

Vocabulary Learning Strategies Employed by Indonesian Virtual Exchange Students

Dias Tiara Putri Utomo^{a,1,*}, Finaty Ahsanah^{a,2}, Arum Islami^{b,3}, Suratmi^{a,4}, Suhariyati^{a,5}


^aUniversitas Muhammadiyah Lamongan, Jl. Plalangan No.KM, RW.02, Kabupaten Lamongan, 62218, Indonesia

^bUğur College School Yalova, Özden Avenue, Ahmet Yesevi Street No:63, Kadıköy, Yalova, 77600 Turkey

¹diastiara@umla.ac.id*; ²finatyahsanah@umla.ac.id; ³arum.islami@tch.ugurokullari.k12.tr; ⁴suratmi@umla.ac.id; ⁵suhariyati@umla.ac.id
* corresponding author

ARTICLE INFO	ABSTRACT
Article history Received June 25, 2022 Revised Dec 16, 2022 Accepted Dec 19, 2022	The study specifically aimed to find out (a) the most and the least frequently used VLS, and (b) the most useful VLS. A total of 105 nursing students who attended a virtual exchange program during the odd semester of 2021/2022 academic year participated in this study. This was ex post facto research which used a vocabulary learning strategy questionnaire to collect the data. To answer research questions, the collected data were analyzed by using SPSS statistics 25.0, including the descriptive statistics. The overall findings revealed that in terms of five categories, determination strategies were reported to be the most frequently used strategies and social strategies were the least ones. In terms of individual strategies, the most frequently used vocabulary learning strategies were ‘using bilingual dictionaries either print or electronic’, ‘guessing word meaning through the context’, and ‘learning new vocabulary items through vocabulary videos’. The least frequent ones were ‘asking the word’s synonym to the teacher’ and ‘communicating with native speakers. Furthermore, the participants assumed that ‘using bilingual dictionaries either print or electronic’ and ‘taking notes of new words’ as the most useful strategies. Considering the results, both students and lecturers must be more aware of the effective learning strategies to achieve better results.
Keywords vocabulary learning questionnaire VLS virtual exchange	

This is an open access article under the [CC-BY](#) license.



I. Introduction

In second or foreign language learning, vocabulary is widely recognized as one of the crucial elements besides grammar and pronunciation. A narrow vocabulary may retard the success of language learners because learning a new language requires sufficient words (Alqahtani, 2015). On the other hand, a large vocabulary will assist learners to achieve better language proficiency and affect their scores in public exams (Asgari & Mustapha, 2011; Komol & Sripetpun, 2014).

Vocabulary is also a major factor in supporting learners’ success in the skills of listening, speaking, reading, and writing (Boonkongsaen, 2013; Kameli et al., 2012; Liu, 2011). Harmer (2001) deems vocabulary as “vital organ and flesh” while Susanto (2017) illustrates vocabulary as “gravel and sand” which is imperative to learn both productive and receptive skills. Considering the importance of vocabulary in language learning, no wonder that researchers and educators are invariably attempting to search for the most effective ways to make students acquire new vocabulary in a pleasant atmosphere.

As a part of language learning strategies, vocabulary learning strategies are vitally important because vocabulary acquisition is a continuous process that generally causes great difficulties among learners (Dóczy, 2011). Vocabulary learning strategies are strategies employed by second/ foreign language learners to acquire new words (Asgari & Mustapha, 2011). The term also refers to any set of learning techniques or behaviors used by language learners to find the meaning of new words, maintain the knowledge of new words, and broaden the vocabulary (Komol & Sripetpun, 2014).

Vocabulary learning strategies are advantageous and necessary for language learners. Learners who are well-equipped with diverse vocabulary learning strategies may not struggle against unknown or unfamiliar words because the strategies facilitate learning new vocabulary (Boonkongsaen, 2013). Liu (2011) points out that it may be impossible for someone to acquire all vocabulary in a language, but it is possible that someone advances his vocabulary acquisition by using certain strategies.

For decades, many experts have drawn a distinction among vocabulary learning strategies. Schmitt & Schmitt, (2020) divides vocabulary learning strategies into two main classes. The first class includes favorable strategies for the initial discovery of words' meaning while the second class includes useful strategies for remembering the previously introduced words (Schmitt & Schmitt, 2020). Furthermore, the strategies are categorized into five groupings: Determination Strategies (DET), Social Strategies (SOC), Memory Strategies (MEM), Cognitive Strategies (COG), and Metacognitive Strategies (MET).

