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The Effects of Mnemonic Technique Training Employed
by Burapha University Students

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Abstract

This study intended to investigate whether mnemonic techniques could help Burapha university students to have more potential for remembering newly learned vocabulary and to explore the students' attitudes towards mnemonic technique training. The participants of this study consisted of 22 first year students who enrolled in English for Communication course at Burapha University, Sakaeo Campus. They were selected through purposive sampling method. Pre-test, post-test, and semi-structured interview were used as research instruments for collecting data. Paired t-test was also conducted to analyze the data. As the post-test scores ($M = 25.59$) were higher than the pre-test scores ($M = 13.18$) at .05 level of significance, the results showed that these students had more ability in remembering vocabulary. Moreover, the students had positive attitudes towards mnemonic technique training in two aspects: 1) increasing vocabulary knowledge, and 2) activities in the training.

Keywords: Mnemonic techniques, Language learning strategies, Vocabulary remembering techniques

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Introduction

In Thailand, Thai students in general study English more than 10 years. They normally study four core skills, including listening, speaking, reading, and writing. Moreover, vocabulary is one of the most important parts in English learning that the students need to master because it plays an important role in language acquisition. As Thailand is a non-English-speaking environment and Thai people do not communicate in English as a second language on a daily basis, Thai students study English as a foreign language (EFL). Therefore, they lack opportunities to use the English language in daily life. Despite having limited possibilities to be exposed to authentic English outside the classroom, Thai students study English and learn a lot of vocabulary. However, the amount of vocabulary they have obtained and retained is still considered inadequate as they cannot produce the language to communicate well enough. Accordingly, most Thai students feel unconfident to use the English language, whether it is in the classroom or in real life situations. Furthermore, it is widely accepted that those who know a lot of vocabulary can understand and use the language more effectively than those with limited vocabulary competence. Hence, having inadequate vocabulary is considered a serious problem for them that needs further development so as to improve English competence in such aspect. Meara (1996) stated that there is significant evidence to show that vocabulary skill is very essential and useful in all aspects of L2 learning. It is known that many English teachers try to implement different approaches to help their students remember vocabulary as much as possible; for example, using vocabulary acquisition techniques through the context, explicit teaching of vocabulary, vocabulary learning strategies or using classroom activities, such as games, pictures, dictionary work, etc. However, nobody can confirm which strategy is the best to help students remember newly learned vocabulary.

Due to the importance of vocabulary competence, many language learning strategies were developed. One of the most effective ways to help students remember new information is a method called mnemonic. Mnemonic techniques were defined by many researchers (e.g., Thornbury, 2002) as techniques for remembering things. According to Nation (1990), they are techniques that learners use to create an unusual association between a word form and its meaning. When learners come across an unknown word and try to remember it, they will make some efforts to memorize it. Thompson (1987, cited in Schmitt and McCarthy, 1997) believed that mnemonic is the technique that works by utilizing some well-known principles of psychology: a retrieval plan is developed during encoding, and mental imagery, both visual and verbal, is used. They help individuals learn faster and recall better by aiding the integration of new materials into existing cognitive units and also providing retrieval cues. According to Schmitt (1997), mnemonic techniques were classified into 5 types: pictures/imagery, related words, unrelated words, grouping, and word's orthography or phonological form. Henson & Eller (1999) also suggested that most



