



Strategies of vocabulary learning employed by low-frequency-word level students in international class

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Abstract

The application and development of vocabulary learning strategies (VLS) lead to acquiring a more extensive vocabulary size and better performance in language acquisition. Students with different proficiencies might employ various VLS in their language learning process. This study aims to describe and analyze the vocabulary learning strategy used by low-frequency-word level students identified by vocabulary size test they took previously. This study adopted mix-method research by using questionnaires and interviews. The participants were university students of international programs majoring in industrial engineering, civil engineering, and business and economics. The students were identified in low-frequency-word level who were considered able to understand wide reading and specialized study. The findings showed that low-frequency-word level students primarily used dictionary, guessing, and activation strategies. The social strategy was identified as another alternative strategy to learn vocabulary. Google Translate was the most popular translating tool due to its practicality. Guessing meaning strategy was done when failing to find the desired words using an online translation machine. Moreover, the students used social media as the platform to implement the activation strategy. Meanwhile, note-taking, rehearsal, metacognitive strategies belong to the least used VLS as the students are not into intentional vocabulary learning.

Keywords: international students; low-frequency-word level; vocabulary learning strategy

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Introduction

Vocabulary learning strategy (VLS) is intertwined with vocabulary size (VS). Scholars (Alahmadi et al., 2018; Alahmadi & Foltz, 2020) have researched the relationship between VLS & VS and proven the positive relationship. The total variety of VLS affects the VS. Researchers found that groups of students with higher VS occupy varied VLS compared to groups with lower VS. Meanwhile, the vocabulary size affects the students' preference on VLS they use. VS reflects the familiarity of words and affects the students to use VLS accommodating English words such as using the monolingual dictionary and learning vocabulary from context.

Scholars have studied vocabulary learning strategies over the years, yet the studies are still relevant to today's context. The scholars (e.g., Amirian & Heshmatifar, 2013; Ghalebi et al., 2020) summarized the classification of vocabulary learning strategies from some experts (Gu, 2018; Schmitt, 2000). In general, the scholars classify the strategies as the most basic ones as metacognitive, cognitive, and social/ affective strategies. Furthermore, VLS can also be classified into five stages: encountering new words, getting the word forms, getting the word meaning, consolidating word form and meaning in memory, and using the words (Yaacob et al., 2019). To figure out how the stages are implemented in the learning, Gu (2018) identifies the strategies into eight categories such as beliefs about vocabulary learning, metacognitive strategies, inferencing, using dictionaries, taking notes, rehearsal, encoding, and activation. This study applied Gu's (2018) classification among the vocabulary strategies categories since it provides thorough or detailed references that learners may implement.

Different vocabulary strategies may indicate different vocabulary sizes. Alahmadi and Foltz (2020) found that VLS preference depends on people's familiarity with words. In other words, vocabulary size affects the VLS

preferences. People who are familiar with more words tend to use certain VLS, including guessing meaning from context. According to Alahmadi et al. (2018), students with a more extensive vocabulary tend to use this strategy as they have been familiar with lots of vocabularies, so they feel easier to understand the context. Besides being more straightforward, it is also more timesaving than other strategies, including checking the dictionary. Thus, it is more effective for them to guess the meaning from the context directly instead of using other VLS. Besides guessing meaning from context, the other strategies that relate positively to vocabulary size are consulting a monolingual dictionary and studying the English explanation. Once they already get the general meaning or comprehend the main point as they have been familiar with several English words, they will feel easier to predict the new vocabulary. As a result, they prefer those strategies more among other VLS. The more varied the VLS used, the larger the vocabulary size. Alahmadi et al. (2018) discovered that students with larger vocabulary sizes occupy more VLS variation. Nevertheless, no research cannot formulate the VLS use as the variety of VLS for each student is different.