Determination strategies are individual strategies to find the meaning of new words without the assistance of other people, such as teachers or classmates. This includes analyzing structural knowledge of a language, such as parts of speech, affixes, and roots (Huong, 2018; Schmitt & Schmitt, 2020). Moreover, determination strategies also encompass guessing the new words' meaning through context and utilizing either bilingual or monolingual dictionaries. These strategies allow learners to be independent of discovering the meaning of words (Baskin et al., 2017).

On the contrary, social strategies involve collaboration or interaction with other people to boost language learning. Learners can cooperate with their teacher or classmates to ask for clarification or information about new words (Bai, 2018; Liu, 2011). According to Schmitt & Schmitt (2020), interaction may include asking for synonyms, paraphrasing, or translating new words. In groups, learners can collaborate in studying and practicing the meaning of new words. Furthermore, the strategies also suggest interaction with native speakers.

Memory strategies assist learners in retaining and retrieving words by associating the words with prior knowledge or experience (Han, 2014; Pradina & Listyani, 2021; Schmitt & Schmitt, 2020). Memory strategies allow learners to use certain images or grouping formats in learning words. Schmitt & Schmitt (2020) suggests several strategies for this group including connecting words to their antonym or synonym, studying the words' spelling, saying new words aloud, using physical action, and imaging words' form and meaning. Moreover, Baskin et al. (2017) highlight that visual materials are much more favorable than verbal materials in learning new words.

Cognitive strategies are like memory strategies relating new words with existing/ prior knowledge; however, cognitive strategies do not employ specific mental processing. In applying cognitive strategies, learners more focus on a mechanical means such as verbal and written repetition, using word lists, flash cards, English notes/ labels, and keeping a vocabulary notebook (Huong, 2018; Pradina & Listyani, 2021; Schmitt & Schmitt, 2020).

Finally, metacognitive strategies are strategies that include a conscious process in which learners can regulate their best way in learning by planning, monitoring, or

evaluating. In other words, metacognitive strategies allow learners to take control over their own learning (Baskin et al., 2017). The strategies enable learners to improve their input and decide what words are worth learning. Since learners cannot master all words, they must learn the most useful vocabulary from the limited resources (Huong, 2018). Metacognitive strategies include using various English media such as songs, movies, and books, taking vocabulary tests, and passing new words (Schmitt & Schmitt, 2020).

Several studies related to vocabulary learning strategies based on Schmitt & Schmitt (2020) taxonomy have been carried out and resulted in various findings. Dóczy (2011) reported the findings of a pilot study which compared vocabulary learning strategies between Hungarian high school students and university students. Interestingly, the study revealed that the level of students affected the strategies they used. The use of social and metacognitive strategies decreased when the level of students improved. On the contrary, the advanced level of students paid more attention to the pronunciation and tended to skip a new word.

Some studies claimed determination strategies are the most preferable strategies (Baskin et al., 2017; Huong, 2018; Nirattisai & Chiramanee, 2014; Pradina & Listyani, 2021). In Vietnam, Huong (2018) investigated academic vocabulary learning strategies used by 132 EFL university students. The study indicated that the participants mostly learned English vocabulary by using reference materials besides guessing the meaning from context and word roots.

The results regarding the merit of dictionary in learning new words were found in Baskin et al. (2017) and Nirattisai & Chiramanee (2014). According to the survey results, determination strategies including using bilingual dictionaries were the most used strategies by students at A1 level (Baskin et al., 2017). Furthermore, Nirattisai & Chiramanee (2014) mentioned that looking up words in an English-Thai dictionary is the most frequently used strategy because of the teacher-centered approach adopted by the lecturer. As foreign language learners, the students did not have much confidence and preferred to study independently. That is why they depend on a bilingual dictionary rather than asking for assistance from other people to find the meaning of new words. A study conducted by Pradina & Listyani (2021) regarding vocabulary mastery strategies employed by Indonesian extensive reading learners found that students improved their vocabulary mastery through reading books with various genres and choosing books with higher level of difficulties. They also made use of dictionaries to help them find the meaning of a new word.

