statements grouped under the following 9 categories: 1) beliefs about vocabulary learning, 2) metacognitive regulation, 3) guessing strategies, 4) dictionary strategies, 5) note-taking strategies, 6) memory strategies, 7) activation strategies 8) sources, and 9) anxiety and motivation.

A three-likert scale was used ranged from agree (1) to disagree (3). For this present study, only data related to types of strategies were analyzed which were metacognitive regulation: selection, metacognitive regulation: self-initiation, guessing using background knowledge, guessing using linguistic clues, dictionary clues, note-taking, memory and activation. Statistical analysis was carried out using The Statistical Package for the Social Sciences (SPSS, version 16.0).

In order to determine the most and least preferred strategies used by all participants, descriptive analysis was carried out. The second research question which is to analyze whether there is a significant difference in terms of the strategies used by students in three different faculties, one-way ANOVA followed by a post-hoc test was done.

FINDINGS

Based on the questionnaires collected, the results were analyzed quantitatively. The first research question is to determine the most and least preferred vocabulary learning strategies used by the respondents. To answer the research question, descriptive statistics of all eight strategies are tabulated. The results of descriptive analysis are presented in Table 1 below.

Table 1: The most and least preferred Vocabulary Learning Strategies (N=197)

No.	Vocabulary Learning Strategies	Mean
1.	Metacognition regulation: Self-initiation	0.61
2.	Metacognition regulation: Selective attention	0.56
3.	Guessing: Using background knowledge	0.47
4.	Guessing: Using linguistic clues	0.63
5.	Dictionary Clues	0.56
6.	Note taking	0.90
7.	Memory	0.79
8.	Activation	0.52

Based on Table 1 above, there are eight vocabulary learning strategies that are analyzed. As can be seen in the table, it clearly shows that note taking strategy has the highest mean (M=0.90) indicating that it is the most preferred vocabulary learning strategy among the respondents followed by memory strategy (M=0.79) as the second most preferred and guessing strategy by using linguistic clues (M=0.63) as the third preferred vocabulary learning strategy. On the contrary, with the mean value of 0.47, the table reveals that guessing strategy using background knowledge has the lowest mean value, thus this proves that it is the least preferred strategy chosen while activation strategy has the second lowest mean value with the mean value of 0.52.

The second research question aims to identify whether there is a significant difference between the strategies preferred among the students in three faculties. To analyze the research question, one-way ANOVA was carried out. The results of the analysis are shows in Table 2 below.

Table 2: The significant difference between strategies

No.	Vocabulary Learning Strategies		Mean Square	F	Sig.
1.	Metacognition regulation: Self-initiation	Between Groups Within Groups	.112 .144	.781	.459
2.	Metacognition regulation: Selective attention	Between Groups Within Groups	.146 .119	1.228	.295
3.	Guessing: Using background knowledge	Between Groups Within Groups	.433 .114	3.798	.024
4.	Guessing: Using linguistic clues	Between Groups Within Groups	1.377 .187	7.368	.001
5.	Dictionary Clues	Between Groups Within Groups	.134 .123	1.087	.339
6.	Note taking	Between Groups Within Groups	.012 .215	.056	.945
7.	Memory	Between Groups Within Groups	.173 .235	.736	.481
8.	Activation	Between Groups Within Groups	.276 .278	.994	.372

Based on the table above, among all eight strategies, only guessing strategy using background knowledge and guessing strategy using linguistic clues have the p-value (sig)<0.05 where p=0.024 for the former and p=0.001 for the latter. Thus, this shows that there is a significant difference of both strategies between the faculties. However, there is no clear indication to identify which faculties are significantly different. Therefore, a follow up post hoc analysis is applied and the findings are revealed in Table 3 below.

