UBON RATCHATHANI UNIVERSITY

THE EFFECT OF KEYWORD METHOD ON THAI STUDENTS'
ENGLISH WORD LEARNING AND RETENTION:
A CASE STUDY OF GRADE 6 STUDENTS AT
BAN KUDNAKEAW SCHOOL

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AN INDEPENDENT STUDY SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS
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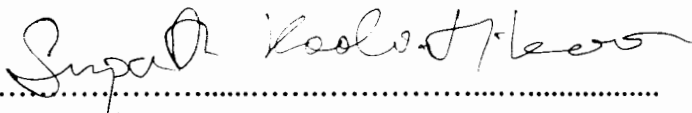
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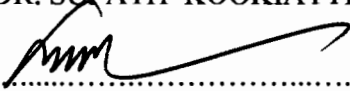OF GRADE 6 STUDENTS AT BAN KUDNAKEAW SCHOOL

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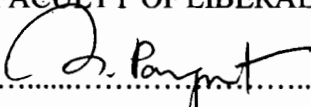
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เรื่อง	:	ผลการใช้เทคนิคการเชื่อมโยงเสียงกับคำสำคัญต่อการเรียนคำศัพท์ภาษาอังกฤษและความคงทนของการเรียนกรณีศึกษานักเรียนชั้นประถมศึกษาปีที่ 6 โรงเรียนบ้านกุดนาแก้ว
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     การศึกษาครั้งนี้มีวัตถุประสงค์เพื่อศึกษาประสิทธิภาพของเทคนิคการเรียนคำศัพท์ โดยผู้เข้าร่วมการวิจัยคือนักเรียนชั้นประถมศึกษาปีที่ 6 จำนวน 16 คน ที่มีทักษะความสามารถด้านภาษาในระดับต่ำ โดยแบ่งนักเรียนออกเป็นสองกลุ่มตามเทคนิคการเรียน เทคนิคที่ 1 คือการเรียนด้วยวิธีการท่องจำ คือการท่องคำศัพท์ รวมถึงการจดคำศัพท์และการเปิดหาความหมายในพจนานุกรมภาษาอังกฤษ ส่วนวิธีการเรียนโดยเทคนิคการเชื่อมโยงเสียงกับคำสำคัญ คือการเชื่อมโยงเสียง คือการเลือกคำภาษาไทย(คำสำคัญ) ที่ออกเสียงเหมือนกันกับคำศัพท์ภาษาต่างประเทศ และการเชื่อมโยงจินตภาพ คือการใช้จินตภาพเชื่อมโยงคำสำคัญกับคำแปลในภาษาต่างประเทศ

     นักเรียนที่เข้าร่วมการวิจัย ได้รับการทดสอบทักษะด้านภาษาโดยใช้แบบทดสอบการแปลคำศัพท์ที่ใช้ในการทดลองเป็นคำนาม 2 พยางค์ที่มีความถี่ในการใช้ต่ำ จำนวน 18 คำ โดยจะแบ่งเรียน 3 ชั่วโมง ชั่วโมงละ 6 คำ การศึกษานี้ใช้แบบทดสอบการแปล โดยมีแบบทดสอบก่อนเรียน หลังเรียนทันที แบบทดสอบความคิดรวบยอดและแบบทดสอบหลังเรียนสองสัปดาห์ เพื่อใช้ในการทดสอบความสามารถในเรียนและการจดจำคำศัพท์ สถิติที่ใช้ในการวิเคราะห์ข้อมูล ได้แก่ ค่าเฉลี่ย ส่วนเบี่ยงเบนมาตรฐาน ค่าคลาดเคลื่อนมาตรฐาน และใช้ t-test ซึ่งผลการทดลองพบว่า ผลทดสอบหลังเรียนสองสัปดาห์ นักเรียนในกลุ่มการเรียนด้วยวิธีการท่องจำมีค่าเฉลี่ยผลการเรียนเท่ากับ 7.25 นักเรียนในกลุ่มการเรียนด้วยวิธีการเชื่อมโยงเสียงกับคำสำคัญมีค่าเฉลี่ยผลการเรียนเท่ากับ 8.38 ทั้งนี้เมื่อเปรียบเทียบความแตกต่างของค่าเฉลี่ยโดยการทดสอบค่า t-test พบว่ามีความแตกต่างอย่างมีนัยสำคัญทางสถิติที่ระดับ 0.05

ABSTRACT

TITLE : THE EFFECT OF KEYWORD METHOD ON THAI STUDENTS'
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KEYWORDS : THE KEYWORD METHOD, ROTE, VOCABULARY
       LEARNING STRATEGIES

The purpose of this study was to investigate the effectiveness of two vocabulary learning techniques. The participants consisted of 16 students with low language proficiency. They were divided into a rote learning group and a keyword learning group, each of eight students. Rote learning involved repetition of target language items, writing down the items, and looking up the meanings from dictionaries. The teacher-students generated keywords consisting of acoustic links, that is L1 words that sounded like L2 target words and imagery links which were the images produced by phrases constructed from the L1 words (keywords). The two groups of participants were in grade 6 and their proficiency was tested by using a translation pre-test consisting of 18 experimental English words used in three class hours (six words each) of the same grammatical category, same length, and of similar frequency of occurrence. The instrument used for data-gathering was a translation test, pre-, immediate, cumulative and 2-week delayed post-tests to evaluate learning achievement of the participants in learning and recalling English vocabulary. The statistics used for the data analyses were means, standard deviations, student error means, and t-test. The learning achievement in the delayed post-test between the students who were taught by rote learning and the keyword method were 7.25 and 8.32 respectively which was significantly different at the 0.05 level.