On the other hand, other studies presented different findings on the most used strategies Rabadi (2016), who investigated EFL undergraduate Jordanian students' vocabulary learning strategies found that memory

strategies such as grouping new words according to their synonyms, antonyms, pronunciation, and spelling were the most frequently employed. It was found that the instructors emphasized the importance of using memory strategies to the students to familiarize them with the strategies. In Iran, Kafipour & Naveh (2011) revealed that cognitive and metacognitive strategies were the most preferable strategies among EFL undergraduate students. This result goes in line with Letchumanan et al. (2016) who stated that cognitive strategies were frequently used among Malaysian learners compared to other strategies. The number of online educational materials and tests which the students easily accessed seemed to be the major reasons. Additionally, research by Amirian & Heshmatifar, (2013); Saengpakdeejit (2014) share similar results. In their studies, they mentioned that in addition to using dictionaries, learners guessed a word's meaning from its context.

All the previous studies conducted worldwide have shown diverse results. Research involving different participants and learning situations presents interesting findings. However, most of the studies focus on investigating undergraduate students in general as research subjects. None of which discuss vocabulary learning strategies employed by virtual exchange students, whereas they experience more exposure to the use of English when attending the program. Moreover, it is worth noting that virtual exchange provides students with opportunities for learning foreign language through the interaction with native speakers as well as having experiences of communicating in foreign languages outside the classroom (O'Dowd, 2017).

Considering the current trend of student exchange programs which are held virtually, the results of this research may provide a valuable contribution to our understanding about vocabulary learning strategies and how virtual exchange students implement them. This study aimed to investigate the most and the least frequently used VLS, and the most useful VLS employed by Indonesian virtual exchange students.

II. Method

A. Participants

A total of 105 undergraduate students majored in Nursing participated in this study. Of the 105 participants, 88 were female students (84%) and 17 were male students (16%) with an age range from 18 to 21. They have been learning English as a foreign language for at least 6 years, or since they were in the senior high schools.

The participants were selected because they were attending a virtual exchange program in the odd semester of 2021/2022 academic year. The virtual exchange program was held once a week for one semester and organized by a Taiwan university using synchronous and asynchronous methods. The classroom consisted of

students from diverse countries and universities in Asia. English was used as a classroom instructional language as well as a main language for communication among students. Sometimes students had a pair or group project which required them to communicate and discuss with other students from different countries.

B. Instruments

This was ex post facto research which used questionnaires to collect the data. The researchers developed a 25-item questionnaire of vocabulary learning strategies based on Schmitt's (2000) taxonomy. It is important to note that a pilot study was performed on 30 participants who were not involved in this research to gain the questionnaire's validity and reliability. Cronbach's Alpha formula was utilized to calculate the reliability coefficient. The reliability value was 0.933 ($\alpha = 0.933$).

The questionnaire was used to expose types, frequency, and the most useful vocabulary learning strategies employed by Indonesian virtual exchange students. All 25 items in the questionnaire were categorized into five different groups of strategies: 5 statements on determination strategies, 5 statements of social strategies, 5 statements of memory strategies, 5 statements of cognitive strategies, and 5 statements of metacognitive strategies. The questionnaire was developed in Google Form and distributed electronically via WhatsApp.

Some adaptation to the questionnaire was made to suit the participants' learning environment. For instance, "utilizing google translate" was added to Schmitt & Schmitt (2020) monolingual and bilingual dictionary strategies as it is a typical online translation machine used by the students. The researchers also included some examples of social network platforms such as Instagram, YouTube, and TikTok in the category of English language media because those platforms currently provide students with opportunities to learn English.

Furthermore, the questionnaire consisted of three sections. The first section was about students' demographic data including name, length of learning English, age, and gender. The second section was used to know the most frequent strategies employed by the participants while the last section was used to reveal the most useful strategies according to the participants. The questionnaire utilized a 5-point Likert scale for each question from 1 (never) to 5 (always). It was written in the participants' official language (Indonesian) to avoid any possible misunderstanding.

C. Procedure

The questionnaire was created with Google Form and administered on January 20-22, 2022, to 105 Nursing students as the participants of the study. The participants were divided into three classes. Before filling out the questionnaire, the researchers provided some information to the participants about the objectives of the research and

how to fill out the questionnaire. They were asked to indicate whether they employed the strategies and whether the strategies were useful. They were told that the data would be gathered anonymously to fetch honest answers. The researchers also reminded the participants to check their questionnaire before submitting it just in case they missed the answers.

