

An Investigation of Vocabulary Learning Strategies of ESP Students

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ABSTRACT

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English is an indispensable language, especially in the digital age. For students who are not specialized in English vocabulary, understanding effective vocabulary learning strategies becomes crucial, helps increase their chances of being hired, and improves coherence in written and spoken communication. This study investigates the vocabulary learning strategies most and least commonly employed by ESP students. The research involved 59 participants from three majors: business administration, accounting, and tourism. Data collection was carried out through questionnaires and interviews. The findings highlight students' preference for metacognitive strategies and their positive attitude toward technology as a supportive tool for vocabulary acquisition. Additionally, cognitive and memory strategies linked to learned vocabulary were occasionally utilized. The implications of this research extend to teachers, students, and curriculum designers, providing insights for developing appropriate methods to enhance ESP vocabulary learning.

Introduction

Specialized English courses are included in the curricula at colleges to meet the increasing demand for English language use in many fields (Dudley-Evans & St-John, 1998; Hutchinson & Waters, 1987). In Vietnam, the government emphasizes the goal of college and university education in assisting students in gaining profound knowledge and practical skills in their jobs with the capacity to work independently and solve problems ingeniously (National Assembly of Vietnam, 2005). Vocabulary plays a crucial role in the learning and teaching of foreign languages, as an ample vocabulary enables students to express their ideas in communication effectively. Insufficient vocabulary causes numerous challenges in acquiring and using language effectively (Nation, 2001). Emphasizing the significance of vocabulary acquisition, Schmitt (2000) asserts that “lexical knowledge is central to communicative competence and to the acquisition of a second language” (p. 55). In addition, Nation (2001) depicts the relationship

between vocabulary knowledge and language use as complementary: vocabulary knowledge enables language use while language use improves vocabulary knowledge. Vocabulary acquisition is fundamental to successful foreign language use and plays a significant role in the formation of thorough spoken and written texts (Gu, 2003; Mart, 2012; Nation, 2011; Yang and Dai, 2011). The significance of vocabulary methods for non-English majors has been extensively examined. Vocabulary acquisition is a vital component of language learning, and it is especially difficult for non-English majors. Using research-based vocabulary methods can assist students in overcoming the challenges they have while learning new words and phrases. Vocabulary learning strategies (VLSs) are crucial in facilitating learners' vocabulary acquisition (Akbari, 2015; Al-Khresheh and Al-Ruwaili, 2020; Asgari and Mustapha, 2011; Goundar, 2019). Nation (2001) suggests that learners have different skills and strategies for accessing vocabulary. In other words, vocabulary learning strategies (VLSs) can help learners expand their vocabulary. The study can contribute to improving teaching methods and materials for ESP instructors, allowing them to better support their students in acquiring the vocabulary necessary for their specialized fields. By understanding ESP students' strategies to learn vocabulary, the study aims to identify which strategies are most effective in their specific context, leading to more targeted and successful language instruction. This research sought the answer to the following question:

What are ESP students' two most and least used learning vocabulary strategies?

Literature Review

Definitions of ESP

English for Specific Purposes (ESP) seeks to assist learners in developing the language skills and methods required to communicate effectively in their chosen fields of study or work. There are numerous definitions of ESP in several studies over several years. Hutchinson & Waters (1987) refer to ESP as a language teaching approach in which all content and method decisions are based on the learner's learning motivation. Robinson (1991) considers ESP to be English courses that are often end-directed and based on surveys and needs analysis to determine specifically what students need and can do through English. Some authors defined ESP as teaching English for academic, professional, or vocational purposes (Brunton, 2009; Carver, 1983; Hyland, 2006). According to Basturkmen (2010), ESP focuses on when, where, and why learners need the language, whether in school or at work. Determination about what and how to teach content will be based on the description of learners' specific circumstances in work and study. Students study ESP to gain academic achievement and satisfy their future careers (Belcher, 2004). In general, ESP denotes the promise of more effective and useful English language instruction (Akbari, 2011; Yogman & Kaylani, 1996).