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CHAPTER 1
INTRODUCTION

The present study aims at investigating the effects of rote memorization and keyword method on English vocabulary learning and retention of Thai EFL 6th grade learners, a case study of grade 6 students at Ban Kudnakeaw School. The purpose of the study is to test the effects of two types of vocabulary learning techniques. This chapter provides an introduction and the background to the entire study. The background information consists of the rationale of the study, the objectives of the study, the research questions and the hypothesis, the significance of the study and the key terms.

1.1 Rationale of the Present Study

In the field of second or foreign language learning, it has long been recognized that vocabulary is an important part to develop four language skills. As McCarthy, (1990; cited in Boonkongsaen, 2012) suggested that "no matter how well the student learn grammar, no matter how successfully the sounds of L2 are mastered, without words to express a wide range of meanings, communication in L2 just cannot happen in a meaningful way."(p.45) Although vocabulary knowledge is a continuum of knowledge which finally aims to productive use, the receptive knowledge such as the ability to recognize lexical items is essential during early stage of learning. (Takac, 2008) In the beginning level, L2 learners' vocabulary knowledge should be enriched as much as possible since it serves a good foundation for the upper language learning. Vocabulary is an important element for successful language learning. Studies have shown that word knowledge is strongly correlated with academic accomplishment (Schmitt, 2000).

In Thailand, although students are required to study English at the beginning stage of their education, the score from the national test called O-Net has indicated that many of Thai students still have low proficiency in English. (Siriganjanawong, 2013) Ample research suggests that vocabulary is one of the problems faced most by Thai L2

learners. For example, Bualuang et al. (2012) state that inadequate vocabulary knowledge at a primary level is problematic for learners. In the context of English instruction in Thailand, a vocabulary teaching method seems to be mainly passive. Most of Thai EFL students are taught by memorizing the words spelling and meaning by rote rehearsal. Therefore, word list that is learned by rote tends to be productive, thus soon disappear from students' memories. (Jenpattarakul, 2012)

From the researcher's EFL teaching experience, English learning in a primary level mainly focuses on teaching vocabulary specifically by rote rehearsal. In some classes, teachers might provide some interesting flashcards, games or songs in order to draw the students' attention, but most of the time students tend to only have fun with the materials and quickly forget the learned words. Therefore, it is very essential to help and motivate students to enlarge their vocabulary knowledge. One way of facilitating vocabulary learning is to use vocabulary learning strategies. (Schmitt, 2000) However, the rote memorization which is one of strategies that is often used in my classroom cannot effectively help students learn vocabulary, so I want to try another technique. In addition, lately I found that ample research suggests that using the keyword method in learning foreign language words with various languages can be an effective method because it provides deeper coding in remembering words. Schmitt 2000 claimed that the common vocabulary learning strategies which have been commonly used tend to be simple memorization and repetition and these strategies are often favoured over more complex ones as the keyword method. On the other hand, deeper activity as Keyword Method is also investigated and found effective since it involves kind of elaborative mental processing that enhances long-term retention. (Schmitt, 2000)

In this study, I have grade 6 students engaged in an experiment because they are in an urgent need to enlarge their vocabulary knowledge for the upper level, Mattayom 1, and prepare for the National Test. From my observation, I found that the main obstacle impeding my Grade 6 students to understand the English test is simply because they do not know the meaning of words. After 5-7 years studying English, it is quite shocking that their vocabulary banks are so small that many of them cannot even recognize the name of colors, days, months and so on. So within a short time before taking a test, even though it is not easy to help them learn and remember list of words

that might possibly appear in the test, I am interested in finding out the technique that will help these students learn and retain vocabulary better.

1.2 Research Objectives and Research Questions

The main purpose of the present study is to study the treatment effects of the rote memorization and keyword method. The teaching effects will be measured by the comparison of the pre- and post-test scores, the comparison between rote memorization and keyword method, and the retention effect some time after the treatment. Specifically, the purposes of the present study are:

(1) To investigate which type of techniques, rote memorization or keyword method, is more effective in helping grade 6 students learn vocabulary

(2) To investigate which type of techniques, rote memorization or keyword method, promotes long-term retention of vocabulary

Based on the above objectives of the study, the following research questions are proposed:

(1) Which type of techniques, rote memorization and keyword method, can better help grade 6 students learn vocabulary? (Immediate test)

(2) Which type of techniques, rote memorization and keyword method, can better help grade 6 students in a long-term retention of vocabulary? (Delayed test)

1.3 Research Hypothesis

The keyword method is more effective in helping students learn vocabulary and in promoting vocabulary retention than rote memorization.

1.4 Significance of the Study

The results from the study will answer the question whether the rote memorization or keyword method instruction is more effective in facilitating and enhancing English vocabulary learning and vocabulary retention. In addition, the present study also discusses the pros and cons of the two methods and shows how both of them may be effective in a real classroom teaching. Therefore, it is expected that the findings of this study may help teachers design activities for effective teaching of L2 vocabulary for grade 6 students with a low English proficiency.

1.5 Definitions of Terms in the Study

1.5.1 Rote memorization

Rote Memorization learning is learning which involves repetition of target language items either silently or aloud and may involve writing down the items (more than once). These items commonly appear in a list form; typical examples being items and their translation equivalents or their definitions. The only thing this learning system does is memorizing or storing the incoming information for later use. It is basically a simple and passive process.