D. Data Analysis

The data gathered from the second and third part of questionnaire were analyzed using the Statistical Package for Social Science (SPSS) version 25 for obtaining descriptive statistics. Then, the descriptive statistics were utilized to identify means and standard deviations which were used to answer research questions. In categorizing the level of strategy use, the researchers employed (Oxford 1990) scoring system which includes high, medium, and low. Mean scores of 1.0 – 2.4 are categorized low strategy use, 2.5 – 3.4 are medium strategy use, and 3.5 – 5.0 are high strategy use.

III. Results and Discussion

The results encompass two primary sections based on each research question. The first section reports the results of Research Question 1 “What are the most and the least frequently employed vocabulary learning strategies by Indonesian virtual exchange students?” while the second section addresses the results of Research Question 2 “What are the most useful vocabulary learning strategies according to Indonesian virtual exchange students?”

A. The Most and the Least Frequently Employed Strategies

The results of descriptive analysis for each category of vocabulary learning strategies are presented in Table 1.

Table 1. Descriptive Statistics for Five Categories of Vocabulary Learning Strategies

Strategy	Mean	Std. Deviation	Rank	Strategy Used
Determination	3.4324	0.53789	1	Medium
Metacognitive	3.4133	0.62096	2	Medium
Memory	3.2533	0.59953	3	Medium
Cognitive	3.2152	0.64432	4	Medium
Social	2.7867	0.53584	5	Medium

Data on Table 1 indicate that Determination strategies (M = 3.4324) are the most frequently employed strategies by the participants, followed by Metacognitive strategies (M = 3.4133), Memory strategies (M = 3.2533), Cognitive strategies (M = 3.2152), and social strategies (M = 2.7867). All categories are used at medium level.

In addition to the most and the least frequently employed vocabulary learning in five categories, the results also reported the frequency of each strategy.

B. Determination Strategies

Data on Table 2 reveals the frequency of five vocabulary learning strategies under determination strategies which were employed by the participants.

Table 2. Determination Strategies Employed by the Participants

Determination Strategies	Mean	Std. Deviation	Rank	Strategy used
Utilize a bilingual dictionary either print or electronic (including google translate) to discover the meaning of new words.	3.8952	0.73542	1	High
Guess the words' meaning through the context	3.8286	0.67164	2	High
Guess the words' meaning through words' classes (noun, verb, adjective, adverb, etc.)	3.3238	1.00475	3	Medium
Guess the words' meaning by analyzing words' structure (prefixes, roots, and suffixes).	3.2762	0.91457	4	Medium
Utilize a monolingual dictionary either print or electronic to discover the meaning of new words.	2.8952	1.09126	5	Medium

As indicated in Table 2, the most frequently employed determination strategy is “utilize a bilingual dictionary either print or electronic (including google translate) to discover the meaning of new words” (M= 3.8952), and the least is “utilize a monolingual dictionary either print or electronic to discover the meaning of new words” (M= 2.8952). The results also revealed that there are two strategies used at a high level and three strategies used at medium level.

C. Metacognitive Strategies

Data on Table 3 show the frequency of five vocabulary learning strategies under metacognitive strategies which were used by the participants. From Table 3, it can be perceived that “learn new words by watching English videos from various media such as YouTube, Instagram,

TikTok, etc.” (M= 3.7619) as the highly used metacognitive strategies while “take vocabulary tests from the Internet” (M= 2.6386) as the least used one.

Table 3. Metacognitive Strategies Employed by the Participants

Metacognitive Strategies	Mean	Std. Deviation	Rank	Strategy used
Learn new words by watching English videos from various media such as YouTube, Instagram, TikTok, etc.	3.7619	.76616	1	High
Increase lexical items by listening to English songs	3.7524	.79398	2	High
Learn new words by watching English-speaking films with subtitles.	3.6190	.92384	3	High
Increase lexical items by doing extra exercises from various sources	3.2667	.90157	4	Medium
Take vocabulary tests from the internet	2.6286	.94317	5	Medium

D. Memory Strategies

Data on Table 4 indicates participants’ preference in vocabulary learning strategies under memory strategies.

Table 4. Memory Strategies Employed by the Participants

Memory Strategies	Mean	Std. Deviation	Rank	Strategy used
Connect new words to personal experience/ knowledge	3.5619	1.00884	1	High
Group new words according to their synonym and antonym	3.4190	.75678	2	Medium
Make an imaginary picture/ image of new words	3.3048	1.00119	3	Medium
Study the spelling of new words	3.0190	.80838	4	Medium
Use semantic map/ graphic to	2.9619	.86518	5	Medium

Memory Strategies	Mean	Std. Deviation	Rank	Strategy used
group new words				

Data on Table 4 indicates that the most frequently employed memory strategy is “connect new words to personal experience/ knowledge” (M= 3.5619) while the least is “use semantic map/graphic to group new words” (M= 2.9619). Furthermore, one strategy is categorized as high-level use while the other four are at the medium level.