English for Specific Purposes (ESP) addresses learners' instructional demands by adapting language training to their specific purposes in both academic and occupational contexts. Scholars highlight the growing necessity for ESP in effective English communication, recognizing the language's importance as a lingua franca.

Importance of vocabulary in language acquisition

Vocabulary plays a vital role in acquiring language. Learners cannot communicate in the target language without vocabulary. According to Wilkins (1972), he asserts "Without vocabulary, nothing can be conveyed." Vocabulary is an essential factor in allowing for efficient communication. Understanding and employing a diverse vocabulary enables students to convey their intents and thoughts accurately and flexibly (Schmitt, 1997). Many factors, including learning techniques, group and individual activities, and vocabulary learning strategies, determine vocabulary acquisition. Vocabulary learning strategies are one of the language learning strategies in pedagogy (Afzal, 2019; Gu, 2003; Nation, 2001). The importance of vocabulary in meeting educational and professional needs. Learners need to possess specialized vocabulary to be able to understand and participate actively in their academic and professional environments.

Classification of vocabulary learning strategies (VLSs)

Language learning strategies inspire learners to take responsibility for their learning and guide their minds to become independent, positive, and masterful in language learning. Vocabulary learning strategies are a subcategory of language techniques and include information about what students do to discover the importance of new words, maintain them in long-term memory, and remind them when necessary. Different scholars have classified vocabulary learning strategies in numerous ways.

Rebecca Oxford introduced Oxford's Taxonomy of Language Learning Strategies in 1990, a system that classifies language learning strategies into three primary categories. These categories encompass cognitive strategies, which include methods like memory techniques; metacognitive strategies, which involve planning and self-assessment; and social/affective strategies, encompassing activities such as seeking assistance and coping with emotional elements like anxiety during the learning process.

Paul Nation and Norbert Schmitt's proposal of Schmitt's Vocabulary Learning Strategies in 1997 introduces a taxonomy specifically designed to address the complexities of vocabulary acquisition. This taxonomy delves into a range of strategies that are crucial for learners aiming to build a strong vocabulary foundation. It includes strategies related to discovering meaning, consolidating form and meaning, and using words in context. This taxonomy focuses explicitly on vocabulary acquisition.

According to Gu and Johnson (1996), vocabulary learning strategies are divided into 4 groups: metacognitive, cognitive, memory, and activation. Metacognitive strategies consist of recognizing fundamental words for comprehension, and the learners find their own strategies, methods, and techniques to learn these words appropriately. On the other hand, learners adopt a number of strategies to clarify the meaning of vocabulary. Cognitive strategies are related to guessing, using a dictionary, and note-taking. Memory strategies intend to transfer a newly learned word from short to long-term memory, taking into account both pronunciation and meaning. It is required to make word lists, pay attention to pronunciation, code using visual and verbal clues, and revise. Activation strategies are ones that allow learners to employ new words in a variety of situations.

Smith (1997) divided vocabulary learning strategies into two types: discovery and consolidation strategies. He designated vocabulary learning strategies into five groups: determination, social, memory, cognitive, and metacognitive strategies. Determination strategies refer to strategies that learners use without the help of others to figure out the meaning of a word by using word class strategies, analyzing word components, guessing words in context, and using the dictionary. Learners can learn new vocabulary through interaction with others with social strategies. Memory strategies include imaginary, group words, and collocation. Metacognitive strategies describe how learners monitor, make decisions, and self-assess their learning progress.

Fan (2003) revised Gu's (2003) classification, which is divided into nine vocabulary learning strategies categories. It includes management, sources, guessing, dictionary, repetition, association grouping, analysis, and known word strategies. Using the dictionary and guessing strategies are frequently used and seem beneficial to the most proficient students (Fan, 2003).