Table 3: The significant difference between strategies in three faculties

Multiple Comparisons

Dependent Variable	(I) FACULTY		(J) FACULTY		Mean Difference (I-J)	Std. Error	95% Confidence Interval	
							Lower Bound	Upper Bound
Meta cognition regulation: Self-initiation	dimension3	Acc.	dimension2	App.	-.015	.065	-.17	.14
				Comp.	.064	.070	-.10	.23
	dimension2	App.	dimension3	Acc.	.015	.065	-.14	.17
				Comp.	.079	.066	-.08	.24
		Comp.	dimension3	Acc.	-.064	.070	-.23	.10
				App.	-.079	.066	-.24	.08
Meta cognition regulation: Selective attention	dimension3	Acc.	dimension2	App.	.092	.060	-.05	.24
				Comp.	.055	.066	-.10	.21
	dimension2	App.	dimension3	Acc.	-.092	.060	-.24	.05
				Comp.	-.037	.057	-.17	.10
		Comp.	dimension3	Acc.	-.055	.066	-.21	.10
				App.	.037	.057	-.10	.17
Guessing: Using background knowledge	dimension3	Acc.	dimension2	App.	.128	.061	-.02	.28
				Comp.	.154*	.057	.02	.29
	dimension2	App.	dimension3	Acc.	-.128	.061	-.28	.02
				Comp.	.026	.056	-.11	.16
		Comp.	dimension3	Acc.	-.154*	.057	-.29	-.02
				App.	-.026	.056	-.16	.11
Guessing: Using linguistic clues	dimension3	Acc.	dimension2	App.	.282*	.076	.10	.46
				Comp.	.116	.084	-.09	.32
	dimension2	App.	dimension3	Acc.	-.282*	.076	-.46	-.10
				Comp	-.166	.070	-.33	.00
		Comp.	dimension3	Acc.	-.116	.084	-.32	.09
				App.	.166	.070	.00	.33

Dictionary clues		Acc.	dimension3	App.	.050	.060	-.10	.19
				Comp.	-.040	.068	-.20	.12
	dimension2	App.	dimension3	Acc.	-.050	.060	-.19	.10
				Comp.	-.090	.058	-.23	.05
		Comp.	dimension3	Acc.	.040	.068	-.12	.20
				App.	.090	.058	-.05	.23
Note taking		Acc.	dimension3	App.	-.025	.083	-.22	.17
				Comp.	-.006	.084	-.21	.20
	dimension2	App.	dimension3	Acc.	.025	.083	-.17	.22
				Comp.	.020	.076	-.16	.20
		Comp.	dimension3	Acc.	.006	.084	-.20	.21
				App.	-.020	.076	-.20	.16
Memory		Acc.	dimension3	App.	.100	.087	-.11	.31
				Comp.	.040	.087	-.17	.25
	dimension2	App.	dimension3	Acc.	-.100	.087	-.31	.11
				Comp.	-.060	.080	-.25	.13
		Comp.	dimension3	Acc.	-.040	.087	-.25	.17
				App.	.060	.080	-.13	.25
Activation		Acc.	dimension3	App.	.127	.094	-.10	.35
				Comp.	.061	.092	-.16	.28
	dimension2	App.	dimension3	Acc.	-.127	.094	-.35	.10
				Comp.	-.066	.088	-.28	.15
		Comp.	dimension3	Acc.	-.061	.092	-.28	.16
				App.	.066	.088	-.15	.28

*. The mean difference is significant at the 0.05 level.

As seen in Table 3, there is a significant difference in terms of guessing strategy using background knowledge between Faculty of Accountancy and Faculty of Computer and Mathematical Science with the mean difference of 0.154. This shows that students in Faculty of Accountancy preferred guessing strategy using background knowledge more than those students in Faculty of Computer and Mathematical Science. In addition, the table also discloses that there is a significant difference

in terms of guessing strategy using linguistic clues between students in Faculty of Accountancy and Faculty of Applied Science. Therefore, this can be assumed that Accountancy students preferred guessing strategy using linguistic clues more than those students in Faculty of Applied Science. Based on the results of this study, it may be possible to conclude that in general the students in the Faculty of Accountancy significantly chose guessing strategy as the way to learn vocabulary in learning language.

DISCUSSION

What are the most and least preferred Vocabulary Learning Strategies among the ESL students?