In the secondary level of participants, an investigation was done on EFL Saudi Arabian learners studying in Malaysia (Yaacob et al., 2019). The study investigated the students' strategies implementation in their actual learning process. The finding showed that they implemented five categories of VLS consisting of word guessing, dictionaries usage, and memory usage strategies. The other studies were carried out in different settings and participants to seek how students implement the strategies in their vocabulary learning process (Amirian & Heshmatifar, 2013; Ghalebi et al., 2020). Ghalebi et al., (2020) conducted a study to determine whether there was a significant difference in applied strategies among the undergraduate and postgraduate English Language Studies Departments. The result showed significant differences between the graduate and doctorate students. Postgraduate students with higher education prefer having metacognitive strategies followed by cognitive strategies to control learning. In contrast, the undergraduate ones prefer having determination strategies followed by affective and memory strategies in which they use a simple method with the less thinking process. It is in line with some surveys on undergraduate students of English education major (Amirian & Heshmatifar, 2013), indicating guessing from context and dictionary use strategies were the most popular strategies while asking the teacher or peers for meaning were rarely used. Regarding strategy categories, the results revealed that memory strategies were the most frequently employed and metacognitive strategies were the least frequently used among them.

Although studies on VLS have been conducted intensively, there is a lack of reports on the EFL context in the international class setting at higher education. There should be a more profound analysis as students with higher English exposure need suitable VLS to acquire vocabulary effectively. Teng (2017) found that students with higher language exposure can gain more vocabulary knowledge incidentally as they have already had a supportive atmosphere to internalize those new vocabularies, especially in reading activities. Thus, investigating appropriate VLS is essential regarding the quality of students' performance in the international program who only practice the language in the academic context. Therefore, this research aims to describe and analyze VLS employed by international students at the low-frequency-word level. By identifying their VLS, lecturers can vary and optimize their vocabulary teaching methodology and materials since the preferred learning strategies has correlation with a successful vocabulary learning.

With effective learning and teaching methodology, students' vocabulary size is expected to enrich effectively. Besides, by investigating the favored strategies, students are expected to explore their suitable method to learn according to their characteristics. The students could learn at their best to gain their optimum performance and better result. Practically, the finding will allow lecturers to accommodate the suitable VLS in their learning so international students can optimally develop their vocabulary. Besides, it will be a consideration for English material designers to equip the learning activities with the VLS found in this research. Concurrently, it provides theoretical benefits for vocabulary development and ideas for further research focusing on students' vocabulary development with high academic English exposure.

Method

Research design

As this study aimed to portray and compare the vocabulary learning strategies of the low-frequency-word level students, the research method implemented in this study was mixed-method. This method integrated quantitative and qualitative data to obtain a more comprehensive understanding, validate findings from different perspectives, and reach multiple readers (Dornyei, 2007; Ivankova & Greer, 2015). This method combined the nature quantitative and qualitative data to get a more accurate view from various influencing factors. The quantitative data resulted then was being explored using a qualitative method as

it allowed researchers to translate social experiences into words (Dornyei, 2007). The qualitative method to explore could be in the forms of interviews, observers' notes of the lesson, transcripts of lessons, video or audio recording of classroom interaction, focus interview protocols, and others (Nunan & Bailey, 2009). This exploration derived a detailed understanding of the subject matters.

Participants

Purposive sampling used as the target of this study was students registered in international classes in different study programs, namely, Business and Economics, Industrial Engineering, and Civil Engineering. In the end, seventeen participants willingly took the questionnaire of vocabulary learning strategy at their convenience. All of them were Indonesians, and they were categorized as second language learners who used English as the primary language during the lessons in their classes. Before filling in the VLS questionnaire, they have taken the vocabulary size test classifying them into low-frequency-word level students as their word families ranged from 10.000 to 14.800. According to Nation (2012), they belonged to learners with wide reading and aimed for successfully reading the specialized study of a subject area. In detail, the description of research participants demography is presented in Table 1.