Learners can generate, handle, choose, and use vocabulary learning strategies that allow explicit and implicit learning. Explicit learning refers to people who are conscious of their learning and attempt to gain language skills. Conversely, implicit learning defines a learner's gaining language skills and knowledge unconsciously. Vocabulary learning strategies are a priority over all other strategies. To gain higher achievement, successful learners employ adaptable and flexible tactics (Schmitt, 1997; Gu, 2012; Farjami & Aidinlou, 2013).

Vocabulary learning strategies are divided into two main groups: comprehension strategies and acquisition strategies (Akbari and Tahiririan, 2009). Comprehension strategies refer to finding out the meaning of words, while acquisition strategies describe strategies to reinforce learned vocabulary. Determination strategies and transactional strategies are included in comprehension strategies. Determination strategies relate to guessing from the context, analyzing words, and looking up those words from the dictionary. And asking for meaning from teachers and friends is not a social strategy. It is considered a transactional strategy. Acquisition strategies or learning strategies include knowledge and skill strategies. Learning the new words combines linguistic features (pronunciation, part of speech, spelling, and collocation), then the frequent exposure of the word and its use in different contexts.

Vocabulary learning strategies can be highlighted according to different categorizations and perspectives. Gu and Johnson (1996) propose four main groups of strategies: metacognitive, cognitive, memory, and activation. Smith (1997) categorizes strategies into discovery and consolidation types: determination, social, memory, cognitive, and metacognitive. Vocabulary learning strategies are divided into comprehension and acquisition strategies, detailing determination and transactional strategies for comprehension and knowledge and skill strategies for acquisition (Akbari and Tahiririan, 2009). Based on the vocabulary learning strategies mentioned above, the current study will focus on determination, social, memory, cognitive, and metacognitive strategies, comprehension, and acquisition strategies.

Related studies

Asgari and Mustapha (2011) carried out a survey to investigate vocabulary learning strategies of EFL students in Malaysia. Data for this study were derived from an open-ended interview

with the participation of ten EFL students. The results showed that some strategies for learning the meaning of the words through reading and monolingual dictionaries, using multimedia to learn English, and trying to use new words in everyday conversation were implemented by participants. In other words, memory, determination, and metacognitive strategies are common strategies, and learners are interested in using them.

Al-Khasawneh (2012) conducted a study to find out the most vocabulary learning strategies and the most vocabulary learning strategies of thirty students in a university in Jordan. The results indicated that determination strategies were the most frequently used, while metacognitive strategies were the least frequently used vocabulary learning strategies among the students.

Rachmawati (2018) examined vocabulary learning strategies utilized by 140 students at Indonesia's Merdeka University. For this study, questionnaires and semi-structured interviews were used to collect data. According to the results, students prefer utilizing dictionaries, deducing meaning from context, and analyzing images or gestures. Studying and practicing meaning in a group, visualizing word form, and imagining a word's meaning were recommended strategies for consolidating meaning. Less-utilized strategies for knowledge retention included testing oneself with words, ignoring or passing over new words, and continuing to study a word over time.

To investigate students' strategies for learning academic English words, Huong (2018) conducted a study with the participants of 132 students who are majoring in English interpretation and pedagogy in Vietnam. The finding revealed that the participants tend to use assisting devices like online dictionaries and various applications rather than cognitive strategies in learning academic words.

Goundar (2019) conducted a thorough study with 53 students in Fiji to explore vocabulary learning strategies and seek the advantages and disadvantages of each strategy. The result revealed that EFL students' most frequently used strategies to enlarge their vocabulary were repetition, reading, guessing through their experience, memorization, and dictionary strategies.

Al-Khresheh and Al-Ruwaili (2020) conducted a study to investigate the vocabulary learning strategies used by Saudi students. The results of the studies indicated that the subject of the study preferred using a memory strategy. In addition, the study's results also identified determined social and metacognitive strategies that are, respectively, the strategies used by students in learning foreign language vocabulary. Cognitive strategy is the least preferred strategy in the results of this study.