1.5.2 Keyword Method

Keyword Method learning process consists of two steps:

(1) Acoustic link: L1 word that sounds like L2 target word.

(2) Imagery link: The image or phrase constructed from L1 word (keyword).

In this study, the L1 words or phrases functioning as "keyword" are worked out in the class by the teacher and learners together. The principle for creating a keyword will be based on Atkinson's studies which suggested that the keyword need not always be a single word but a brief phrase.

1.5.3 Word Learning

Word learning refers to the process of gaining knowledge about the word which includes its form and meaning. Although, continuum knowledge of L2 vocabulary consists of several dimensions, this study focuses on the basic receptive knowledge which is useful and proper for the proficiency level of the target students. Therefore, word learning here would aims at recognizing the meaning of lexical items in written forms.

1.5.4 Word Retention

Word retention refers to how well learners store word knowledge which is the retention of word knowledge in long-term memory. According to the model of memory level proposed in Craik and Lockhart (1972), short-term memory can be differentiated from long-term memory for its trace duration is up to 30 seconds immediately after learning and word will be retrieved in phonemic and possibly few semantic forms, while long-term memory' trace duration can be varied from minutes to years after learning and word will be retrieved in largely semantic, and some auditory and visual forms.

CHAPTER 2
LITERATURE REVIEW

Vocabulary is a basic component of language proficiency and basic factor necessary for mastering a language, thus at the early stage of L2 learning, vocabulary knowledge is very important. Celce-Mercia (2011; cited in Siriganjanavong, 2013) suggested that different strategies can help learners remember and acquire words. Therefore, vocabulary learning strategies are introduced in many studies in order to explore their effects on enhancing students' ability in learning and remembering vocabulary. Two of the most studied vocabulary learning techniques: rote memorization and the keyword method and their research findings (Sagarra & Alba, 2006) will be discussed in this chapter.

2.1 Vocabulary Learning and Instructions
2.1.1 L2 Vocabulary Learning

Learning a foreign language is a matter of storing a large number of words into the memory. This is a challenging task since we cannot solely learn a bunch of words in formal class or pick them up from simple exposure through classroom activities. Schmitt (2000) stated that memory has an essential interface with language learning. Memory comes into two basic types, short-term and long-term memories which are different in their duration and capacity of information storing. The first type is short-term memory which human use to store and hold information while it is being processed. The information can be held in a short time but rehearsal can extend its duration. On the other hand, long-term memory can store information in a longer time to use in the future but it takes time.

Schmitt (2000) proposed that the purpose of vocabulary learning is to transfer the words learned in short-term memory(STM) into more permanent long-term memory(LTM). However, it takes time in order to transfer the information from STM to LTM as Gass and Selinker (2008) mentioned that learning vocabulary involves repeated process as it is incremental in nature. Therefore, through recycling

the learnt words and repeatedly exposed to the words seem to help to transform words in STM to LTM. However, although vocabulary acquisition is incremental in nature, words cannot be learned only with incremental advancement, there is always some backsliding. Both learning and forgetting can occur. (Takac, 2008) In addition to this, Schmitt (2000) suggested that to recall the meaning of the lexicon, memory aided technique as keyword can effectively help learners find some preexisting information of the lexical item in the longer term memory than repetition only. To sum up, although lexical acquisition requires multiple exposures to a word, if learners do not recycle the words, those partially known words will be forgotten. As a teacher, we can help to reintroduce the words repeatedly in classroom activities, but it cannot be guaranteed if students are going to recycle the word outside classroom. Therefore, as Nation (1990) recommends there are too many words to learn only in teaching time which is often limited, teaching learning strategies to students to learn words on their own would be beneficial.

2.1.2 Approaches to L2 Vocabulary Instruction

James Coady (1997) proposes four main positions in the continuum of literature dealing with vocabulary instruction. The first position is called "Context Alone". It is believed that students learn words effectively from extensive reading not from direct instruction. The second position is "Strategy Instruction" proposing that in order to deal with the context, individuals need proper strategies to cope with the words in context. The third one is "Development plus Explicit Instruction" in which explicit teaching of word in early stage of learning is emphasized following by more context-based learning. The last position is "Classroom Activities" such as communicative activities among students.

A good vocabulary program should adopt the proper mix of explicit teaching and activities where incidental learning can occur. (Schmitt, 1997) In the sphere of vocabulary instruction, many teachers seem to prefer using contextual clues believing students will learn word incidentally and depend on using dictionary less. However, some studies reveal that "guessing words' meaning from context would be effective for readers who already have some vocabulary knowledge to deal with the words in the surrounding context of the target words." (Schmitt 2000, p. 145) It should be noted that contextual clues are useful only for those who have already acquired

a large number of vocabulary, but for learners whose vocabulary is limited, they should have enough vocabulary repertoire in order to use context clue strategies. Therefore, for beginning learners, explicit learning is important to help them gain enough vocabulary so they can guess the meaning of the unknown words they meet in context.

2.1.3 Vocabulary Learning Facilitation

One way of facilitating vocabulary learning that has been increasingly received attention is using vocabulary learning strategies. (Schmitt, 2000) Celce-Mercia (2011; cited in Siriganjanavong, 2013) suggests that strategies can help learners remember and acquire words. Learning strategies are steps taken by students to enhance their own learning. (Oxford, 1990) In addition, Rubin, (1987; cited in Schmitt, 1997) defined learning strategy as "the process by which information is obtained, stored, retrieved, and used", and here 'use' is defined as vocabulary practice rather than interactional communication.

