

An Analysis on Vocabulary Learning Strategies (VLS) Used by Junior High School Students

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ABSTRACT

This research identifies the vocabulary learning strategies used by junior high school students. The participants were 103 students from the ninth grade of SMP Negeri 2 Semparuk in the academic year 2020/2021. The data were derived from an open-ended questionnaire which consisted of 5 questions using qualitative analysis, and a close-ended questionnaire consisting of 20 items using descriptive statistics. There were four strategies covered in the questionnaire: metacognitive, cognitive, memory, and activation strategies. Based on the data collected, some students shared their experiences of learning vocabulary daily. They only focused on finding the strategies that will support their learning of English vocabulary by translating, memorizing, taking notes, and highlighting the words that they are going to learn for the next day. They also practiced making sentences using the words they have found. The result also showed that the most frequently used strategies by the ninth-grade students of SMP Negeri 2 Semparuk are activation strategies (M=2.52), then respectively followed by cognitive strategies (M=2.16), memory strategies (M=2.14), and metacognitive strategies (M=2.05).

Keywords: *Descriptive, Qualitative, Vocabulary Learning Strategies (VLS)*

INTRODUCTION

The main issue with junior high students is their limited achievement in English studies. One of the causes is that students in some schools, especially in public schools, still have a limited number of vocabularies. It will be their first year of having to learn English at school. As according Curriculum 2013, English has already been made a compulsory subject in secondary schools. Because of its significance, students are required to master English, which consists of four skills: reading, writing, speaking, and listening. However, in order to master those skills, students should first master vocabulary, which would be regarded as a critical factor in improving the English language.

Inadequate vocabulary achievement and the use of ineffective vocabulary learning strategies remain the most significant problems in English language learning. Furthermore,

students' limited vocabulary achievement can have an impact on their writing, listening, speaking, and reading abilities. "Without grammar, very little can be conveyed; without vocabulary, nothing can be conveyed," according to Wilkins (as cited in Schmitt 2010, p. 3). As a result, vocabulary learning strategies are an important part of learning English as a foreign language. It is regarded as a method for students to acquire vocabulary. As a result, it emphasizes the importance of having a sufficient vocabulary; however, learning can be very interesting.

However, according to Schmitt (2000), vocabulary learning strategies (VLS) are one approach for facilitating vocabulary learning that is gaining popularity. Vocabulary learning strategies (VLS) are a subcategory of language learning strategies used by students to acquire vocabulary in the target language. Language learning strategies (LLS) are any techniques that students use to develop their learning, particularly their second language (L2). Furthermore, strategies, according to Oxford (1990), are tools for active, self-directed participation in learning, which is required for the development of communicative competence.

Moreover, some authors and researchers (Nation, 2001; Gu and Johnson, 1996; Takac, 2008) have expressed vocabulary learning strategies in a variety of ways. First, Nation (2001) believes that vocabulary learning strategies are a component of language learning that must involve choice, be complex, i.e. requiring knowledge and benefit from training, and increase the efficiency of vocabulary learning and use. According to Gu and Johnson (1996), most research on vocabulary learning strategies has focused on different methods of vocabulary presentation and their effects on retention. According to Takac (2008), research on vocabulary learning strategies stems from two directions. The first is that many of the learning strategies employed by students are vocabulary-based. The other is concerned with investigating the efficacy of vocabulary learning strategies. As a result, it is possible to conclude that vocabulary learning strategies are regarded as a method of acquiring vocabulary in English language learning as a foreign language learning.

In addition, Furthermore, two previous studies on Vocabulary Learning Strategies have been conducted. Fan (2003) conducted a study with 1,067 ESL learners in Hong Kong to determine the frequency of use, perceived usefulness, and actual usefulness of second language vocabulary strategies. The findings revealed that learners frequently used strategies to guess the meaning of new words as well as to consolidate their knowledge of new words. Besides, the study found that Hong Kong learners did not use association strategies for imagery or grouping in L2 vocabulary acquisition. Further to that, Kulikova (2015) investigated vocabulary learning strategies and vocabulary learning beliefs for beginning university students of Russian in the United States. The findings revealed that, in addition to actively using a dictionary, guessing, and note-taking strategies, nearly all participants indicated frequent usage rehearsal strategies, particularly repetition. Then, at the end of the semester, participants agreed even more on the importance of repetition, practice, good memory, and cultural knowledge in vocabulary learning.