A study was conducted by Nguyen (2021); based on the findings of twenty studies, it is obvious that social media is one of the most effective ways to enhance vocabulary learning among EFL and ESL learners because it provides various benefits. According to Dinh (2022), in order to help students enhance vocabulary retention, 120 participants were invited into the study. The finding indicated that the TBLT and vocabulary retention are directly connected. The studies show a common emphasis on memory, determination, and metacognitive methods in vocabulary learning. The use of dictionaries and a desire for practical application of vocabulary are prevalent themes. However, there are differences in the frequency of cognitive techniques

and the specific tools that learners prefer across cultural and educational situations. In this current study, questionnaires and semi-structured interviews were used and conducted to obtain more information about the beliefs and attitudes dealing with vocabulary learning strategies that learners use in English for Specific Purposes classes.

Methods

Research Design

With the aim to investigate vocabulary learning strategies commonly used by ESP students, questionnaires and semi-structured interviews were employed in the current study. In order to address the two questions, this study used mixed methods research, which combines quantitative and qualitative approaches. The quantitative method helps analyze problems through numerical data; it is considered more realistic and objective. Furthermore, the qualitative method allows researchers to collect in-depth information that is more authentic and gain a full understanding of the phenomenon (Gay et al., 2012).

The questionnaire used in this study was adapted from the research conducted by Kocaman and Cumaoglu (2014). The questionnaire was translated into Vietnamese to ensure understanding and prevent misunderstandings among the participants. Subsequently, a pilot test was conducted with 14 ESP students who shared similar backgrounds with the current study's participants to identify and correct any potential ambiguities. Based on the results of the piloted questionnaire, the reliability index is greater than 0.7 ($\alpha = .814$), which is high enough to conduct officially. Questionnaires were distributed to 59 students studying ESP modules. The questionnaire consisted of two parts: personal information and vocabulary learning strategies. The former would find out students' background information, including gender, major, and age. The latter involves six subcategories: Memory strategies (1-6), cognitive strategies (7-11), compensation strategies (12-15), metacognitive strategies (16-19), affective strategies (20-25), and social strategies (26-31).

Participants

59 students studying business administration, accounting, and tourism at a university in the Mekong Delta were invited to participate in the basics of convenient sampling

technique. They are sophomores and are studying English for specific modules as a part of their program. All study participants completed the Basic English courses before taking the ESP module.

Findings

59 participants completed the 31-item questionnaire in order to assess the extent to which ESP students use vocabulary learning strategies. Each of the six categories of vocabulary learning strategies (Memory, Cognitive, Compensation, Metacognitive, Affective, and Social) received a descriptive statistic, as well as the aggregate mean score for each of the six categories.

Table 1

Vocabulary Learning Strategies with Mean Score

	N	Minimum	Maximum	Mean	S.D	N
Overall	59	1.80	5.00	3.60	.49	59
Memory	59	2.00	5.00	3.69	.67	59
Cognitive	59	1.80	5.00	3.41	.71	59
Compensation	59	2.25	5.00	3.77	.65	59
Metacognitive	59	2.50	5.00	3.98	.61	59
Affective	59	2.17	5.00	3.74	.73	59
Social	59	2.00	5.00	3.74	.72	59

Table 1 shows the mean and standard deviations for the overall as well as for each category. The results revealed that participants' frequency of using vocabulary learning strategies was high ($M= 3.60$, $SD= .49$). As far as the six categories of strategies are concerned, the results showed from moderate to high usage, with metacognitive strategies ($MMeta= 3.98$, $SD= .61$) as the main strategy chosen by the participants, followed by compensation strategies ($MCom=3.77$, $SD=.65$), affective strategies ($MAff=3.74$, $SD=.73$), social strategies ($MSoc=3.74$, $SD=.72$), memory strategies ($MMem=3.69$, $SD=.67$), and cognitive strategies ($MCog=3.42$, $SD=.71$).