Foreign language learning strategies are specific actions taken by learners to make learning easier, more enjoyable, more self-directed, more effective and more transferable to a new situation (Oxford, 1990). In order to master an adequate number of vocabulary, learners need to invest a lot of effort for their own learning. Individuals need to work on their own to remember and retain a number of vocabulary items, though storing a lot of words in memory is a challenging task. Oxford and Nyikos (1989; cited in Boonkongsaen, 2012) suggest that learning strategies can foster learner independence, autonomy and controlled over their learning.

Many scholars propose different classifications of vocabulary learning strategies. In this study, the taxonomy of VLSs by Schmitt will be adopted. Schmitt (1997) develop the taxonomy from Oxford (1990) system which is widely accepted and organize them into two classes containing 6 groups.

The first class is the strategies used for the discovery of a new words' meaning while the second class is the strategies for retrieving the meanings of words when encountering the words again. In this study we are going to find out the effective of strategies for retrieving the meaning of words. Memory strategies and Cognitive strategies are subsumed under this class. "Memory strategies" (traditionally known as mnemonics) where learners retain words by connecting words with some previous

knowledge such as pictures, related words, grouping or word's orthographical and phonological form as Keyword. "Cognitive Strategies," which are similar to Memory strategies but not focus so specifically on manipulative mental processing, include oral or written repetitions, word lists and note taking.

From the above taxonomy, it can be concluded that Keyword Method belongs to Memory Strategies, while Rote Learning is in Cognitive Strategies. However, it is still controversial whether rote learning should be classified as Cognitive Strategies as mentioned in the study by Li Xiuping (2004)

" There is almost no consensus in the literature as to which category RL exactly belongs. Confusion exists in the research literature as to what strategies should be subsumed under which category headings. For example, repetition is subsumed under the category of memorization in Rubin's (1981), Grains & Redman's (1986), Purpura's (1994) typology, but classified as a cognitive strategy by O'Malley et al. (1985), Oxford (1990), and Schmitt (1997). "

The concept of RL in the present study will be developed by adapting the taxonomy from prior research in this area. Therefore, the current study categorize rote memorization as Cognitive Strategies since the learners in a rote learning group do not relate the target words to previous knowledge through visual and verbal imagery as a Memory Strategy.

Schmitt (2000) claimed that the common vocabulary learning strategies which have been commonly used tend to be simple memorization and repetition, and these strategies are often favoured over more complex ones as the Keyword Method. Additionally, Cohen & Aphek as cited in Schmitt (2000) states that a shallower activity as rote memorization may be more suitable for beginners because it contains less distraction. On the other hand, a deeper activity as Keyword Method is also investigated and found effective since it involves a kind of elaborative mental processing that enhances long-term retention. (Schmitt, 2000)

2.2 Vocabulary Learning Strategies

2.2.1 Mnemonics and Vocabulary Learning

Mnemonics are memory aid. Mnemonic technique makes use of the

associative nature of human memory by visually associating the item to be remembered with some cues that is easily remembered. This cue acts as the retrieval aid for the item. The keyword technique is a mnemonic device specifically useful for learning vocabulary words in a foreign language. By using this technique as Atkinson (1975) proposed, the learner creates a visual image in the form of word or phrase from the L1 word that sound like the target L2 word. The visual image is a retrieval cue to recall the meaning of L2 words. Mnemonic techniques aim at organizing the storage of information more elaborately and integrating the new information with prior knowledge into a cohesive whole. Craik and Lockhart' (1972) depths-of-processing theory provides the theoretical basis for keyword method. "Depth" refers to a greater degree of semantic or cognitive analysis. Through keyword, learners learn and analyze words deeper with the elaboration coding. Moreover, the Dual-Coding Theory (Paivio, 1991) also shed light on supporting the keyword method. The theory assumed that there are two systems that handle cognitive process, the verbal that deals with language and the nonverbal system that deal with nonverbal objects or events. The two systems support each other, or else if another system fails to be recall the other system assumed to be still working. This theory also corresponds to the principle of learning style of the second language learners which might be varied from visual or auditory to kinesthetic learning. Gass and Selinker (2008) said that most successful learners use a variety of modalities in learning so they are facilitated by various modes for the incoming information.

2.2.2 Mnemonics

The term Mnemonic-Keyword Method was coined by Atkinson (1975). The method consists of two stages; namely, acoustic and imagery links. Firstly, the foreign word is remembered by being linked to a keyword, a sound-like native word (the acoustic link, through an interactive image that involves both the foreign word and the native word (the imagery link). The example of Keyword will be here drawn from the sampling items from Siriganjanawong's study (2013), the word "amendment" which means change, adjustment, improvement can be sounded out to the similar Thai word "Ah! mend..mend" meaning "Ah! What's a stink!" The word "Ah! mend..mend" in Thai is a keyword which displays a picture of a person in a dirty and stinky clothe. When learners encounter the word "amendment", the pronunciation of the word

remind the learners of the word, "change" because the bad smell gives an idea that there needs to be a change or improvement somehow. By this method, L2 word is remembered by being linked to a keyword in L1. Several researches agreed that a keyword method is superior to other methods such as rote repetition and a semantic method.(Sagarra, N. and Alba, M. 2006) Although the keyword technique looks quite bizarre at first sight, its effectiveness lies in its association of the use of aural and imagery cues.(Nation, 1990) One difficulty with the keyword technique is that it is often difficult to think of the keyword that sound like the foreign words. The technique will be very beneficial if teachers can provide a keyword that has a clear picture linking L2 to L1.