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students, at one time or another, used mnemonic, a kind of learning device to help enhancing vocabulary memory, as a technique to help them remember new information. To illustrate this, Higbee and Kunihiro (1985) argued that students learn new information by pairing something memorable, such as a word or an object, with new information they have just learned. According to the considerable influence of mnemonic techniques on second/foreign language learning, many related studies were conducted. Siriganjanavong (2013) studied the introduction of the technique called “Mnemonic Keyword Method (MKM)” to native Thai EFL learners and explored how effective this method was in terms of short-term and long-term recognition. Half of the participants were taught with MKM, while other mixed methods were used with the other half. The results revealed that in both short-term and long-term, low proficiency EFL students had better word retention when being taught with MKM than with other mixed methods. However, there was a reduction of its effectiveness when time passed by at some points. The reason why MKM was more effective than the other could be in accordance with the fact that there was a combination between both verbal and visual aids in this method. Moreover, Radovic and Manzey (2019) investigated the potential impact of the availability of a mnemonic acronym on learning and execution of a sequential task, the resumption after interruptions, and the mental representation of the task. The results showed that the mnemonic acronym helped increase learning the sequence of the task and a hierarchical mental representation of the task was evident. As a result, after an interruption, resumption times became faster at particular steps of procedures. Also, the structure of mnemonic acronym had a direct effect on the mental representation of a task. They suggested, even though not at all steps of procedural task, that mnemonic acronym enhanced resilience towards interruptions.

According to the previous need analysis conducted by the researchers of this study, lacking English skills to succeed in using the English language was investigated. The results suggested that the students' weakness was vocabulary deficiency. They reported that they needed to develop vocabulary knowledge prior to learning other skills. Moreover, they were provided with a diagnostic test. The results also indicated that more than half of the students needed to improve vocabulary competence urgently as they reported that they could remember newly learned words only temporarily. For these reasons, they needed a lot of guidance for learning and retaining vocabulary in the long-term memory. Therefore, their vocabulary knowledge obviously needed improvement.

As mnemonic techniques mentioned earlier were obviously effective devices in remembering vocabulary, they were used in this study so as to help the students' vocabulary memory to be more durable. The findings of the study could bring about useful suggestions for dealing with students' remembering vocabulary problems.



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Due to the importance of competence in vocabulary retention in long-term memory for English learning stated earlier, a flood of research was undertaken to investigate the effects of mnemonic techniques for learning English vocabulary (see Siriganjanavong ,2013; Putnam,2015; Radovic & Manzey, 2019). Since recognizing newly learned vocabulary in long-term memory discussed previously is very essential, this present study intended to examine whether mnemonic techniques could help Burapha university students to have more potential for remembering the vocabulary. The study also explored the students' attitudes towards mnemonic technique training.

Research Objectives

The major objectives of this study are as the followings:

1. To investigate whether mnemonic techniques could help students to have more potential for remembering the vocabulary.
2. To explore the students' attitudes towards mnemonic technique training.

Research Methodology

This current research was classroom-based. It aimed to find the practical solutions to the students' vocabulary remembering problems. The students were trained in 3 mnemonic techniques: 1) grouping, 2) picture/imaginary, and 3) word's orthography or phonological form, which were regarded as the tools for helping the students to remember the vocabulary.

Participants

The participants of this study consisted of 22 first year students who enrolled in English for Communication course at Burapha University, Sakaeo Campus. They were selected through purposive sampling techniques. As being recruited to be respondents, the participants formally indicated their consent to participate in the study. In addition, the researchers informed that all participants' identity would be kept anonymous.

Instruments

Research instruments of this study consisted of

- 1) Pre-test and post-test which referred to the list of 40 vocabulary words. They were provided to the participants in order to examine their proficiency level in remembering newly learned words. The participants had to complete the tests so as to compare the effects of mnemonic technique training on their proficiency



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in remembering vocabulary. Pre-test and post-test were the parallel set of vocabulary, which were tried out in a sample group. The reliability of the test was calculated by using KR-21 (at 87%).

2) Semi-structured interview which was employed in order to get the respondents to express their attitudes towards the mnemonic technique training activities. The interview was used in order to obtain in-depth data. The interview protocol consisted of several topics, including students' opinions on mnemonic techniques that they used and the effects after the training. This semi-structured interview was designed to encourage as much flexibility and spontaneity as possible so as to help the respondents to express their perspectives on mnemonic techniques. The content validity of the interview questions was measured by three experts, and by using IOC (Item Objective Congruence). Following this, the content of the questions or terms used that were unclear were revised in accordance with the comments and suggestions of the experts.