Table 1. Research participants demography

Faculty	Participants
Accounting	3
Management	5
Civil Engineering	4
Industrial Engineering	5
Total	17

Instrument and data collection

This study used two instruments to collect data. The first instrument was a questionnaire, and the second was an interview guide. The questionnaire collected the participants' vocabulary learning strategy data while the interview was done to find further information about their vocabulary learning strategies. The questionnaire suggested by Gu and Johnson (2018) version 6.4 was used in this study. It consisted of 31 statements grouped into four categories: metacognitive strategies, cognitive strategies, memories/repetition strategies, and activation strategies. The sample responded to a 5-point Likert scale from "always use it," "usually use it," "sometimes use it," "seldom use it," and "never use it." Every statement of the 5-point Likert Scale was given scores to simplify

the data analysis, "Always use it" = 4, "usually use it" = 3, "sometimes use it" = 2, "seldom use it" = 1, and "never use it" = 0. Statements no.1 to 6 explored metacognitive strategy, statements 7 to 25 sought information about cognitive strategy, and statements 26 to 29 collected memory/repetition strategy data. Statements 30 to 31 asked for information about the activation strategy. The questionnaires were distributed to students using e-form due to the practicality during the pandemic situation to gain data. All participants whose vocabulary size had been measured and identified on the previous research before they were invited to fill in the questionnaire. The data of students with low- frequency-word level was then documented. The percentage of VLS usage was analyzed to determine the pattern of VLS used by the participants.

The second instrument was interview guidelines asking the participants to confirm their preferred vocabulary learning strategies. Due to the pandemic situation, the interview was conducted online through Microsoft Teams for around one hour. There were around eight questions prompting them to describe their practical experiences of implementing the VLS during their English learning process. The reasons for having their dominant and the least VLS were also investigated.

Data analysis

This study employed three kinds of data: vocabulary size (VS) test, a questionnaire, and an interview. The VS test was used to see how large the vocabulary that participants had. Then, the VS results were categorized using Nation's 1,000-word level divisions. Students with VS score 1,000-2,000 belong to high frequency level that they were considered as reading graded readers and they need deliberate teaching and learning. Those with VS score 3,000-9,000 are in mid-frequency level. They were reading-mid frequency readers who still require deliberate learning. While students who reach VS score 10,000 on are categorized in low frequency level. They are specialized according to certain fields or areas of study, and they are considered as wide reading readers. According to Kremmel (2016), this division is suitable for classifying test-takers who belong to beginner to intermediate learners of English as a foreign language.

The VS size was supported with a questionnaire concerning vocabulary learning strategies (VLS). The questionnaire result was presented and analyzed descriptively using Microsoft Excel. The data would show the comparison of the implemented strategies in percentages. From the numbers, the most and least VLS could be identified. However, the overall result would be discussed in the finding section.

An interview was conducted to reveal more profound insight. The interview result was intended to triangulate and develop the questionnaire data reliability and validity. The participants' answers were recorded. The data of interview result was transcribed, then categorized and identified into VLS proposed by Gu (2018) such as metacognitive strategies, inferencing, using dictionaries, taking notes, rehearsal, encoding, and activation. Some keywords on those scripts were highlighted and identified. Further analysis of the data was done by using the excerpts to support the participants' statements as the basis of the finding discussion.

Findings

This research aims to describe and analyze the vocabulary learning strategy used by low-frequency word-level students. The following are the description of the VLS questionnaire result and interview result to display students' dominant and infrequent vocabulary learning strategies. There were eight categories of VLS suggested by Gu (2018) such as (1) beliefs about vocabulary learning that were defined into two sections (words should be memorized and words should be learned through use), (2) metacognitive strategies, (3) inferencing, (4) using dictionaries, (5) taking notes, (6) rehearsal, (7) encoding, and (8) activation. The result of the questionnaire is in Figure 1.