The theoretical framework for the encouragement of using a keyword method in vocabulary learning lies in its strength of verbal linkage and visual imagery in the memory process. Two empirical support theories, Paivio's (1997) Dual-Coding Theory and The Depth of Processing' learning theory (Craik and Lockhart,1972) will be elaborated here to explain how keyword work better in enhancing learning and memory. Memory is a basic of any psychological phenomenon since without memory we will never recognize things, and we will apprehend things over and over again like we know it for the first time. Learning vocabulary is a kind of memory task due to a large numbers of words that learners need to store in their head. Schmitt (2000) stated in his book that psychology has very close ties with the area of language learning and processing. This concept relates to the explicit language learning that the more one manipulates, thinks about, and uses mental information, the more likely that one will retain that information. This theory is called the Depth of Processing. In the case of vocabulary, the more one engages with a word, the more the word will be remembered in longer memory (Craik and Lockhart, 1972). Keyword is claimed to be one kind of deep processing learning. How well learners remember or recall words depends on how learners deal with words while they learn. According to Schmitt (2000), there is evidence, both in audition (Moray, 1959; Norman, 1969), and in vision (Turvey, 1967), that repetition of an item encoded only at a sensory level, so it does not lead to a development in memory performance. Practicing or learning vocabulary by repetition deals mainly with articulations, thus words can be stored in a short time, while keyword connects the learnt words with semantic cues so it tends to hold longer

in the memory as well as being easy to be recalled from long-term memory.

In addition to this, Shapiro and Waters (2005) pointed out, memories are stored in two different coding systems in Dual-Coding.

" Theory with different levels of processing ranging from shallow to deep. Shallow processing highlights surface features of words to be remembered such as sounds, orthography, or physical features such as the number of vertical lines in a word, while deep processing focuses on meaning. The richer the meaning of an item to be remembered, the deeper the processing and the more it will be recalled (Craik and Lockhart, 1972 as cited in Shapiro and Waters, 2005). Such strategy associates the meaning, sound, and image of the L1 and L2 has been found to improve retention (Hulstijn, 1997; Pressley, Level, & Miller, 1982, as cited in Fan, 2003)."

Therefore, this study believes that the deeper processing of words through the keyword method will enhance learners' word learning more effectively than the shallower on as the rote memorization.

2.2.3 Rote Memorization

Rote as defined in Oxford Advanced Learner's Dictionary (2005, 7th edition) is a process of learning something by repeating it until you remember it rather than understanding the meaning of it. Nation (2000) additionally indicates that repetition is essential for vocabulary learning because there is so much to know about each word that single encounter cannot provide learners enough quality of that word. Moreover, Nation (1982) also claims that rote learning is an effective way of learning a lot of words in a short time. In addition to this, Gairns & Redman (1987) comment on rote learning that repetition provided students with an opportunity to practice oral and written forms of vocabulary items in the early stage of learning, which is found facilitative for language learning improvement. The features of rote learning proposed by Gairns & Redman (1986) are, for example, to read silently or aloud, to write down the items more than once, to learn from lists and to find definitions or translation equivalents. The concept of rote learning in term of vocabulary study in this study will refer to the combination or repetition and memorization following the feature described above.

2.2.4 Related Studies

A study by Campos (2003) indicated that a rote method is significantly more effective as opposed to a keyword method. The results from both immediate and 1 week-delayed translation tests used to measure the effectiveness of the two methods among secondary and university students whose L1 is Spanish showed better scores of rote memorization group. In rote learning fifteen L2 Latin words and L1 equivalents are provided to both secondary and university students to study (at their own pace) for 30 minutes, while in keyword method, the teacher gave images and keywords of 15 target words to learners.

O'Mally & Chamot (1990) suggest that teachers should consider culture when teaching L2 since learners from different culture sometimes have quite different opinions about the usefulness of various vocabulary learning strategies. The same researchers also conduct a study and found that Asian learners who receive strategies training perform worse than the Asians who use rote repetition strategy. O'Malley et al. found Asian students' persistence to using strategies for imagery and grouping to learn vocabulary definitions. Asian students were found to rely on rote memorization strategies for vocabulary task. The students' prior educational experience is a part of their cultural background. They found that students whose initial educational training emphasized rote memorization of curriculum content may have developed quite effective memory strategies. In addition, this could be due to the differences in phonological and orthographical forms of English and Thai. Unlike Spanish language, the language that is often examined their comparative effects has more shared characteristic with English language.

De Groot and Van Hell (2005) raise 5 strong points of rote learners as opposed to keyword method. Firstly, rote learning outperforms keyword learning in short-term benefits. Secondly, since the recall takes place through keyword, the retrieval of words in rote learning is faster. Another point is that simple words can be memorized better by rehearsal. Next, rote memorization is more beneficial for a productive test. Finally, rote learning is suitable for advanced learners, while keyword learning is effective for beginning learners.