3) Lesson plans of mnemonic techniques, which consisted of 3 mnemonic techniques: 1) grouping, 2) picture/imaginary, and 3) word's orthography or phonological form. Each mnemonic technique used in the training activities took 6 hours in total; each lesson took two hours. Content validity of these lesson plans were checked by three specialists. The lesson plan contents were based on a five-point Likert scale ranging from the most suitable (5) to the least suitable (1) as the following:

4.51-5.00 refers to the most suitable

3.51-4.50 refers to highly suitable

2.51-3.50 refers to suitable

1.51-2.50 refers to fairly suitable

1.00-1.50 refers to the least suitable

The three lesson plans were rated at 4.43. It means that these lesson plans were suitable and could be used in the actual study afterwards.

Data Collection

Before conducting the study, the researchers had the participants do the pre-test. After that, 3 mnemonic techniques: 1) grouping, 2) picture/imaginary, and 3) word's orthography or phonological form, were employed in the training activities. When the mnemonic technique training activities had been completely performed, the post-test was provided to the participants so as to examine their ability in remembering vocabulary. In the next stage, the participants were interviewed in order to discover their attitudes towards the mnemonic technique training.



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Data Analysis

The data was analyzed in the following manner:

1. The researchers analyzed the data from the pre-test and the post-test. The means (*M*), and standard deviations (*SD*) were the basic descriptive statistical analyses used to describe whether mnemonic techniques could help the students to have more potential for remembering the vocabulary. Furthermore, T-test was also used to compare the students' ability in retaining vocabulary based on the pre-test and post-test scores, which were gained after completing the mnemonic technique training.
2. The data from the semi-structured interview, which was the students' opinions, was transcribed and described.

Results

The findings of the study are presented based on the two research questions as the framework.

Research Question 1

To answer this research question, quantitative data was analyzed. Moreover, Paired T-test was conducted to compare the scores between the pre-test and the post-test. The results of the score comparison are presented in the table below.

Table 1 Comparison between the pre-test and the post-test scores of Burapha University students, Sakaeo Campus, based on mnemonic technique training.

Test	Mean	SD	N	t	P
Pre-test	13.18	2.13	22	-17.387	.000
Post-test	25.59	3.187	22		

* $p < .05$

As shown in table 1, Paired Samples T-test was used to compare the pre-test and the post-test scores. The mean score of the pre-test was 13.18 and that of the post-test was 25.59. The results indicated that there was a highly significant difference at .05 level. The statistical evaluation for both the pre-test and the post-test was statistically significant where $p = .000$ ($p < .05$). It was obvious that the post-test score was higher than the pre-test score. Therefore, it could be assumed that after the training, mnemonic techniques could assist the students to have more ability for remembering vocabulary.



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Research Question 2

This part presented the findings on students' attitudes towards mnemonic technique training. The data was gathered from the semi-structured interview. After the data was analyzed, it suggested that the students had positive attitudes towards mnemonic technique training in two aspects: 1) increasing vocabulary knowledge, and 2) activities in the training. The majority of them revealed that mnemonic techniques contributed to their vocabulary knowledge. These techniques could assist them to remember the vocabulary. It was very useful when they applied the techniques in their examinations.

"Mnemonic techniques can help me to retain vocabulary. Moreover, it assists me to have steps for remembering new words in a short time." (a student, interviewed)

"I really appreciate learning by using mnemonic techniques because they can help me to have a bigger size of vocabulary, which I need when taking examinations."

(a student, interviewed)

"These techniques encourage me to study English because they can help me to discover new ways in remembering vocabulary." (a student, interviewed)

In addition, most students liked the activities provided to them, which was considered another aspect that indicated their positive attitudes towards mnemonic technique training.

"I felt as if I had been playing games while employing mnemonic technique training. It was not so boring as learning the lessons in regular ways." (a student, interviewed)

"I was really interested in these mnemonic techniques. I was very happy about the activities in the training. I have found that there are many different ways to remember vocabulary." (a student, interviewed)

It was surprising that one of the students revealed that these mnemonic techniques helped to promote his confidence in speaking or expressing ideas in English.