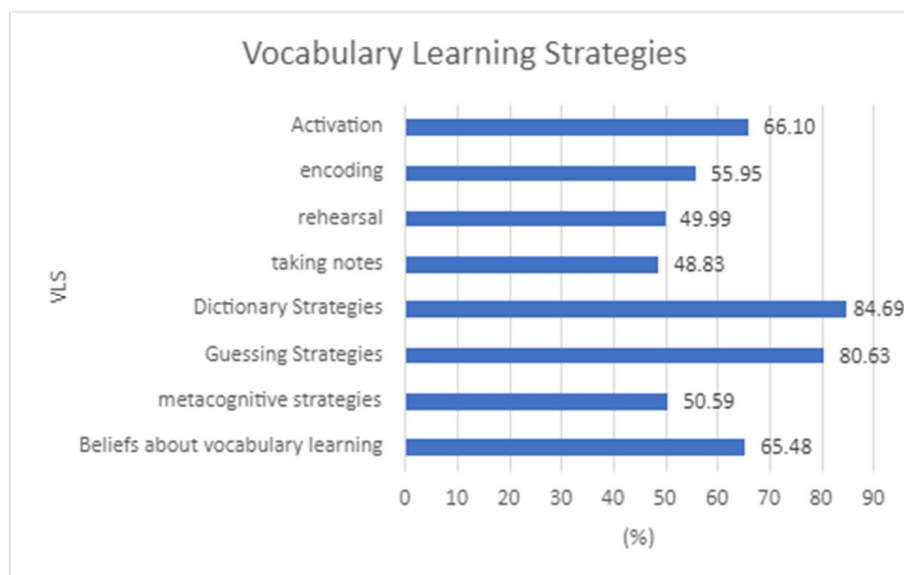


Figure 1. The comparison of VLS

Figure 1 portrays that all eight categories of VLS were generally used by all participants when they learned English. Here are the top three strategies that were frequently used by learners who have used low-frequency words identified from the 1000-word band division proposed by Nation (2012). The strategies were dictionary strategies (84.69%), guessing strategies (80.63%), and activation (66.10%). It can be perceived that dictionary strategies and guessing strategies were the dominant strategies among other VLS. The less dominant strategies applied were consecutively encoding (55.95%), metacognitive strategies (50.59%), rehearsal (49.99%), and note-taking (48.83%).

An interview was carried out with seven international students from different majors consisting of industrial engineering, economics and business, and civil engineering students to acquire further information related to the VLS questionnaire results. According to the interview, one participant with the highest vocabulary size employed the least number of strategies compared to other participants. He only preferred using two strategies; Google Translate usage strategy and activation strategy. The participant learnt words from video game and used those words both in spoken and written form. Interestingly, once he learnt new words such as synonyms of certain words, he preferred to activate using it to create sentences whenever he got the chance. The other six participants applied four until six strategies such as note-taking, dictionary, activation, learning words through use, using context, and memorizing.

Regarding the number of strategies employed, the finding showed that those seven students used different numbers of strategies. The interview result showed that the most dominant strategies applied by students were dictionary strategy, guessing strategy, and activation strategy. Google Translate was considered as digital dictionary tool by all participants that they preferred to use it as the first strategy to learn English vocabulary. From the interview, Google Translate is the most used assisting tool that students used as the first option to find out the meaning of words. Since it is easy to access, students can use Google Translate anytime and anywhere. Not only to find the meaning of words, Google Translate is the first tool to find new terms or registers as stated by one of students in the interview:

Researcher: If you find a new term, what will you do?

PAB: I seek the meaning in Google Translate for the synonyms that I have already known. ... For new phrases, I look for the meaning in Google Translate, then find the sentence examples. If the phrases or registers cannot be found in Google Translate, I'll use Google then click on the link of Urban Dictionary. This is a dictionary for slang phrases. There will be explanation of the phrases there, the meaning and the examples.

Although Google Translate does not support thorough examples of the vocabulary used in sentences, this tool is still preferable as it lets students find the translation quicker than other dictionaries. Even one student claimed that Google Translate became the only way out whenever he encountered new and difficult vocabulary. In the interview he said that:

Researcher: If you find new words when you are reading journal, what strategy will you do?