Table 2

Memory strategies students used to learn vocabulary in ESP class

No.	Item	Mean	Never and Occasionally %	Sometimes %	Often and Always %
1	When I don't remember a word in English, I try to use another word which has the same meaning.	3.34	22.0	30.5	47.5
2	I often find connections between new words and familiar words that I have learned before.	3.36	45.8	30.5	23.7
3	I pronounce new words loudly.	3.66	11.9	27.1	61.0
4	I try to learn English words with their part of speech (noun, adjective, adverb)	3.37	23.7	28.8	47.5
5	I write down the meaning of the words I look up in my native language and in English	4.08	6.8	13.6	79.6
6	To learn new words, I write them many times in my notebook.	3.05	28.8	30.5	40.7

From Table 2, regarding memory strategies, the way to write new words many times in the notebook gets the lowest mean score ($M= 3.05$) and the lowest frequency of the strategies "I

often find connections between new words and familiar words that I have learned before". Two of the total six strategies were reported to be highly frequent usage. Strategies to write the meaning of the word in English and the native language of the participants received the highest mean score (M=4.08) with the agreement of 79.6 percent of the respondents. The repetition strategy is the most commonly used follow-up strategy by the respondents, with an agreement of 61 percent (M=3.66).

Cognitive strategies

Table 3

Cognitive strategies students used to learn vocabulary in ESP class

No.	Item	Mean	Never and Occasionally %	Sometimes %	Often and Always %
7	I try to learn English words by writing them on my cards and carry these cards with me at all times.	2.86	32.2	44.1	23.7
8	I often stick to words where I can see them easily.	2.97	39	22	39
9	I learn how to pronounce English words by listening to e-dictionaries.	4.24	0	10.2	89.8
10	I have a vocabulary notebook while learning English words.	3.34	18.7	33.9	47.4
11	I often take note of the English words I want to learn.	3.68	13.6	23.7	62.7

Two of the five cognitive strategies listed in Table 3, as the most frequently used by the participants, were most frequently employed by the participants. Interestingly, the majority of respondents would use e-dictionaries to learn how to pronounce English words. There are 89.8 percent of participants who prefer to rehearse their pronunciation using technology (M= 4.24). Strategy 11, taking note of the English words students wish to learn, was employed frequently (M = 3.68), with the agreement of 62.7% of the participants.

Compensation strategies

As can be seen from Table 4, dealing with compensation strategies, 91.5 percent learned English words with the support of technology software carried by participants (M=4.41). The result also revealed that students love learning English words with visual media like videos with the agreement of 77.9 percent of the respondents (M=3.93). Doing different English vocabulary tests and learning synonyms and antonyms of target language are indicated at the medium level (M=3.49; M=3.25).

Table 4

Compensation strategies students used to learn vocabulary in ESP class

No.	Item	Mean	Never and Occasionally %	Sometimes %	Often and Always %
12	12. I learn the synonyms and antonyms of the English words that I am learning.	3.25	27.1	25.4	47.5
13	13. I do different English vocabulary tests while learning English.	3.49	20.4	22	57.6
14	14. I love learning English words with the support of technology software.	4.41	0	8.5	91.5
15	15. I love learning English words with videos.	3.93	10.2	11.9	77.9

Metacognitive strategies

Table 5 depicts that the mean scores of all the items were at a high level. The mean score of participants toward trying to find the most suitable method while learning English words is at the highest level (M=4.22), with 91.5 percent of participants agreeing. The mean score about trying to learn pronunciation and the meaning of new words ranked second (M = 4.15), which was used regularly by 81.4% of the participants. Learning English with the support of technology games and studying English words in a planned way was reported to be of highly frequent use (M=3.92; M=3.66).