E. Cognitive Strategies

Data on Table 5 indicates participants’ preference in vocabulary learning strategies under cognitive strategies.

Table 5. Cognitive Strategies Employed by the Participants

Cognitive Strategies	Mean	Std. Deviation	Rank	Strategy used
Take notes in class to learn new vocabulary	3.6095	.86040	1	High
Repeat a new word with its meanings orally	3.3524	.83183	2	Medium
Use a new word in sentence	3.1810	.81784	3	Medium
Write a new word with its meanings in a vocabulary book	3.0952	.91488	4	Medium
Label English words on the physical objects	2.8381	.96201	5	Medium

Data on Table 5 indicate that “take note in class to learn new vocabulary” (M= 3.6095) is the most frequently employed cognitive strategies while “label English words on the physical objects” (M= 2.8381) is the least once. The data also reveal that there is one strategy which is categorized as high-level use and four strategies are included in medium-level use.

F. Social Strategies

Data on Table 6 indicate the frequency of five vocabulary learning strategies under social strategies which were employed by the participants. According to Table 6, the most frequently employed social strategies is “study and practice meaning of new words in group” (M=3.5524) while the least used is “communicative with native speakers through various media to improve my vocabulary” (M=1.9905). None of the strategies under social strategies which included in high level use. Three of the strategies are in medium use, and the rest two are in low use.

Table 6. Social Strategies Employed by the Participants

Social Strategies	Mean	Std. Deviation	Rank	Strategy used
Study and practice meaning of new words in group	3.5524	.78423	1	High
Ask classmates for the meaning of new words	3.4095	.78072	2	Medium
Ask the instructors to paraphrase or explain new words	2.5905	.95771	3	Medium
Ask the instructors about the synonyms of new words	2.3905	.93537	4	Low
Communicate with native speakers through various media to improve my vocabulary	1.9905	1.13082	5	Low

G. The Most Useful Vocabulary Learning Strategies

Among 25 vocabulary learning strategies, the ten most useful vocabulary learning strategies employed by the participants are presented in Table 7.

Table 7. The Most Useful Vocabulary Learning Strategies

Vocabulary Learning Strategies	Mean	Std. Deviation	Rank
Utilize a bilingual dictionary either print or electronic (including google translate) to discover the meaning of new words.	3.962	.6190	1
Take notes in class to learn new vocabulary	3.886	.8004	2
Increase lexical items by listening to English songs	3.752	.7940	3
Learn new words by watching English videos from various media such as YouTube, Insta-gram, TikTok, etc.	3.724	.8026	4
Guess the words' meaning through the context	3.657	.6626	5
Utilize a monolingual dictionary either print or electronic to discover the meaning of new words.	3.552	.7842	6
Increase lexical items by doing extra exercises from various sources	3.438	.8979	7
Ask classmates for the meaning of new words	3.429	.8304	8

Vocabulary Learning Strategies	Mean	Std. Deviation	Rank
Connect new words to personal experience/ knowledge	3.419	.7568	9
Make an imaginary picture/ image of new words	3.410	.7842	10

According to Table 7, the most useful vocabulary learning strategies are "Utilize a bilingual dictionary either print or electronic (including google translate) to discover the meaning of new words" (M= 3.962), followed by "Take notes in class to learn new vocabulary" (M= 3.886), "Increase lexical items by listening to English songs" (M= 3.752),

H. The discussions below are presented based on each research question.

1) The Most and the Least Frequently Employed Strategies

The results showed that Determination strategies were the most frequently employed while social strategies were the least. This is congruous with the results of other previous studies (Amirian & Heshmatifar, 2013; Nirattisai & Chiramanee, 2014).

During the synchronous learning, the instructors taught the lesson in English and provided limited interaction with the participants while in the asynchronous mode the participants had to complete assignment related to the materials. In this case, as EFL learners, the participants deploy the most efficient and effective way to find the meaning of new and unfamiliar words. The participants mainly rely on using reliable resources independently, including utilizing bilingual dictionaries and trying the fastest way such as guessing the words' meaning from the context to follow the lesson quickly.