JET: Okay, if I find the words that I don't know at all, the one and only, Google Translate

Though Google Translate was often used by those participants, some of them still used printed dictionaries. Since the students dealt with specific English terms according to their academic field, they found many unfamiliar words in sentence that Google Translate failed to translate. Therefore, guessing strategy was preferred to implement. Most of the time, the participants tried to read the whole sentence first. They later got the clue from some keywords meaning that they were familiar with, then did the whole context guessing. Most participants with higher vocabulary sizes used this guessing strategy. In this case, validity from sources is considered more substantial compared to prediction from context.

The dictionary strategy is usually combined with other strategies. Previously, it was mentioned that students use translation tools then guessing strategy. In another case, it could be guessing the context first, then confirming the meaning using translation tools. It could be implied from the following interview.

Researcher: If you find a new word, do you directly use translation tools or use other strategies?

KER: Maybe, I'll read the context first, ma'am. What does the sentence mean? What does the paragraph mean? If I get the idea of the meaning, I'll use it. If I don't get the meaning because of one vocabulary, I'll translate it. Oo, this is the meaning. By understanding the meaning of the vocabulary, I'll get the sense of the paragraph I read.

Nevertheless, dictionary use is also limited. Although online dictionary like Google Translate offers practicality in finding the meaning of words, the tool cannot always provide the meaning of registers or specific vocabularies of a particular field. The low-frequency word often occurs in university-level learning since the discussion is specific to a particular field such as business and engineering. Online dictionary sometimes fails to give appropriate meaning to the vocabulary. The case can be observed from the excerpt below.

Researcher: Was your problem solved when you used Google Translate?

IET: Google Translate translated things literally. Sometimes I translated word by word. Then, I check and confirm again the meaning of the words and the meaning of the sentences by the context.

The other strategy mostly preferred by the participants was activation strategy. The strategy was done mostly by putting the words into practice. One participant was found actively create her social media post such as Instagram feed and story using any English vocabulary she learnt. Two other students preferred to involve themselves in a conversation with foreigners through online chat and international events. It indicated that activation strategy was done through using vocabularies both in oral and written form. The strategy enabled learners to memorize the words better. They believed that the habit of employing the words assisted them in memorizing the words since most of them did not like taking notes. When they used the words in their writing assignment, they would ensure that the meaning was appropriate. Other than writing, activating the vocabulary learned was done in speaking. One interviewee found an effective practice by joining an international event where he could speak English with foreigners. Through the process, he was encouraged to find and use more words to enable him to have and sustain the English conversation.

Researcher: What is the most effective strategy for you?

IET: For me, the most effective one, it might be a bit different, yet I think, when we try to speak or talk in English, we automatically get more words. When we try to speak more, we automatically use more vocab as the topics to say.

Posting an Instagram story and feed in English was another example of an activation done by another interviewee. She created the story in her social media in English as regularly as possible to help her memorize the words.

Researcher: Besides reading, how often you did you use and learn English?

KKE: As previously, like conversations with roommates, I will always use English to understand each other...and then I also like to create a lot of Instagram stories and posts in English, and maybe like create videos Instagram story so I will also speak English....

Meanwhile, the least used strategies were note-taking, rehearsal, and metacognitive strategies. Among the three, only one strategy was mentioned mostly by the participants which was note-taking strategy. Two of the interviewees found that note-taking helped them improve their vocabulary. One of the students had been regularly listed the words she had just acquired in her

journal. Learning its effectiveness in memorizing more words, she implemented this strategy to study other languages such as Spanish and Mandarin. From the interview, the student confirmed the case.

Researcher: How note-taking strategy is the strategy effective for you?

KKE: So, effective repetition is repetition with the note. Then checking again and reconfirming. So, probably the most ineffective is going to be only repetition without taking notes, rechecking, and reconfirmation.