According to Nation (2001), the taxonomy is decided on the aspects of vocabulary knowledge, the sources of vocabulary knowledge, and the learning process. Furthermore,

Oxford (1990) distinguishes two types of learning strategies: direct and indirect strategies. Direct strategies for dealing with a new language are used, similar to how well the performer on stage works with the language itself in a variety of specific tasks and situations. Memory strategies for recalling and retrieving new information, cognitive strategies for understanding and interpreting the language, and compensation strategies for using the language despite knowledge gaps are all covered in this class. Furthermore, indirect strategies are used to manage learning in general. It could be compared to the play's director. This category includes metacognitive strategies for coordinating the learning process, effective emotional regulation strategies, and social strategies for having learned with others. Gu and Johnson (1996), on the other hand, classified vocabulary learning strategies as metacognitive, cognitive, memory, and activation strategies.

Metacognitive strategies are actions that extend beyond cognitive devices and help learners organize their learning process. According to O'Malley and Chamot (1990, p. 8), "metacognitive strategies include thinking about the learning process, planning for learning, monitoring comprehension or production while it is occurring, and self-evaluation after the learning activity has been completed." Furthermore, according to Oxford (1990), there are three metacognitive strategy sets: centering, arranging and planning, and evaluating your learning. It consists of selective attention and self-initiation strategies for improving access to input, deciding on efficient study/review methods, and testing oneself to measure improvement. Cognitive strategies are concerned with how language is processed in the mind through practice, receiving and sending messages, analyzing and reasoning, and creating the structure for input and output. Guessing strategies, skillful use of dictionaries, and note-taking strategies, such as word lists, flashcards, translation, and vocabulary notebooks, are also included.

Then, memory strategies reflect very basic principles, such as sorting things, making associations, and reviewing. Associating or elaborating in this context means relating new words to concepts already in memory or relating one piece of information to another. According to Oxford (1990), memory strategies are more effective when the learner employs both metacognitive strategies, such as paying attention, and effective strategies, such as deep breathing, to reduce anxiety. Finally, activation strategies are those that teach students how to use new words in different contexts. For example, students may create sentences using newly learned words (Ghazal, 2007). As a result, the researcher considered learning vocabulary strategies used by students at SMP Negeri 2 Semparuk.

METHOD

The descriptive qualitative research design was employed in this study. Its purpose was to comprehend the specific context of this research, which was to investigate students' vocabulary learning strategies when learning English. According to Leedy and Ormrod (2015), descriptive research is defined as research that does not allow the researcher to change or modify the situation under investigation, nor is it used to determine cause and effect relationships. As a result, the researcher would concentrate on providing a

description of the phenomenon. Furthermore, Best and Kahn (2006) state that "descriptive research is a study that describes and interprets the conditions or relationships that exist, opinions that are held, processes that are taking place, visible effects, or emerging trends" (p.118). It means that in descriptive research, the researcher is expected to accurately and objectively describe the situation based on the fact of an object being studied.

The participants of this research were 103 ninth-grade students of SMP Negeri 2 Semparuk which is one of the public schools in *Kecamatan Semparuk*. It is located on *Jalan Pendidikan, Desa Seburing, Kecamatan Semparuk, Kabupaten Sambas, Kalimantan Barat*. This school uses curriculum 2013 as guidance for the teaching and learning process. However, the English subject is one of the compulsory subjects in this school started from the seventh grade.

The researcher collected two types of data in this study: qualitative data and quantitative data. The open-ended questionnaire was used to collect qualitative data, and the close-ended questionnaire was used to collect quantitative data. These questionnaires were used to identify students' learning strategies, in which students could be more easily determined by answering the questions and receiving a checklist for the items that relate to their learning habits.

The data from an open-ended questionnaire was analyzed using qualitative analysis by the researcher. According to Ary et al. (2010), qualitative analysis consists of three steps. There are familiarization and organization, coding and reducing, interpreting and representing. The researcher classified the information gathered by categorizing statements into each strategy (coding and themes). Following that, the researcher interpreted the data using a box of statements called excerpt. The researcher only showed the most frequent statements found when analyzing the open-ended questionnaire from the students in the excerpt.

Moreover, descriptive statistics will be used to analyze data from a close-ended questionnaire. Dornyei (2003) states that descriptive statistics are used to describe sets of numerical data to support data. However, in this study, the researcher calculated the mean using Microsoft Excel. The mean of the data in this study revealed the score of each vocabulary learning strategy used by students. First, after students completed the questionnaire, the researcher analyzed the responses. The researcher assigned 1 to 3 points to each student to assist them in determining the strategies they employed.