Based on the findings of the study, it can be concluded that the ESL students favor cognitive strategies which are note taking strategy,guessing strategy using linguistic clues as well as memory strategies. The findings are similar to that of Oxford's (1990), that cognitive strategies are the most popular one among language learners. This may be because it puts learners at ease. Cognitive strategies are direct; thus, they are straightforward. Oxford stated that (1990, p. 136; as cited in Yeh & Wang, 2004), "they are similar to memory strategies, but are not focused so specifically on mental processing." Strategies like taking notes, repeating words, word listing do not need one to think complicatedly; hence, easier for younger learners to use. Similarly, Bai (2018) also found out that cognitive strategy is the most common strategy used by the participants followed by metacognitive and affective strategy.

According to Scafaru and Tofan (2006; as cited in Gounder, 2015; Yeh & Wang, 2004), over seven strategies that they tested, note-taking strategy was used frequently by the learners. It is proven to be effective in language learning where visual memory takes place. Most learners would opt for this type because when a new word is written, they form an image of the word in their mind; enabling them to remember it vividly. Note taking strategy in some way is similar to the usage of vocabulary cards, vocabulary books and spelling formation (Scafaru & Tofan, 2006) which represent the idea of seeing a piece of information, recording and processing it in one's mind. Note taking ranked first could also due to the traditional teacher-centered education system that has been deep rooted in them since school years. They are used to listening and taking notes when in classes, which could have caused them to subconsciously practice it in learning vocabulary too.

In addition, note taking, memorizing, and using sources to find difficult words are the three macro-strategies that are mostly used by learners; regardless whether they are 'poor' or good learners (Eldin Ahmed, 2017). Gu and Johnson's (1996) also revealed a similar finding when a study that was done among Chinese learners showed that they used a wide range of VLSs including note taking and guessing. Students were discovered to learn vocabulary when they encode images and repeat visuals that appeared to be strong negative predictors between vocabulary size and English proficiency; claiming that students should not depend too much on visual repetition and fancy images strategies when learning vocabulary. Similar to the present study that looked at VLSs among diploma students, Hadavi dan Hashemi (2014) who also analyzed VLSs among EFL freshmen and senior students in medical sciences across different courses found out that freshmen use VLSs more than the seniors by choosing memorization and note taking as the most frequent techniques used. Such findings are also similar to the previous studies done by Arjomand and Shariffar's (2011) and Seddigh and Shokrpur's (2012).

However, the findings of the current study contradict the results of Alqarni (2018) who revealed that the Saudi freshmen favored metacognitive strategies the most while cognitive and memory strategies are the two least favored VLSs. Assuming that they are poor or low language users, Alqarni believes that since the students are not in school anymore, techniques such as rote learning is inapplicable anymore in learning a language; causing them to shift to metacognitive strategies that make them become more independent language users. Undoubtedly, it is acceptable to infer that when comparing between juniors and seniors, the undergraduates have lower level of proficiency which could affect the choice of VLSs (Boonkongsaen & Intaraprasert, 2014; Celik & Toptas, 2010). The strategies they chose may depend on their vocabulary knowledge and language learning experience; hence, determine what strategies to use or how many they should use when learning vocabulary.

In fact, the data also sums up that the ESL students are more keen in using direct strategies than indirect strategies. Direct or explicit strategies seem to be more significant because they could apply the approaches directly to learn new linguistic items unlike indirect ones where the process of learning takes place internally. Though note taking and memorization of words guide learners to save information and use it when necessary and are preferred mostly by the participants, both strategies are also considered as shallow strategies (Mokhtar, Rawian, Yahaya & Abdullah, 2009; as cited in Hadavi & Hashemi, 2014).