On the other hand, there are many studies examined the effectiveness of different versions of keyword method in enhancing vocabulary learning as compared to other learning techniques. For example, the study by Sagarra and Alba (2006) investigated the effectiveness of three methods, namely, rote memorization, semantic mapping and keyword method of learning L2 vocabulary among 778 beginning English learners of Spanish. The findings revealed that vocabulary learning techniques requiring deeper processing through form and meaning association as a keyword method promoted better retention in L2 vocabulary learning at the early stage in a classroom. 24 English two syllable nouns sharing the same frequency of occurrence and level of imageability ranked by the native speakers are tested. In the rote memorization method, students were asked to write the word-translation pair and read. On the other hand, in the keyword method, they were asked to connect L1 to L2 word by finding a word or sentence that look or sound like L2. While in semantic mapping, they were asked to write the words that are associated with the target L2 words. The researchers additionally suggested that it is effective when presenting a word, whether the teacher provided learners with keywords or helped them create the keywords.

There are findings of other studies in a natural classroom setting. For example, the study by Rodrígue and Sadowki (2000), examined the effect of rote rehearsal, context, keyword and context/keyword methods on immediate and long-term retention of English vocabulary. The study yielded the same results on the keyword method effectiveness. The participants were 160 9th grades from two different schools in Venezuela and randomly assigned to one of the four learning conditions. The experimental words consisted of 15 English nouns rated on 1-7 scales for imaginary, concreteness and meaningfulness and are regarded as low frequency words. The participants in rote learning received a booklet containing L2 words and L1 translations. In the keyword learning condition, students had keyword provided more in a booklet. In context strategy condition, the examples of the L2 words were given. Finally, in the context/keyword method, participants received both keyword and sampling sentences of the L2 words. The results from the immediate test, a multiple-choice test and a cued-recall test requiring participants to translate L2 into L1 is used in a 1 week-delayed posttest revealed that context/keyword is superior to other FL vocabulary methods under varying circumstances.

In Thai context, Siriganjanavong (2013) conducted a study to explore the effectiveness of two methods, keyword method and mixed method in low proficiency English learners on the vocabulary acquisition and retention. The participants were 44 low proficiency students (measuring from their O-Net scores) from one intact non-credit English class. There were 40 target words, 20 words used in the keyword method experiment and 20 words in the mixed method. The researcher adopted a multiple-choice test to assess students' performance before and after the treatment. Moreover, a cued-recall test requiring students to fill in the word meaning in Thai or its English synonym was used to measure the short-term retention. Under keyword method, learners were presented L2 words with L1 word or sentence that has similar sound and/or meaning to the new L2 vocabulary. In addition, by using the mixed method, students were instructed to perform structure analyses, contextual clue guessing and opposite word-pair. The results showed that words taught by the keyword method could be better recalled both in short-term and long-term memory.

CHAPTER 3
RESEARCH METHODOLOGY

The chapter explains the methodology used in this study. It describes the research participants, instruments, procedures, treatments, data collection and data analysis. Two groups of students were assigned to two treatment conditions, rote memorization and keyword method techniques. The pretest and posttest both immediate and delayed, were used to measure the effect of the two instructions. In the following, an observation on a learning involvement is also employed as another assessment of the keyword effect.

3.1 Research Design

In order to answer the research questions, the researcher adopted two groups of students and assigned them to two teaching techniques. One group was assigned to the traditional method named rote memorization. Another group was assigned to the experimental treatment, the keyword method. To facilitate the natural classroom setting, the students were from two classes so they did not know they were being in an experiment. The researcher tried to maintain the homogeneity across the groups by measuring the participants' English proficiency level. Their English LAS (Local Assessment System) scores (done when they were in fifth grade), their test scores from O-Net tutoring course and their O-Net tests' score (using previous-year tests) were collected. Moreover, their attention in learning was also considered. Both groups were taught by the researcher.

A 2 condition (keyword vs rote rehearsal) × time (immediate vs delay) design was implemented. The effectiveness of the teaching treatments was calculated in 2 phases. The first phase was a within-group design in which immediate and delayed posttests' mean scores from each groups, rote and keyword were compared. The second phase was a between-group comparison. The decreases in mean score from a posttest to a 2-week delayed posttest obtained from the keyword and rote method were compared.

3.2 Participants and Setting

The study was conducted in a suburban public school in Khun Han District. Students in sixth grade were selected to participate in this study. The natural classroom setting was maintained as much as possible. During the experimental period, the researcher taught both groups.

3.2.1 English Class

Students in grade sixth were required to study English three hours per week. According to their overall English level, most of the class hour was spent on learning and practicing vocabulary necessary at the grade level. Few grammar rules were taught. Words learned are usually picked up from the textbook by the teacher since students are low-proficiency in English so they cannot follow the entire textbook.

3.2.2 Students

The samples for this study were sixth grade students in Kudnakaew School. There were 2 classes for sixth grade students. The first class comprised of 15 students in which 4 of them were classified as LD(learning disability) students according to the school LD System). The second class combined with 14 students with 3 LD students. The LD students were excluded in this study.