Two participants were found still created word banks showing that they applied note-taking strategy. One of them started to use this strategy since he was in senior high school by listing the words and its Indonesian translation. Another participant even put the variation Indonesian translation of each English words. For example, she put some words such as *kasar*, *keras*, *muram*, and *suram* to define the Indonesian meaning of the word "gruff" in her note. In fact, one of the interviewees thought that note-taking strategy did not work for him. He had ever experienced employing the note-taking strategy, yet it did not help him to perform better. The excerpt below elaborates the finding.

Researcher: Why did you not use a note-taking strategy?

IET: I am not that kind of person, but I know some people would do that....I tried to use a note-taking strategy, making that effort, that I have to learn ten vocabularies every day. Practically, it didn't work for me. My private teacher asked me to do so, listing ten words each day, yet at the end, still it didn't work because I didn't use the words, so I didn't remember. However, if I really use the words in practice, I remember them better.

Besides those strategies mentioned above, there was one strategy that did not belong to Gu's (2018) category mentioned by three participants. When those students lost to acquire the English vocabulary, they chose to ask their teachers, friends, and parents. As mentioned in the interview below, the student would prefer to use this strategy after using other strategies like the dictionary strategy with Google Translate.

Researcher: What would you do when you hear unfamiliar words?

JU: Perhaps, if it was in spoken context, mam, in a face-to-face context, impossible for me to find the words directly, then I would memorize the words. If it was not possible to ask the word's meaning directly, I would try to remember the words and then use Google Translate again. However, in the other situation, I would directly ask the lecturer, like "wait a minute, what does the word mean?".

A similar strategy was also applied by the other students who experienced difficulties finding the meaning of specific terms in English. Even more, he used this strategy before the others, as stated below.

Researcher: When you were reading, then you did not know the words. What would you do?

ACP: All right, Engineering English is different from General English. So, I sometimes asked my friends or asked directly to my lecturer.

Discussion

This section aims to present the discussion on the research finding. The objectives of the study were to describe and analyze the vocabulary learning strategy used by low-frequency word-level students. According to the result of VS test conducted, the interviewees were all in the low-frequency word level. They understood and communicated the English vocabulary that was primarily used for specific purposes. The finding showed that the most dominant strategies applied by students are dictionary strategy, guessing strategy, and activation strategy. That approves what scholars (Ghalebi et al., 2020) found that undergraduate students prefer determination strategies, affective strategies, and memory strategies. Dictionary strategy belongs to determination strategies, while guessing strategy and activation strategy refer to memory strategies. Meanwhile, the least used strategies were note-taking, rehearsal, and metacognitive strategies.

Regarding the number of strategies employed, the finding showed that the students used different numbers of strategies. The data showed that the student with the highest vocabulary size employed the least strategy. In this case, only two were used: dictionary strategy and activation strategy. It has confirmed Yaacob et al. (2019) findings of students with high proficiency who usually tend to implement dictionary use and discovery. The dictionary use and activation strategies are closely related since both implement the vocabulary in writing and speech. Besides, the vocabulary found in the dictionary as input can then be processed in different contexts, so the students understand more about its use. Here the word activation occurs.

Dictionary strategy

The first frequent strategy revealed in this study is the dictionary strategy. The result aligns with the study conducted on Thai students of Technical English

(Boonnoon, 2019) as well as the undergraduate students of the English department (Ghalebi et al., 2020). However, in the latter, dictionary strategy was counted as determination strategy that the learners try to understand the words meaning without any help from others (Alqarni, 2018). This study also confirmed the same reasoning that online dictionary become an option since it can be accessed anywhere and anytime as an independent tool for learning vocabulary. This goes accordingly with another research finding that the online tool has become handy for quick meaning and translation with less interruption (Bytheway, 2015). It validated why online dictionary became the only solution for some participants of the research due to its practicality and efficiency.