Unlike deep strategies that focus on in depth mental processing such as association and keyword method, shallow strategies cause learners to think at a superficial level. Consequently, it limits words learnt from being retained longer in a long-term memory (Craik & Lockhart, 1972). Though note taking and guessing using linguistic clues are the most favored, cognitive strategy guessing using background knowledge was recorded as the least. As opposed to English native speakers who can acquire new English words by guessing from context, ESL and EFL learners may not obtain much exposure to be able to guess words they barely know. Living in a non-English speaking environment makes it more challenging for them to apply it because English is not used every day and everywhere (Moktar & Mohd Rawian, 2012). This means the more exposed they are to varied contexts, the better they will be in this strategy. This aligns with the study done by Haarstrup (2008; as cited in Kulikova, 2015) and Kirmizi (2014) that students in higher levels were better at guessing from context than the lower ones because of the exposure they receive as they further their studies. A learner who combines both guessing strategies: using word part analysis and using context, he or she can guess words successfully up to 80% (White, Power & White, 1989). Despite its difficulty, it is significant to train learners to learn such techniques for language attainment.

Is there any significant difference between the ESL students in three different faculties – Accountancy, Applied Science and computer and Mathematical Science - in terms of their vocabulary learning strategies preference?

The results indicate that there is a significant difference in two VLS between faculties. The two strategies which show p-value (sig) <0.05 are guessing strategy using background knowledge where p=0.024 and guessing strategy using linguistic clues where p=0.001. The significant difference in terms of guessing strategy using background knowledge between Faculty of Accountancy and Faculty of Computer and Mathematical Science has the mean difference of 0.154. This shows that students in the Faculty of Accountancy preferred guessing strategy using background knowledge more than those students in Faculty of Computer and Mathematical Science.

In addition, there is also a significant difference in terms of guessing strategy using linguistic clues between students in the Faculty of Accountancy and Faculty of Applied Science. The mean difference shown is 0.282 and thus, this can be assumed that Accountancy students preferred guessing strategy using linguistic clues more than those students in the Faculty of Applied Science.

Based on the results of this study, it can be concluded that in general, the students in the Faculty of Accountancy significantly chose guessing strategy as the way to learn vocabulary in learning language more than the students of the other two faculties; Applied Science and Computer and Mathematical Science.

Previous studies on the vocabulary learning strategies used by students of different fields of study revealed that freshman students majoring in surgical technology employ different VLS than their seniors who are also doing science but in different majors (Hadavi & Hashemi, 2014). They were reported to prefer memorization, dictionary and note-taking technique in vocabulary learning. In overall, guessing and dictionary strategies are the most frequently used among all learners where p=0.000. In the other study, the strategies used by English majors are slightly different than the ones used by those non-English disciplines and the same findings were also found between science and arts students (Mochizuki, 1999; Peacock & Ho, 2003; Mingsakoon, 2003; Bernardo & Gonzales, 2009 as cited in Hadavi & Hashemi, 2014). These findings reveal individual differences in which it facilitates teachers and curriculum developers in designing suitable materials and activities that can boost learners' potential.

In conclusion, there is no absolute strategy used for learners of any particular programmes. Further research can be done to look in depth into the strategies employed by language learners of different fields of study.

LIMITATIONS OF THE STUDY

This study focuses on ESL learners of three faculties in one public university whereby most of them employ note taking and memory strategies in learning vocabulary. These strategies are considered direct or shallow strategies (Mokhtar, Rawian, Yahya & Abdullah, 2007 as cited in Hadavi & Hashemi, 2014). Thus, further studies can be done to ESL learners of different proficiency levels (poor and good ESL learners) to look at the strategies employed by them. Their level of proficiency may affect the types of VLS they use in learning vocabulary. Intermediate and advanced learners would prefer deeper strategies such as imagery, key word method and differencing in learning vocabulary (Schmitt, 2007 as cited in Havadi & Hashemi, 2014). Other than that, the other limitation of the present study is only a small number of respondents were chosen (197 students). A few questionnaires cannot be used as the responses are incomplete or not fully answered. Thus,

researchers have a limited number of respondents. This figure represents students of three different faculties. Therefore, the results obtained cannot be used to generalize or to represent the learners' VLS preference as a whole.