Specifically, "utilizing a bilingual dictionary to discover the meaning of new words" ranked first in the category of Determination strategies and the overall strategies provided in the questionnaire. Many previous studies have confirmed the use of a bilingual dictionary as the most frequently used strategy in vocabulary learning strategies among EFL/ESL learners (Huong, 2018; Komol & Sripetpun, 2014; Liu, 2011; Noprianto & Purnawarman, 2019; Saengpakdeejit, 2014).

For EFL/ESL learners, utilizing a bilingual dictionary is considered practical and effortless. Moreover, the popularity of Google Translate as an online translation machine motivates students even more. They can simply type words or phrases in the source text column, and then the translation results will instantly appear at the target language column. Noprianto & Purnawarman (2019) assert that a bilingual dictionary caters for words' meaning, pronunciation, word classes, spelling, and how to put the word into sentences. In addition, according to Rabadi (2016) dictionaries are major resources for EFL

learners to learn new lexical items and provide learners with a great chance to be independent.

In contrast to the use of a bilingual dictionary, the participants were not quite familiar with the use of a monolingual dictionary. In this study, utilizing a monolingual dictionary ranked the last in the Determination strategies category. In Asgari & Mustapha (2011) study, the use of a monolingual dictionary was quite popular among Malaysian university students. They also mentioned that English-to-English dictionary was a typical dictionary used by second language learners in Malaysia. It is quite possible that the different results are caused by the learning environment. According to Kameli et al. (2012), teachers mostly affect learners' choice of vocabulary learning strategies. Many students adopt vocabulary learning strategies from their teachers. In an EFL context, the teachers mostly liked the idea of using a monolingual dictionary in the classroom, but they admitted that they did not provide the students with proper training in utilizing a monolingual dictionary (Ali, 2012).

Data analysis also revealed that Metacognitive strategies were the second most frequently used strategies and categorized in the medium use Table 3. This goes in line with a study conducted by Kafipour & Naveh (2011) which confirmed that the participants preferred employing Metacognitive strategies because they could manage their own learning. The number of accessible educational materials on the internet made students more confident of taking control of their learning.

In this research, the virtual exchange participants realized that they cannot fully be dependent on the instructors' directions to expand their lexical items. They must be able to be self-directed learners during the virtual course. In self-directed learning, the participants can make use of mobile technology such as mobile phones and laptops along with the applications on them to develop their language competence and sustain their interests in learning (Lai et al., 2022). Self-directed learning also makes vocabulary more enjoyable and effective (Rabadi, 2016). Self-directed learning has encouraged the participants to employ metacognitive strategies which are closely related to the convenience of technology. This may explain why the use English-language media such as videos, songs, and films were categorized in the high-level use in this study.

Memory strategies were found to be the third most frequently used strategies (see Table 4). This has similar results with Amirian & Heshmatifar (2013); Kafipour & Naveh (2011) who stated that Memory strategies placed in the middle of the five categories. Amirian & Heshmatifar (2013) revealed that Memory strategies were less frequently used than Determination and Cognitive strategies. In this research Memory strategies were less frequently used than Determination strategies but more frequently used than Cognitive strategies. However, according to the statistical results, the mean scores

between Memory strategies and Cognitive strategies did not show any significant difference. Compared to Determination and Metacognitive strategies, Memory and Cognitive strategies will take more time and require students to use elaborative mental processing (Schmitt & Schmitt, 2020).

The plausible reason why Memory and Cognitive strategies are less frequently used is due to the participants' language learning experience. According to Boonkongaen (2013), EFL students' use of vocabulary learning strategies is highly affected by their previous language learning experience. In Indonesia, vocabulary learning is performed integrated with other language skills. It is quite common to find Indonesian high school English teachers who tell their students to look up dictionaries rather than consolidating the new words. As a result, the participants do not use Memory and Cognitive strategies as frequently as the first two mentioned strategies. Furthermore, Boonkongaen (2013) stated that more experienced students utilize more vocabulary learning strategies than the less experienced ones. Some participants in this study attended their first virtual exchange program. They are probably not yet accustomed nor well-experienced in the learning process.