Table 1: Interpretation of Students' Answer

POINTS	INTERPRETATION
1	Never
2	Sometimes
3	Always

Table 2: The Range of Verbal Interpretation

POINTS	VERBAL INTERPRETATION	RANGE
1	Never	0.01 – 0.50
	Very rarely	0.51 – 1.00
2	Rarely	1.01 – 1.50
	Sometimes	1.51 – 2.00
3	Very frequently	2.01 – 2.50
	Always	2.51 – 3.00

The researcher analyzed and reported the results of the data analysis using the Likert Scale of frequency by Brown (2010) as shown in Table 3.2. It is used to identify the range of frequency based on the mean score of each strategy.

FINDING AND DISCUSSION

FINDING

Following the analysis of questionnaires, the researcher provided some explanations in these findings. The first describes the vocabulary learning strategies used by students, along with the mean score for each. Meanwhile, the second one includes information on the students' preferred vocabulary-learning strategy.

Vocabulary Learning Strategies Used by Students

Metacognitive Strategies

The researcher reports the data from each statement of metacognitive strategies in the first analysis, as shown in Table 3. With a mean score of 2.27, the data showed that most students preferred to take note of how they learn vocabulary. In metacognitive strategies, it had the highest mean score.

Table 3: VLSQ for Metacognitive Strategies Section

NO.	STATEMENTS	MEAN SCORE
1.	I look for the meaning of words by using context clues in a text.	1.99
2.	I take note of new words I learn.	2.27
3.	Besides English textbooks, I always look for other readings that fall under my interest, such as fairy tale books, novels, or English magazines.	1.65
4.	I use various meanings of a word to make it easier to understand, such as the word live (tinggal, hidup), get (mendapatkan, memahami), know (mengetahui, mengerti).	2.11
5.	I make a note of words that seem important to me.	2.25

Meanwhile, the data above (Table 3) shows that strategies with a mean score of more than 2.01 are frequently interpreted, and some are also interpreted as occasionally

based on the range of verbal interpretation. It suggests that metacognitive strategies were only used as needed in students' learning processes. These data are also supported by the students' claims, as shown in Figures 1 and 2.

Saya harus menghafalkan kata-kata baru beserta artinya, dan juga selalu mempelajarinya kembali. (I have to memorize new words and their meaning, and always relearn them)

Figure 1: Excerpt 1

*Saya membuat permainan kata-kata. (I make a wordplay)
Mengajar dengan disertai game yang berhubungan dengan kosa kata – kosa kata Bahasa Inggris yang dipelajari. (Teaching with wordplay game that have learned)*

Figure 2: Excerpt 2

Although not all students in this study responded to the open-ended questionnaire, some did share how they improve their vocabulary when learning English. Figure 1 depicts how some students claimed that they needed to memorize new words and their meanings. It is done on a daily basis, whether at home or at school, and it is classified as a planning strategy in metacognitive strategies. Furthermore, in Figure 2, some students like to make a game, such as a wordplay, and they also suggest that the teacher is supposed to teach English with any interesting learning activities, such as games, as they previously stated. As a result, the researcher categorizes the strategy as self-initiation strategies, demonstrating how students initiate their learning through the use of a game.

Cognitive Strategies

As shown in Table 4, the second analysis came from statements 6 to 10, which belong to cognitive strategies. According to statement number 8, the majority of students preferred to use the dictionary to find the meaning of words, with a mean score of 2.62. The score is then interpreted as always greater than 2.50. It demonstrates that students use the dictionary for learning English regardless of whether it is an online or offline dictionary, as evidenced by student claims in Figure 5 below. Meanwhile, two strategies are interpreted as occasionally because they have a mean score of less than 2.00, indicating that students use them only occasionally.

Table 4: VLSQ for Cognitive Strategies Section

NO.	STATEMENTS	MEAN SCORE
6.	When I find new words in reading, I guess the meaning and then look at the dictionary.	2.26
7.	I use the audio feature in the dictionary application to check the pronunciation of a word.	1.77
8.	I use the dictionary to find only the meaning of the word.	2.62
9.	I only take note of the meaning of the word.	2.22
10.	I take note of the English synonym(s) or antonym(s) of the word.	1.92

Furthermore, to support the data presented above, the researcher reports some strategies employed by students based on their responses to the open-ended questionnaire. To begin, as illustrated in Figure 3, students claimed that they could learn at least one new word every day. In this context, learning entails students attempting to memorize, locate, and look up new words with their meanings, pronunciations, spellings, or word structures such as prefixes, suffixes, and stems. This activity is constantly repeated because they claim to do it every day. It is divided into repeating strategies.