3.2.3 Participants

The participants will be selected from grade 6 students attending two intact classrooms consisting of twenty-nine students. All of them had not been exposed to the keyword method before the experiment. The participants had not been notified that they would participated in the study since they still learned English in the normal class hours and in their own classrooms with their peers in order to have a natural classroom setting. The researcher collected data from the students who meet the criteria of the study. There were those whose English ability and learning attention were considered comparable. These students were assigned into two experimental groups. The first group (8 students in the same classroom) was taught with rote memorization. Meanwhile, the other group (another 8 students in the same classroom) was introduced to the keyword method. 18 students from the two classes who were selected to be participants received less score in pretest. (see appendix B for the pretest)

3.3 Experimental words

The materials of the present study included 18 experimental English words (6 words per hour, 3 class hours within a week, 1 week of treatments) selected from the word list (see Appendix A for vocabulary list items). The words belonged to the same grammatical category (nouns), the same length (2 syllables) and are of similar frequency of occurrence (low frequency) based on the Corpus of Contemporary American English (COCA). Additionally, the low frequency vocabulary boundary was lowered to the 9,000 level according to the assessment of vocabulary size of Schmitt and Schmitt (2012). The experimental words needed to be easy to link to L1 translation. The researcher picked up the words that are unknown for the participants and also easy to find the keyword. The teacher first suggested the prepared keyword before letting students share their ideas about the keyword of their own since the current study adopted a mixed way (teacher and student-generated) to generate the keyword. With regard to the concept of keyword method that assists students to engage and associate new materials with existing knowledge in a meaningful way, the researcher decideded to use both ways to build up a keyword for each word. Apart from this, studies demonstrated various results on teacher-generated and student-generated keyword. (Liu, 2008) Finally, only the words that were unfamiliar to the participants according to the pretest' result were used in the study. The Experimental words were selected from vocabulary for grade 6 students collected from 15 textbooks published on The National Institute of Education Testing Service (Public Organization) or NIETS.

3.4 Instruments

The measurement instruments used in this study were created by the researcher. The pretest was administered as a vocabulary selection test before the implementation of the treatment conditions. 18 experimental words were randomly divided into 3 study sequences (6 words each). They were assigned to 3 study hours within 1 week. Immediate posttest was administered after each class hour. Students had 10 minutes to complete the test. In the last class hour (the 3rd sequence) of the two treatments, the researcher reviewed all of the 18 experimental words. After that, the cumulative posttest measuring the participants' vocabulary knowledge was given in this review

class. Finally, the delayed retention posttest was given 2 weeks after the cumulative posttest.

The vocabulary items on all measurement instruments were presented in a randomly sequenced format. The translation test was used in this study because the straightforward translation test could provide the results that demonstrate the full potential of the treatments. By having students write the vocabulary meaning, the chance of getting the item correct due to the guessing was eliminated. Moreover, participants' reflection and interaction toward the treatments were observed and recorded by the researcher. Participants' notebooks were also checked to ensure that all procedures were followed.

3.4.1 Pretest

Prior to the treatment, participants have to complete a pretest to access previous knowledge of the experimental words. For the pretest (see appendix B for the pretest), the participants were asked to translate 35 English words into Thai. This test aimed to confirm that participants were unfamiliar with the target words so that the results could be claimed to be from the treatments. Any words participants known was excluded from this study.

3.4.2 Immediate Posttest

After each experiment, 8 words learned were tested to evaluate the participants' short-term memory. (see appendix C for three of the immediate posttests) Translation test was adopted. The participants had to write the translation of English words or the keyword cues. One point was given to the correct translation, while only keyword or cue answered was not get any point but it was collected and discussed with the result of the study as one of the learning process.

3.4.3 Cumulative Posttest

The cumulative test (see Appendix D) performed quite like an immediate posttest aiming to investigate the participants' performance over 18 experimental words once at a time immediately after all treatment sequences. The test was delivered after the review of all 18 target words in the 3rd study hour.

3.4.5 Delayed Posttest

To measure the participants' lexical learning and long-term retention, a 2-week delayed posttest was administered. The test consisted of 18 word items from

3 times treatment. The test was similar to the cumulative posttest but the experimental words order were arranged differently. To avoid confusing results, the presentation order of the target words in all types of tests was different from any other presentation order in the treatment.

3.4.5 Classroom Observation

The researcher decided to observe the participants' interaction toward the treatments during studying and testing instead of using a survey or interview. The students were nervous to have a formal survey or interview, so it would be more natural to observe students' perspective toward the teaching methods.

3.5 Procedures

In the first week, the pretest was distributed for the purpose of vocabulary selection and the participants did not know the purpose of the test. Then, two groups of participants were presented with 6 words in 3 normal class hours within 1 week (2nd week). Considering Bonomo 1973 (cited in Rodríguez, M. and Sadowki, M. (2000) that in general, no more than about eight new words should be presented at one time; otherwise, it is manageable by students. According to the participants' proficiency, the researcher proposes that 6 words taught a day is an appropriate amount. In all learning conditions, the pronunciation of the English words was stressed.

Following the presentation of 6 words on each hour, the immediate posttest was distributed to test the participants' ability to retrieve the words in short-term memory. At the end of the third class hour, all experimental words were reviewed and cumulative posttest was administered to measure students knowledge of all word learned cumulatively. Finally, 2 weeks after this they were assigned to complete a delayed posttest measuring their ability in recalling the retention of target words' meanings.

Table 1 Timetable of Treatments

Weeks	Days	Procedures	Time (min)	Note
1	1	Pretest	30	To select the words that students do not know
2	1	Treatment (1st hour) Test	30 10	6 words taught and tested
	2	Treatment (1st hour) Test	30 10	6 words taught and tested
	3	Treatment (1st hour) Test	30 10	6 words taught and tested
		Review Cumulative Test	20 20	18 words were reviewed and cumulatively tested
3				
4				
5		Delay Posttest	20	18 words were tested as a delay retention

3.6 Treatments

In all learning conditions, the pronunciation of the English words was stressed.