The other impact of using the strategy was that the students would also be more independent in their learning process by minimizing requesting help from teachers or peers. This online tool also provides a bilingual translation that enables them to switch the translation. For instance, when learners need the English vocabulary, they could set the tool to translate Indonesian words to English and vice versa. Practicality was mentioned as the most appealing aspect to them that it could save more time to study. Besides that, the students preferred a feature such as translation suggestion to provide them options to decide the most suitable translation. However, Google Translate might lead to errors that sometimes suggest ungrammatical sentences, primarily when dealing with longer sentences. Karjo and Metta (2019) found that errors in translating are made mainly by Google Translate. Students are still choosing Google to translate because they have the background knowledge to decide on a suitable translation despite that situation. In addition, they do not use Google Translate for its answer validity. It may happen as low word frequency level students can notice the most suitable words for them. Considering the practicality and variety of Google Translate words, this strategy belongs to the most apparent method. It is uncomplicated and reachable for them.

Guessing strategy

The following favored strategy is guessing meaning and learning words through use. The students applied this strategy when dealing with the vocabulary of specific fields such as technical terms in economics and engineering that were primarily found in articles, books, or other academic sources. The apt translations of vocabularies were hardly found on the online dictionaries. By reading the sources, they would retrieve the meaning of the words from the contexts. This research discovered that the guessing strategy was the second dominant strategy applied by the participants. It does not align with the study conducted by

Alahmadi et al. (2018), which found that students with larger vocabulary sizes tend to apply the guessing strategy due to their familiarity.

Therefore, the learners tried to find the meaning from other sources and then conclude based on their reading. This strategy is also widely used, especially for university students who encounter this situation (Ghalebi et al., 2020; Tilfarlioglu & Sherwani, 2018). A study conducted by Yaacob et al. (2019) showed that the guessing strategy was mainly used before the dictionary strategy (Ghalebi et al., 2020; Tilfarlioglu & Sherwani, 2018).

Activation strategy

Using the vocabulary learnt into practice either in spoken or written form had been the VLS used by the low- frequency word level students called activation strategy. This learning vocabulary process at learners' convenience and making it into a habit has worked for some people. In this process, they unconsciously tried to memorize the words. Later, when they needed to re-use the words, they could immediately retrieve them from memory. Scholars have shown that this strategy was widely used in various EFL contexts (Amirian & Heshmatifar, 2013; Ghalebi et al., 2020).

Albeit the students were not at their convenience, they could still learn and acquire new vocabulary. The participants in this study had ample chance to sort vocabularies that they acquired both from the classroom activities done in international class and outside the class, such as when they used the literature to do homework. This activation occurred when they got input for technical terms in their field and processed them into output. Encountering new terms was not a comfortable learning situation, mainly when the context was unclear. Furthermore, those terms were essential to accomplish their academic tasks. The more they were willing to practice using those words, the more they learned the vocabulary. It is in line with Tanaka (2017), who found that students learning vocabulary in a demotivating situation may still succeed since they have background knowledge as their perceived competence in learning and perceived autonomy to value learning to support their academic performance. Therefore, their willingness to use the technical terms for boosting their academic performance matters.

Activation strategy has been the implementation of four strands of Nation. According to Nation and Yamamoto (2012), the input should balance with the other three strands: meaning-focused input, language-focused learning, and fluency development. The new vocabulary from a dictionary and other media has been input for the learners' vocabulary development. This input is learned repetitively and becomes a habit that fluency occurs. The vocabulary learned

then is being produced as the output. The correct use in output has made the learners confident to use the word. It makes them acquire new vocabulary firmly.

Social strategy

Based on the interview result, it turned out that the learners also employed other strategies apart from Gu's (2018) vocabulary learning strategies. They used social strategy (Schmitt, 2000) to ask teachers, parents, or peers during the learning process. Instead of using dictionaries, students would rely on their lecturers who had sufficient knowledge about the context and the vocabularies used. This finding aligns with some research saying that this strategy is favored to be implemented by freshmen students (Alqarni, 2018). Other studies also show that this strategy is preferable to use, although it is not the most frequently implemented (Bytheway, 2015; Ghalebi et al., 2020; Tilfarlioglu & Sherwani, 2018). This strategy builds more robust engagement among learners and teachers through interaction. For slow learners, it can reduce anxiety by sharing the difficulties they have in the class. It will be easier for the lecturers to notice the students' difficulties and build strategies to facilitate better learning. This strategy may be only used when the students have a good relationship with their surroundings. Communication will not exist when both parties are not feeling comfortable sharing ideas.