Saya belajar minimal satu kata setiap harinya. (I learn at least one word everyday)

Figure 3: Excerpt 3

Ya, pernah. Saya pernah meminta guru les untuk mengajarkan saya kata – kata baru Bahasa Inggris (Yes, I have. I have asked my course teacher to teach me about the English new words)

Figure 4: Excerpt 4

In contrast to the previous two points in cognitive strategies, the third point in Figure 5 below indicates that the students used a dictionary and the internet to determine the meaning of the words in Indonesian or English. They also made use of the internet by using online translation. They did not only use the dictionary and the internet to look up the meaning of words, but also to find synonyms and antonyms, as well as to check the pronunciation of words.

Mencari terjemahan Bahasa Indonesia dari kata Bahasa Inggris tersebut. (I translate the word into Bahasa Indonesia)
Saya akan mencari kata-kata yang akan dipelajari di dalam kamus. (I will look up the words to be learned in the dictionary)
Saya mencari makna kata baru tersebut di kamus atau internet (I find out the meaning of the words in the dictionary and the internet)

Figure 5: Excerpt 5

Some students concentrated on their learning methods by creating structure, such as taking notes and highlighting, as shown in Figures 6 and 7. Students took notes, such as creating a simple dictionary. As a result, they could bring it to school with them every day. Furthermore, the students only concentrate on the words that they will learn. These are cognitive strategies.

Saya membuat kamus pegangan sendiri. (I make a simple dictionary made by myself)
Saya membuat catatan yang bisa dibawa setiap hari (I make note that I can bring everyday)

Figure 6: Excerpt 6

Memfokuskan pada kata-kata yang berkaitan dengan materi yang akan dipelajari (I look up to the words that I will learn)

Figure 7: Excerpt 7

Memory Strategies

According to the next findings, most students preferred to write words that they frequently recall (mean score=2.53), as shown in Table 5. This strategy is the most commonly used by students because it interprets as always based on the verbal interpretation of frequency. These statements are about memory strategies, which have the highest mean score (statement 14), even though there is one strategy with a mean score less than 2.00 (statement 15).

Table 5: VLSQ for Memory Strategies Section

NO.	STATEMENTS	MEAN SCORE
11.	I write the new words on one side of a card and their explanations on the other side.	2.03
12.	I memorize together words that sound similar (e.g., here – hear, two – to – too, won – one, it - eat).	2.04
13.	I learn words better when I put them in contexts (e.g., in phrases, sentences, etc.).	2.13
14.	To remember a word, I write it repeatedly.	2.53
15.	I memorize the spelling of a word letter by letter, such as (H-O-U-S-E), school (S-C-H-O-O-L), narrative (N-A-R-R-A-T-I-V-E), description (-D-E-S-C-R-I-P-T-I-O-N).	1.96

In addition, the researcher included some supporting data from an open-ended questionnaire. The information was gathered by analyzing the responses of students to the questionnaire. As illustrated in Figure 8, some statements have been classified as memory strategies. Every day, the students practiced by looking for new words and memorizing

them. Because it is constantly repeated, they will become accustomed to memorizing new vocabulary. These methods are known as rehearsal for memory strategies.

Mencari kata baru yang setiap hari diucapkan dan menghafalkannya (I look for new words that are spoken and memorize them every day)
Menambah hafalan kata-kata. (I add memorization of words)
Memberi tugas menghafal kata-kata untuk setiap pertemuan (Asking students to memorize vocabulary with their meaning for each meeting)

Figure 8. Excerpt 8

Activation Strategies

Following that, the analysis of statements 16 to 20 refers to activation strategies. As shown in Table 6, the majority of students chose to use the words they had learned for sentence writing, with a mean score of 2.37. It differs from previous strategies in that the researcher did not find any strategy with a mean score of less than 2.00 in this strategy. As a result, those strategies are frequently employed by students during the learning process.