CONCLUSION

In conclusion, the data of the study has brought up some issues that require extra attention by the teachers as well as the learners. One of the major findings of this study disclosed that all respondents favor cognitive and memory strategies the most when learning vocabulary. They prefer using note taking and memorizing techniques than using others. As it is discussed earlier, such strategies are shallow strategies; hence, this finding may trigger teachers or educators to look at the types of strategies those language learners prefer. The deeper strategy one uses, the more information will be retained in one's memory. Because of its complexity, undergraduate students may not be familiar with any of them, thus it is the reason why educators have to play their roles. Choosing the right technique in language learning is significant as it could positively affect learners. Thus, deep strategies must be taught so that they are aware and can wisely choose the strategies that would help them remember the words better. Regardless of any strategies they opt for, most importantly, learners must be encouraged to use vocabulary learning strategies because it is impossible to depend solely on educators to teach all words. With their assistance, vocabulary learning could be less tough than it used to be, and ultimately, develop students to be independent language learners.

REFERENCES

A. Mutalib, A. H., Abdul Kadir, R., Robani, R., A Majid, F. (2014). Vocabulary learning strategies among Malaysian TEVT students in German-Malaysian Institute (GMI). *Procedia - Social and Behavioral Sciences, 123, 361 – 368*

Ahmed, A. A. J. E. (2017). The role of vocabulary learning strategies in enhancing EFL learners writing skills. *International Journal of Humanities Social Sciences and Education,* 4 (8), 41-50. http://dx.doi.org/10.20431/2349-0381.0408006

Alqarni, I. (2018). Saudi English major students' vocabulary learning strategies: An exploratory study. *International Journal of Applied Linguistics English Literature*, 7, 141. https://doi.org/10.7575/aiac.ijale l.v.7n.1p.141

Ansari, M., Vahdany, F., & Banou Sabouri, N. (2016). The relationship between the use of vocabulary learning strategies and gender of Iranian EFL learners. *Research in English Language Pedagogy* (RELP), 4(1), 88-100.

Arjomand, M., & Sharififar, M. (2011). The most and least frequently used vocabulary learning strategies among Iranian EFL freshman students and its relationship to gender. *Iranian EFL Journal*, 7(1), 90-100.

Asgari, A. and Mustapha, G.B. (2011). The type of vocabulary learning strategies used by ESL students in university of Putra Malaysia. *English Language Teaching, Vol. 4(2), 84-90.*

Bai, Z. (2018). An analysis of English vocabulary learning strategies. *Journal of Language Teaching and Research*, 9 (4). pp. 853-859. DOI: http://dx.doi.org/10.17507/jltr.0904.24

Boonkongsaen, N., & Intaraprasert, C. (2014). Use of English vocabulary learnings by Thai tertiary-level students in relation to fields of study and language-learning experiences English vocabulary learning strategies employed by Thai tertiary-levels students with different genders and levels of vocabulary proficiency. *Canadian Center of Science and Education*, 7(5), 59-70.

Boonkongsaen, N.(2012). Factors Affecting Vocabulary Learning Strategies: A Synthesized Study. *Naresuan University Journal, 20(2), 45-53.*

Chiang, H. (2004). *The relationship between field sensitivity/field independence and the use of vocabulary learning strategies of EFL university students in Taiwan*. Unpublished doctoral dissertation, Texas A&M University–Kingsville.

Craik, F., & Lockhart, R. (1972). Levels of processing: A framework for memory research. *Journal of Verbal learning and Verbal Behavior*, 11, 671-684

Craven, L. (2014). Vocabulary Learning Strategies. *Tama University School of Global Studies Bulletin, Issue 6, 9-15.*

Fan, Y. M. (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.

Goundar, P. R. (2015) An Analysis of Vocabulary Learning Strategies of Adult English as a Foreign Language (EFL) Learners. *International Journal of Humanities And Cultural Studies, Volume 2(Issue 3), 354-395.*

Gu, Y., & Johnson, R. K. (1996). Vocabulary learning strategies and language learning outcomes. *Language Learning*, 46(4), 643-679.

Haarstrup, K. (2008). Lexical inferring procedures in two languages. In D. Albrechtsen, K Haastrup, & B. Henriksen (Eds.), *Vocabulary and Writing in a First and Second Language: Processes and Development* (pp. 67–111). New York: Palgrave Macmillan.