Table 5

Metacognitive strategies students used to learn vocabulary in ESP class

No.	Item	Mean	Never and Occasionally %	Sometimes %	Often and Always %
16	I learn English with the support of technology games.	3.92	15.3	10.2	74.5
17	With new words, I try to learn pronunciation and their meanings.	4.15	3.4	15.3	81.4
18	I try to find the most suitable method while learning English words.	4.22	6.8	84.7	91.5
19	I study English words in a planned way.	3.66	6.8	40.7	52.5

*Affective strategies***Table 6**

Metacognitive strategies students used to learn vocabulary in ESP class

No.	Item	Mean	Never and Occasionally %	Sometimes %	Often and Always %
20	I study English vocabulary while listening to background music to relax.	4.00	6.8	20.3	72.9
21	I reward myself when I learn English words.	3.28	27.1	23.7	50.8
22	I feel pleasant when I learn English words.	3.64	11.9	30.5	57.6
23	When I develop my English vocabulary, I feel more enjoyable in class.	3.98	6.8	16.9	76.3
24	Teacher encourages us to learn English words outside of the classroom.	4.25	1.7	10.6	87.7
25	I consider the use of English words that I know while watching English videos or movies.	3.05	30.6	15.3	54.1

As can be seen in Table 6, the mean score of participants' affective strategies is from medium to high level. 87.7% percent of the participants agreed that teachers encourage them to learn English whether inside or outside the classroom (M= 4.25). It means that their feeling is more enjoyable and more eager when increasing their English vocabulary (M= 3.98). 72.9% percent supported the view that learning vocabulary while listening to music is an effective strategy (M=4.00).

*Social strategies***Table 7**

Social strategies students used to learn vocabulary in ESP class

No.	Item	Mean	Never and Occasionally %	Sometimes %	Often and Always %
26	I check with my friends to see if I pronounce the English words correctly.	3.61	13.3	30.5	56.2
27	I ask my friends to correct me when I mispronounce a word.	3.83	10.2	27.1	62.7
28	When learning English words, I like to work in groups	3.78	10.2	22.0	67.8
29	When learning vocabulary, I need support from my teacher.	3.90	11.9	22.0	66.1
30	I love working with classmates rather than working individually.	4.00	8.5	15.3	76.2
31	Through competition with friends, I can learn English words better.	3.39	23.8	25.4	50.8

From Table 7, the most frequently used social strategy by the participants is working in groups, with the agreement of 76.2 percent of the participants (M= 4.0). Support from the teaching is one of the frequently used social strategies (M= 3.9) following the strategy of preferring group work to individuals. Descriptive statistics were performed on each strategy from the quantitative data of the participants. The findings were arranged by two most used and two least used strategies by the participants. Purposefully, to support the quantitative data, semi-structured interviews were used to find out the reason why the participants considered using vocabulary learning strategies.

Insight into student's vocabulary learning strategies in ESP class

Interview data were collected to collect the reasons behind the strategies participants used frequently when learning vocabulary in ESP classes. Five students were randomly selected to answer the interview questions. Table 8 shows the two most used vocabulary learning strategies.

Table 8

Two most used learning vocabulary learning strategies

Item	Mean
COMP14. Learning English words with the support of technology software.	
META18. Trying to find the most suitable method while learning English words.	

To examine the reason why these two strategies were used the most. Five students participated in a semi-structured interview, showing that using technology in learning English vocabulary is indispensable.

Student A said that

I'm afraid to be wrong when the teacher calls me. So when I have a new word, I often hear it in the phone's app dictionary. It makes me more confident, and I get better grades. (Student A, interview extract)

Sharing the same opinion, student B said that

Rarely do I encounter specialized vocabulary in my daily life, so I frequently consult the dictionary software on my computer. If not, I will not be able to comprehend the lesson. (Student B, interview extract)

Student E added that

I can practice many times with English learning software on the computer. I can practice pronunciation and reading skills with the words I am learning. (Student E, interview extract)

Table 9 below illustrates two least used vocabulary learning strategies.

Table 9

Two least used learning vocabulary learning strategies

Item	Mean
MEM2	Finding connections between new words and the words learned
COG7	Learning English words by writing them on my cards and carrying these cards at all times

Semi-interviews were conducted with five randomly selected participants to find out why these two strategies were the least used. The majority of the participants show that they cannot find the similarities between new words and previously learned words.