Table 6. VLSQ for Activation Strategies Section

NO.	STATEMENTS	MEAN SCORE
16.	I try to read as much as possible so that I can rewrite the words I tried to remember.	2.26
17.	I try to use newly learned words in real situations.	2.00
18.	I try to use newly learned words in my imagination.	2.24
19.	I make new sentences using the words I have learned.	2.37
20.	I try to use new words as much as possible in speech and writing.	2.33

In line with this, the researcher obtained two statements from the open-ended questionnaire analysis. As a result, the data presented above may be supported. Figure 9 shows that the students only concentrate on the words they have learned and practice them in sentences. Furthermore, the students want to be taught how to use those words in various contexts, such as writing and speaking sentences. These strategies are classified as activation strategies, which concern how students construct sentences using newly learned words.

Saya hanya fokus pada kata yang berkaitan dengan mempraktekkannya dalam kalimat (I only focus to the words that I have learned and practice them into sentences)
 Menjelaskan arti kata Bahasa Inggris yang dipelajari di kelas dan mengajarkan cara menggunakan kata tersebut (Explaining the vocabulary that have learned and teach students how to use them)

Figure 9: Excerpt 9

The Most Used Vocabulary Learning Strategies

Based on the data found, it described in the chart below:

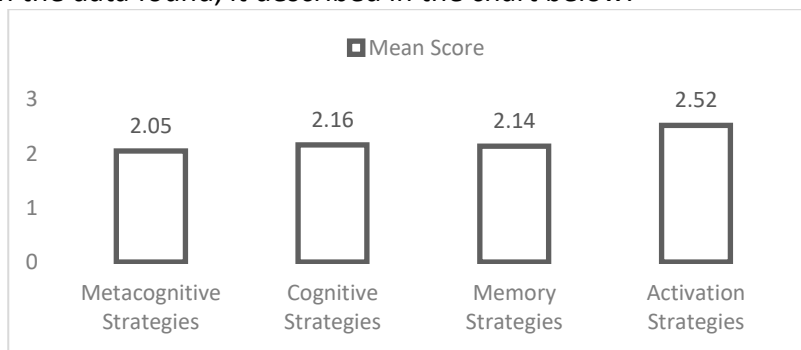


Figure 10: Four domains in Vocabulary Learning Strategies

According to the chart above, as shown in Figure 10, the most commonly used strategy by students was activation strategies. It displays a mean score of 2.52. Furthermore, the second strategy, with a mean score of 2.16, was cognitive strategies. Memory strategies came next, with a mean score of 2.14. The final category, with a mean score of 2,05, was metacognitive strategies.

Table 7: The Verbal Interpretation of Vocabulary Learning Strategies

STRATEGIES	MEAN	VERBAL INTERPRETATION
Metacognitive Strategies	2.05	Very Frequently
Cognitive Strategies	2.16	Very Frequently
Memory Strategies	2.14	Very Frequently
Activation Strategies	2.52	Always

Moreover, as shown in Table 7, the data shows an average between very frequently and always. As a result, it can be concluded that each strategy makes a relative contribution to students' English learning. The most commonly used strategy by students, however, was found in the activation strategies, with the highest mean score 2.52 and verbally interpreted as always.

DISCUSSION

As described that vocabulary learning strategies are a subcategory of language learning strategies that students use to acquire vocabulary when learning English as a foreign language. According to Gu and Johnson (1996), there are four types of vocabulary learning strategies: metacognitive strategies, cognitive strategies, memory strategies, and activation strategies.

The research findings presented that the students averagely coincident with all strategies in the questionnaires. Based on overall data collected by using vocabulary learning strategies questionnaires, the most frequently used strategies by SMP Negeri 2 Semparuk students are activation strategies (M=2.52), then it is followed by cognitive strategies (M=2.16), next is memory strategies (M=2.14), and the last is metacognitive strategies with (M=2.05).

The data analysis also showed the most and least frequently used strategy by SMP Negeri 2 Semparuk students. In activation strategies, the most frequently strategy used by students comes from statement number 19 "*Saya membuat kalimat-kalimat baru menggunakan kata-kata yang sudah saya pelajari*" (M=2.37), followed by statement number 17 "*Saya mencoba menggunakan kata-kata baru yang dipelajari dalam konteks sehari-hari*" (M=2) as the least activation strategies. It means that students prefer to make new sentences using words that they have been familiar rather than using new words they just learned.