"After the training, I had a bigger vocabulary size. I felt that I became more confident to speak or use English in communication with my teacher."

In conclusion, according to the quantitative data, the results from the comparison between the pre-test and the post-test scores by using Paired T-test showed that the post-test score was statistically and significantly higher than the pre-test score. It could be assumed that the students had more potential for remembering vocabulary after completing the training activities. In other words, mnemonic technique training could help to enhance students' vocabulary retention. Moreover, the data from the semi-structured interview reported that they had positive attitudes towards mnemonic technique training in two aspects: 1) increasing vocabulary knowledge, and 2) activities in the training.



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Discussion

According to the results of the study, the first year students at Burapha University, Sakaeo Campus, generally had more potential for remembering the vocabulary. The result from Paired T- test indicated that the post-test score was statistically and significantly higher than the pre-test score. This study demonstrated that there was a highly significant difference at .05 level. According to the findings of Siriganjanavong (2013), and Radovic and Manzey (2019) explained earlier, the results of this study were consistent with such results in terms of having better word retention after the training. This could be interpreted that mnemonic techniques had positive effects on the students. Moreover, it is widely accepted that in order to have greater job opportunities or further study, one needs to have English competence because it is one of the most important requirements. Therefore, the students were aware of the importance of vocabulary knowledge and employed mnemonic techniques effectively. That is, their post- test score was higher than that of the pre- test. It was obviously seen that mnemonic techniques could assist the students to retain vocabulary in the long-term memory after the training.

In addition, the findings of this study revealed that after the data was gathered from the semi-structured interview, and was analyzed, it suggested that the students had positive attitudes towards mnemonic technique training in two aspects: 1) increasing vocabulary knowledge, and 2) activities in the training. Moreover, one of the students revealed a surprising result that his confidence in speaking and expressing ideas in English was promoted through these mnemonic techniques. Accordingly, it could be generalized that the students' positive attitudes towards the mnemonic technique training tended to assist them to use such techniques effectively and led to having the higher post-test score and retaining newly learned vocabulary better. However, the results of this study were inconsistent with the findings of Putnam (2015), in terms that in education today, mnemonic techniques were not popular among learners because they might not obviously meet the demands of practical learning in classroom. However, as mentioned in the study of Putnam (2015), certain classroom contexts might impact how effective it was when using the mnemonics as well as its limitations.

For the implication of the study, according to the theory of mnemonic techniques for learning, and the results of this study, all in all, mnemonic technique training could have an impact on vocabulary learning of the first year students at Burapha University, Sakaeo Campus. Accordingly, students should be taught with a variety of vocabulary learning techniques and teachers should apply various teaching strategies in their teaching so as to help students enhance and sustain vocabulary knowledge in the long-term memory. In addition, those whose work is related to this area should put emphasis on establishing mnemonic techniques for English vocabulary learning in order to promote long-term memory and increase vocabulary size of students.



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Recommendation for further study

This section presented the suggestions for further research as well as its limitations. The first limitation was the higher scores of the students. As the number of participants in this study was small and there was no control group in the investigation, the generalization and the interpretation of this research should be conducted with caution. This study was limited to only 22 first year students, who enrolled in English for Communication course at Burapha University, Sakaeo Campus, which was a very particular group of students in a unique university. The results of the study might not be representative of other groups of students in different contexts as they could yield different results due to various reasons. Moreover, the findings might not be the representative of students in other year levels despite being conducted in the same university. Therefore, the results of the current study could not be generalized as the overall answers to the research questions. Furthermore, although many studies were conducted based on mnemonic techniques, they used various methods not exactly the same as the current study. Hence, comparing the findings of this study with related research conducted previously could be limited. Another limitation involved the training. The results of the current study revealed that the three types of mnemonic techniques in the training activities could help to enhance the participants' English vocabulary potential. For further study, other types of mnemonic techniques should be used in the training as well as longer time for training session should be implemented so as to discover students' abilities and attitudes towards the techniques more deeply on the impact of mnemonic technique training.

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