Finally, Social strategies as the least used strategies by the participants are in accordance with some previous studies (Amirian & Heshmatifar, 2013; Asgari & Mustapha, 2011; Kafipour & Naveh, 2011). Amirian & Heshmatifar (2013) argued that the teacher-centered model commonly applied in Iran provided limited opportunities for students to work in groups or do other classroom activities. In Kafipour & Naveh (2011) study, students assumed that learning vocabulary was an individual process which did not need social interaction. Similarly, Asgari & Mustapha (2011) mentioned that none of the students studied words with the assistance of others.

In this study, "study and practice meaning of new words in group" and "ask classmates for the meaning of new words" ranked the first and second most used strategies Table 6. Besides attending lectures, the participants were expected to do some individual assignments and group projects. The participants who were not familiar with tasks written in English were trying to seek for their classmates' assistance. While completing the tasks, the participants learned and practiced vocabulary that seemed new, unfamiliar, or useful. Peers might create a significant impact towards students' vocabulary mastery. Students can learn new words from their friends, correct each other's pronunciation, or clarify the words' meaning (Kameli et al., 2012).

The statistical results also indicated low mean scores for "ask the instructors" and "communicate with native speakers". In terms of asking the instructors about the synonym or to explain the words, the participants rarely used the strategies (see Table 6). At a certain point, virtual meetings can be the best solution for conducting distance

learning. However, if the instructors fail to create a supportive virtual learning environment, the students will not be able to build a good relationship between peers and instructors (Sharma, 2020). In addition, as new virtual exchange participants, they felt nervous, shy, and lacked confidence in asking the meaning of unfamiliar words to the instructors. A low number of mean scores for “communicate with native speakers” indicated a minimum number of students who had ever experienced this. The result follows Nirattisai & Chiramanee (2014) research which stated that “interact with native speakers” was categorized the least strategies used by Thai university students. Like Thai students, Indonesian students encountered difficulties in finding an English-speaking partner.

2) The Most Useful Vocabulary Learning Strategies

Data on Table 7 indicates ten most useful strategies according to the participants. When the tables of the most frequently used strategies are compared with the tables of the most useful strategies, it implies several important findings. Some strategies which categorized in the high-level use are also perceived useful by the participants, like utilizing a bilingual dictionary, taking notes in class, listening to English songs, etc. This may indicate that those strategies are appropriate for the students' characteristics and needs.

However, some strategies in the medium-level use are perceived useful, such as “utilize a monolingual dictionary”. The results of a study by Abbasi et al. (2019) in Saudi Arabia revealed that 55% of the participants showed their interest in utilizing a monolingual dictionary. They confirmed that a monolingual dictionary could help students in thinking in English. Other studies also mentioned that a monolingual dictionary was favorable for learners in EFL classroom (Ali, 2012; Mustika et al., 2021). The low usage strategies with high usefulness indicate that learners recognize the strategies' value but do not currently practice them (Liu, 2011). In this case, the participants notice the advantage of a monolingual dictionary, but they prefer to utilize a bilingual dictionary due to its practicality and easiness.

IV. Conclusion

The use of Determination strategies is popular among the participants because the strategies are well-known and considered effective and efficient in discovering the meaning of new words. On the other hand, social strategies are rarely employed by the participants because the participants might feel shy, nervous, and even not confidence during the virtual meeting. Virtual exchange students must be aware of their preference for vocabulary learning strategies so that they can manage their language learning along with the materials delivered during the course. Furthermore, it is recommended that future researchers can address different settings and use different instruments. The limitations of this study can still be

explored including the participants' gender, language proficiency, the duration of virtual exchange program, and how many times the participants attended the virtual exchanges.