After that, the most frequently used strategy by students in cognitive strategies is statement number 8 "*Saya menggunakan kamus hanya untuk mengetahui artinya saja*" (M=2.62), the least frequently used strategy by students is statement number 7 "*Saya menggunakan fitur audio di dalam aplikasi kamus untuk mengecek cara pengucapan dari sebuah kata*" (M=1.77). It means that students prefer to use a dictionary for looking up the meaning only. In memory strategies, the most frequently used strategy by students is statement number 14 "*Untuk mengingat sebuah kata, maka saya akan terus mencatatnya*" (M=2.53), and the least frequently used strategy is statement number 15 "*Ketika saya mempelajari sebuah kosakata, saya akan mengingat ejaannya seperti kata "house" (H-O-U-S-E), "school" (S-C-H-O-O-L), "narrative" (N-A-R-R-A-T-I-V-E), "description" (D-E-S-C-R-I-P-T-I-O-N)*" (M=1.96). It means that students prefer to keep the words by using it frequently rather than paying attention to the details of a word.

Then, in metacognitive strategies showed that statement number 2 "*Saya mencatat kata-kata baru yang saya pelajari*" (M=2.27) as the most frequently used strategy by students, and statement number 3 "*Selain buku pelajaran Bahasa Inggris, saya selalu mencari bahan bacaan Bahasa Inggris lainnya yang termasuk dalam minat saya, seperti buku-buku dongeng, novel, ataupun majalah-majalah Bahasa Inggris*" (M=1.65) as the least frequently strategy in metacognitive strategies used by students. Based on that, students prefer to record new words they have learned rather than looking for new words from those they have not yet learned.

From all of that, it can be concluded that the activation strategies as the most frequently used vocabulary learning strategies by SMP Negeri 2 Semparuk students. The

findings are different from Fan (2003)'s findings that are cognitive strategies as the most frequently used and memory strategies as the least frequently used by students. Moreover, it is also different from Kulikova (2015) who find that the most frequently used strategy is memory strategies and cognitive strategies.

CONCLUSION

This research yielded significant findings regarding how students experienced vocabulary learning strategies while learning English. It reported that several strategies, such as translating, memorizing, taking notes on the words, putting the new words into sentences, and highlighting the words that they will learn the next day, contributed to their learning. Regardless of these strategies, the researcher discovered that the teacher plays an important role in improving students' vocabulary learning in class. Many students also stated that the learning process will be more interesting if the teacher can create games while learning, such as making word games, so that students are not bored, and it can also help them to easily remember what they have learned.

REFERENCES

- Ary, D., Jacobs, L. C., & Sorensen, C. (2010). *Introduction to research in education*. USA: Wadsworth Cengage Learning.
- Best, J. K., & Kahn, J. V. (2006). *Research in education*. United States of America: Pearson Education Inc.
- Brown, S. (2010). Likert scale examples for surveys. *ANR Program Evaluation*, 4.
- Dornyei, Z. (2003). *Questionnaires in second language research: Construction, administration, and processing*. London: Lawrence Erlbaum Associates.
- Fan, M. Y. (2003). Frequency of use, perceived usefulness, and actual usefulness of second language vocabulary strategies: A study of Hongkong learners. *The Modern Language Journal*, 222-241.
- Ghazal, L. (2007). Learning vocabulary in EFL contexts through vocabulary learning strategies. *Novitas Royal*, 84-91.
- Gu, Y., & Johnson, R. K. (1996). Vocabulary learning strategies and language learning outcomes. *Language Learning*, 643-679.
- Kulikova, O. (2015). *Vocabulary learning strategies and beliefs about vocabulary learning: A study of beginning university students of Russian*. Iowa: University of Iowa.
- Leedy, P. D., & Ormrod, J. E. (2015). *Practical research: Planning and design*. England: Pearson.
- Nation, I. (2001). *Learning vocabulary in another language*. New York: Cambridge University Press.

- O'Malley, J. M., & Chamot, A. U. (1990). *Learning strategies in second language acquisition*. Cambridge: Cambridge University Press.
- Oxford, R. L. (1990). *Language learning strategies: What every teacher should know*. Boston: Heinle & Heinle Publishers.
- Schmitt, N. (2000). *Vocabulary in language teaching*. United States of America: Cambridge University Press.
- Schmitt, N. (2010). *Researching vocabulary: A vocabulary research manual*. University of Nottingham, UK: Palgrave Macmillan.
- Takac, V. P. (2008). *Vocabulary learning strategies and foreign language acquisition*. Ireland: Multilingual Matters.