Hadavi, M. & Hashemi, Z. (2014). Comparative Analysis of Vocabulary Learning Strategies in Learning English as a Foreign Language among Freshmen and Senior Medical Sciences Students Across Different Fields of Study. *Malaysian Journal of ELT Research, 10*(2), 19-33.

Kafipour, R. & Naveh, M.H. (2011) Vocabulary Learning Strategies and their Contribution to Reading Comprehension of EFL Undergraduate Students in Kerman Province. *European Journal of Social Sciences*, 23 (4), *626-647.*

Kırmızı, O. (2014). Measuring vocabulary learning strategy use of Turkish EFL learners in relation to academic success and vocabulary size. *World Journal of Education*, 4(6), 16–25. https://doi.org/10.5430/wje.v4n6p16

Kulikova, O. (2015). *Vocabulary Learning Strategies and Beliefs About Vocabulary Learning: A Study of Beginning University Students of Russian in the United States*. Retrieved from Networked Digital Library of Theses & Dissertations. University of Iowa.

Knez, M. (2018). Factors Influencing Vocabulary Learning Strategy Preferences. *XA Proceedings, Volume 1 (1), 83-95.*

Ma, Q. (2009). *Second language vocabulary acquisition*. Bern: Peter Lang AG, International Academic Publishers.

Mokhtar A. Z., Rawian A. (2012). Guessing word meaning from context has its limit: why? International Journal of Linguistics, 4 (2). 288 – 305.

Mokhtar, A. A., Rawian, R. M., Yahaya,M. F., Abdullah, A. & Mohamed, A. R. (2009). Vocabulary Learning Strategies of Adult ESL Learners. *The English Teacher. Vol. 38, 133-145*.

Nation, I. S. P. (2001). *Learning vocabulary in another language*. Cambridge, Cambridge University Press.

Nayan, S. & Krishnasamy, H. N. (2015). A preliminary study on vocabulary learning strategies used by the students from the faculty of accountancy. *International Journal of Languages, Literature and Linguistics, Vol. 1(No. 1)*, 10-14.

Nirattisai, S., & Chiramanee, T. (2014). Vocabulary learning strategies of Thai university students and its relationship to vocabulary size. *International Journal of English Language Education*, 2(1), 273-287.

Oxford, R. L. (1990). *Language learning strategies: What every teacher should know*. New York: Newbury House.

Savadkouhi, B. Z. Hassani, M. T., & Rahmani, R. (2013). The effect of hemispheric dominance on learning vocabulary strategies among Iranian EFL Learners. *European Online Journal of Nature and Social Sciences*, 2(2), 347-361.

Seddigh, F., & Shokrpur, N. (2012). Vocabulary learning strategies of medical students at Shiraz university of medical sciences. *English Language Teaching*, 5(2), 160-174. https://doi.org/10.5539/elt.v5n2p160

Scafaru, M., & Tofan, L. (2006). Vocabulary learning strategies. *Management and Socio-Humanities*, 95-98.

Schmitt, N. (1997) Vocabulary learning strategies. In N. Schmitt & M. McCarthy (Eds.), *Vocabulary: description, acquisition and pedagogy* (pp. 199-228). Cambridge: Cambridge University Press.

Stoffer, I. (1995). *University foreign language students' choice of vocabulary learning strategies as related to individual difference variables*. Unpublished doctoral dissertation, University of Alabama, USA.

White, T. G., Power, M. A., & White, S. (1989). Morphological analysis: Implications for teaching and understanding vocabulary growth. *Reading Research Quarterly*, 24, 283-304.

Yeh, C., & Wang, Y. (2004). An investigation into vocabulary learning strategies used by senior high school students in Taiwan. *Taiwan Journal of TESOL*, 1(2), 1-44.

Zhang, B. & Li, C. (2011). Classification of L2 Vocabulary Learning Strategies: Evidence from Exploratory and Confirmatory Factor Analyses. *RELC Journal, 42(2), 141-154.*

Zhang, B. (2009). FL Vocabulary Learning of Undergraduate English Majors in Western China: Perspective, Strategy Use and Vocabulary Size. Language Learning & Technology 2 (3), 178-185