Student C stated that

Connecting new vocabulary with learned words is only for students who have a large vocabulary. I myself have a smaller vocabulary, and my memory is not very long, so I can't associate any learned words with new words. (Student C, interview extract)

Student D said that

Terminology vocabulary is not the same as communication vocabulary. I have not yet felt the similarity of these two types of vocabulary that I have learned. (Student D, interview extract)

Learning English words by writing them on flashcards is one of the least utilized strategies due to the fact that participants find it inappropriate, are fearful of ridicule from their peers, and are perceived as nerds by others.

Students A shared that

Write words on cards and take them, which don't look very good to me because they don't appeal to me. (Student A, interview extract)

Student C said that

I have a hard time concentrating on studying. I need to study with everyone in the same class. Studying alone like that makes me bored. (Student C, interview extract)

Student E stated that

My major has to be dynamic, and I feel like a nerd with my cards if I bring them everywhere. And everyone will see me as a bookworm. I love using apps instead. (Student E, interview extract)

Discussion and Conclusion

The findings of the study indicated that the participants utilized metacognitive strategies to a greater extent than other strategies. Students may prefer metacognitive strategies over other ways because they allow for a more in-depth understanding of their learning process. Self-awareness, contemplation, and the ability to regulate one's cognitive processes are all part of metacognitive methods. These strategies may help students improve their entire learning

experience by encouraging critical thinking, problem-solving, and a more aware approach to learning. Understanding how one learns can lead to better academic performance and a sense of empowerment in the learning process. The semi-structured interviews showed some valuable data about the participants' strategies. The two most commonly used vocabulary learning strategies were learning English words with the support of technology software and trying to find the most suitable method while learning English words. The participants pointed out that they can practice many times with English learning software on the computer, which helps them practice pronunciation and reading skills with the words they are learning. In addition, The two least used vocabulary learning strategies were finding connections between new words and the words learned and learning English words by writing them on cards and carrying these cards at all times. Most participants showed that they could not find the similarities between new and previously learned words.

The finding revealed the metacognitive strategies and the other strategies are utilized frequently. Al-Khresheh and Al-Ruwaili, 2020; Ghalebi and Bagheri, 2020; Vo and Duong, 2020; and Wanpen et al., 2013) have supported this finding. With metacognitive strategies, students are able to assess their learning progress, achieve success, and plan for their future education. Students are encouraged to become independent learners at universities. The results of this study indicate that the participants are active in their search for the optimal vocabulary learning method. The findings of this research contrast with those of Al-Khasawneh (2012). According to his findings, students employed metacognitive strategies for learning vocabulary the least frequently. This study revealed that students enjoy using technology to acquire their vocabulary, particularly specialized terms. This result is consistent with research by Chien (2015) and Phillips (2017). According to the current study, finding the connection between newly learned and previously learned words and learning words with flashcards and carrying them everywhere are the two least utilized strategies. It contradicts previous research on the efficacy of flashcards for vocabulary learning (Akin & Seferoglu, 2004; Erten & Tekin, 2008). It appears to align with the current learning trend. They favor using software, applications, or online websites to increase their knowledge, particularly vocabulary (Edge et al., 2012; Kose and Meda, 2018; Jafari and Chalak, 2016; Ma and Yokamlue, 2019; Trinh and Le, 2021). It aligns well with Al-Bidawi's (2018) research. He discovered that memory strategies are the least popular among the students who participated. It contradicts the findings of Goundar (2019). Participants enjoy using memorization techniques to increase their vocabulary.

Learning a foreign language is a process of practice and active acquisition. Based on the current study's findings, it can be concluded that EFL learners will succeed when they have the most appropriate strategies. The findings of this study hope to contribute useful information to teachers, students, and curriculum designers, especially for ESP courses. For further research, the experimental study can be conducted with lessons that exploit the metacognitive strategies for the learners in ESP courses in order to help the learners.

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