References

- Abbasi, W. T., Ahmad, M. M., & Mohammed, F. A. E. (2019). Learners' perceptions of monolingual dictionaries in learning English as a foreign language. *International Journal of Education and Literacy Studies*, 7(3), 10–18. <https://doi.org/doi: 10.7575/aiac.ijels.v.7n.3p.10>.
- Ali, H. I. H. (2012). Monolingual dictionary use in an EFL context. *English Language Teaching*, 5(7), 2–7.
- Alqahtani, M. (2015). The importance of vocabulary in language learning and how to be taught. *International Journal of Teaching and Education*, 3(3), 21–34. <https://doi.org/10.20472/TE.2015.3.3.002>
- Amirian, S. M. R., & Heshmatifar, Z. (2013). A survey on vocabulary learning strategies: A case of Iranian EFL university students. *Journal of Language Teaching and Research*, 4(3), 636.
- Asgari, A., & Mustapha, G. B. (2011). The type of vocabulary learning strategies used by ESL students in University Putra Malaysia. *English Language Teaching*, 4(2), 84. <https://doi.org/10.5539/elt.v4n2p84>
- Bai, Z. (2018). An analysis of English vocabulary learning strategies. *Journal of Language Teaching and Research*, 9(4), 849–855. <https://doi.org/10.17507/jltr.0904.24>
- Baskin, S., Iscan, A., Karagoz, B., & Birol, G. (2017). The use of vocabulary learning strategies in teaching Turkish as a second language. *JournBaskin, S., Iscan, A., Karagoz, B., & Birol, G. (2017). The Use of Vocabulary Learning Strategies in Teaching Turkish as a Second Language. Journal of Education and Practice*, 8(9), 126–134. *Al of Education and Practice*, 8(9), 126–134.
- Boonkongsan, N. (2013). Factors affecting vocabulary learning strategies: A synthesized study. *Naresuan University Journal: Science and Technology (NUJST)*, 20(2), 45–53.
- Dóczy, B. (2011). Comparing the vocabulary learning strategies of high school and university students: A pilot study. *WoPaLP*, 5, 138–158.
- Han, Y. (2014). *Foreign language vocabulary learning strategies: Patterns of use among college students*.
- Harmer, J. (2001). *The practice of English language teaching*. In London/New York.
- Huong, L. P. H. (2018). A survey study on academic vocabulary learning strategies by EFL university students. *Journal of Language Teaching and Research*, 9(5), 1009–1016.
- 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.
- Kameli, S., Mostapha, G. B., & Baki, R. B. (2012). *The Influence of Formal Language Learning Environment*

- on Vocabulary Learning Strategies. *Journal of Language Teaching & Research*, 3(1). <https://doi.org/10.4304/jltr.3.1.23-29>
- Komol, T., & Sripetpun, W. (2014). *Vocabulary learning strategies employed by undergraduate students and its relationship to their vocabulary knowledge*. Faculty of Liberal Arts, Prince of Songkla University.
- Lai, Y., Saab, N., & Admiraal, W. (2022). Learning strategies in self-directed language learning using mobile technology in higher education: A systematic scoping review. *Education and Information Technologies*, 27, 7749–7780. <https://doi.org/10.1007/s10639-022-10945-5>
- Letchumanan, K., Muthusamy, P., Govindasamy, P., & Farashaiyan, A. (2016). An overview of preferred vocabulary learning strategies by learners. *Asian Social Science*, 12(10), 174–179.
- Liu, Z. L. (2011). A study on English vocabulary learning strategies for non-English majors in independent college. *Cross-Cultural Communication*, 6(4), 152–164.
- Mustika, A., Rahman, M., & Mesalina, J. (2021). *Students' perception on the use of online dictionary*. UIN Sulthan Thaha Saifuddin Jambi.
- 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. <https://doi.org/10.5296/ijele.v2i1.5366>
- Noprianto, E., & Purnawarman, P. (2019). EFL students' vocabulary learning strategies and their affixes knowledge. *Journal of Language and Linguistic Studies*, 15(1), 262–275. <https://doi.org/10.17263-jlls.547730>
- O'Dowd, R. (2017). Virtual Exchange and internationalising the classroom. *Training Language and Culture*, 1(4), 8–24.
- Pradina, O., & Listyani, L. (2021). Vocabulary mastery strategies used by Indonesian extensive reading learners. *Prominent*, 4(1), 1–18. <https://doi.org/10.24176/pro.v4i1.5731>
- Rabadi, R. I. (2016). Vocabulary learning strategies employed by undergraduate EFL Jordanian students. *English Language and Literature Studies*, 6(1), 47–58.
- Saengpakdeejit, R. (2014). Awareness of Vocabulary Learning Strategies among EFL Students in Khon Kaen University. *Theory & Practice in Language Studies*, 4(6), 1101–1108.
- Schmitt, N., & Schmitt, D. (2020). *Vocabulary in language teaching*. Cambridge university press.
- Sharma, R. (2020). Online learning and its positive and negative impact in higher education during Covid-19. *EPRA International Journal of Multidisciplinary Research (IJMR)*, 6(9), 177–181.
- Susanto, A. (2017). The teaching of vocabulary: A perspective. *Jurnal Kata: Penelitian Tentang Ilmu Bahasa Dan Sastra*, 1(2), 182–191. <https://doi.org/10.22216/jk.v1i2.2136>