The least favored strategies

Note-taking becomes the least dominant VLS used by the low- frequency word level students. Some students found it effective for improving their vocabulary as it has become their learning style. This experience validates the recommendation of Yamada (2018) in his research that language learners should create vocabulary notebooks to record the vocabularies that they find so learning will take place. The effectiveness of this activity is higher once the learners do note-taking by listing words and their translation, and mapping note-taking development (Siegel, 2021). By working independently on familiarizing word structure, identifying words development, and varying the related vocabularies, learners can enlarge their vocabularies enormously. In fact, it requires time and effort compared to only listing words with their translation. Therefore, note-taking only works for learners who are willing to spend time for independent vocabulary learning with a long-term goal that is not only for solving word unfamiliarity or helping to memorize words learned. Considering that the international students dominantly find new or challenging words during the academic class, it is reasonable if VLS with a long process is not preferred.

Another least used-VLS is the rehearsal strategy. According to Gu (2018), rehearsal strategy consists of reviewing word lists, repeating the words orally for their pronunciation, and writing the word, often aiming at memorizing the words. It can be perceived that the use of note-taking strategy was in line with the rehearsal strategy as the rehearsal strategy depended on the output of note-taking. However, the strategy was considered the least preferred since students rarely intentionally spent their time learning vocabulary. Even though rehearsal strategy could significantly improve vocabulary retention (Santacruz & Ortega, 2018), most participants preferred applying the other strategies.

The metacognitive strategy also belonged to the least used strategy to learn vocabulary. Based on Gu's (2018) perspective, metacognitive strategy refers to applying selective attention and self-initiation. Referring to their learning profile, most international students learned English since elementary school; even some started learning the language in childhood. Besides being exposed to English in the academic context, they were exposed to many English inputs such as books, articles, music, movies, YouTube videos, and games. All interviewees were aware that those English exposures were essential to support them in surviving their academic life. In other words, international students had already applied the strategy of selective attention. They had themselves equipped with various sources for vocabulary development belonging to a VLS called input seeking as part of metacognitive strategies. In the perspective of Yamada (2018), input seeking was a positive predictor of test scores at any frequency level. The positive impact of input seeking in affecting VS is also proven by Yaacob (2019). In other words, input seeking is applicable for improving VS of any learners with different VS.

Conclusion

The study revealed the description and analysis of students' vocabulary learning strategies at the low-frequency word level. The three most popular strategies were dictionary strategies, guessing strategies, activation, and social strategy. Google Translate was used chiefly to find the meaning and translation of the words due to its practicality, and it had become the first help to learn the words. However, the online translation tool would not be helpful when the students were dealing with specific vocabulary according to their study fields. Therefore, they then implemented the following strategy, which is guessing meaning from the context. The finding also showed that some participants implemented social strategies. Instead of applying a guessing strategy, students preferred to ask their

peers or teachers. Activation strategy was another strategy used by students. Students used the words they acquired in both spoken and written text. Social media such as Instagram and chatting platforms became the media to put what they learned to use. They also applied the words they learned from the academic activities, such as their academic textbooks.

Meanwhile, the least VLS used by the international students were note-taking, rehearsal, and metacognitive strategies. These three strategies were least preferred for their impracticality since they required more time and effort. International students tended to learn from what they accessed. They rarely learned vocabulary intentionally as they only used input from their academic sources in international class.

Further research in a more significant number of participants and different contexts of learners such as regular programs is recommended to be done. Besides, the study will significantly promote effective strategies to learn English vocabulary for students.

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