3.6.1 Rote Memorization

3.6.1.1 Learners write down the words.

3.6.1.2 Learners spell and pronounce the words along and after a teacher.

3.6.1.3 Learners look up for the meaning of the word in a dictionary.

(The dictionary is recommended by the teacher, it provides only one to two definition(s) of each word which is considered appropriate for their level.)

3.6.1.4 Teacher presents the meaning of the words and learners check their answers.

3.6.1.5 Teacher gives an example of each word in sentences.

3.6.1.6 Learners memorize the words by repeating them for several times.

It should be noted here that in order to be sure that participants in the rote learning and keyword method group had quite an equal chance to be exposed to the

target word, dictionary was used. According to Gairns & Redman's (1986) rote learning concept, getting the meaning of a word through a dictionary or teacher is one of rote learning' s features. It was expected that students will have an equal time to be exposed to the word fair enough through a dictionary (see Appendix F for the lesson plan of the rote learning group).

3.6.2 Keyword Method

3.6.2.1 Learners write down the words.

3.6.2.2 Learners spell and pronounce the words along and after a teacher.

3.6.2.3 Teacher demonstrates how to remember words easier by linking to L1 by presenting the keyword generated by teacher first before having students share their ideas of their own keyword.

3.6.2.4 Learners discuss among their peers about the keyword of each word and present to the class until the class comes up with the best keyword.

3.6.2.5 Teacher gives an example of each word in sentences.

3.7 Data collection

The study adopted translation tests to assess the receptive ability of the participants in learning and recalling the target English vocabulary. In following, the development of learners' learning was also observed and measured during their learning process.

3.8 Data Analysis

In order to compare the effectiveness between the rote memorization and keyword method vocabulary learning strategies on learning and retention of English vocabulary, t-test was used for comparison. There was comparison between the participants' mean scores of the immediate, cumulative and delayed posttest by using t-test.

CHAPTER 4

RESULTS

Statistical analyses were conducted using IBM SPSS Statistics 17. Descriptive statistics was also used to discover if there was any difference between the rote memorization group and the keyword group. Immediate, cumulative and delayed posttests were used to measure the treatment conditions' effects on learning and recalling of newly learned vocabulary.

The translation posttests were checked and given one point per correct answer. A descriptive analysis with means and standard deviations for each teaching technique in all treatments for immediate, cumulative and delayed posttests is shown in table 2.

Table 2 Means and standard deviations from the immediate, cumulative and delayed posttests according to the different teaching methods

	M	**SD**	**Std. error mean**	**t-test**	**Sig.**
Immediate					
Rote	16.00	.535	.189	-.798	.438
Keyword	16.25	.707	.250		
Cumulative					
Rote	11.88	.835	.295	-.559	.559
Keyword	12.13	.835	.295		
Delay					
Rote	7.25	1.165	.412	-2.147	.050*
Keyword	8.38	.916	.324		

Mean percentages revealed that retention from immediate to the cumulative posttest decreased equally by 4.12 % with the rote learning and the keyword method. On the other hand, the scores decreased from cumulative to the delayed posttest with the rote learning (4.63%), was higher than those of the keyword method (3.75%). This suggested that the keyword method is a better vocabulary teaching method for long-term beneficial effects than the rote memorization.

The results and discussion of the study were divided into 2 main parts. The first part focused on the first research question, which type of techniques helps students learn vocabulary better. The second part involved the question which type of techniques better helps students retain vocabulary knowledge. In order to assess the effects of each treatment method, an independent t-test was used to measure a between-group effect and a paired-sample t-test was used to measure the within-group effect.

Pretest

Pretest was examined to assess the participants' knowledge of the sampling vocabulary before treatment. It is necessary that participants did not have any knowledge about the target words before the treatments or else the results failed to determine the real effect of the treatments. The result indicates that before the treatments both groups did not know any meaning of the target words when the words were both presented literally and orally.

4.1 Part 1

To compare the effectiveness of the teaching techniques in helping students learn vocabulary in short-term memory, the scores from the immediate translation test consisting of 18 items (6 items per 1 sequence) in each learning conditions were investigated. The mean scores that participants received in each treatment are provided in Table 3.

Table 3 Means and standard deviations from the immediate posttests according to the different teaching methods

	M	SD	Std. error mean	t-test	Sig.
Immediate (Rote)	16.00	.535	.189	-.798	.438
Immediate (Keyword)	16.25	.707	.250		

It can be seen that immediately after the treatments, the mean scores from participants in rote learning condition (16.00) was a little bit lower than the scores from participants in the keyword condition (16.25). The mean score was just .25 points different. This result could possibly be due to the short-time memory effect thus students in both conditions could still remember the words learned.

Therefore, the immediate cumulative posttest was respectively brought to find out if they can hold the vocabulary knowledge from the whole study week.

Table 4 Means and standard deviations from the cumulative posttests according to the different teaching methods

	M	SD	Std. error mean	t-test	Sig.
Cumulative (Rote)	11.88	.835	.295	-.559	.559
Cumulative (Keyword)	12.13	.835	.295		

Table 4 mirrored the decrease in mean scores in both treatments, keyword (12.13) and rote learning (11.88). It revealed that when all 18 words were tested once at a time at the end of the study week, participants in both conditions tended to forget the learned words nearly at the similar rate. In term of short-term memory, no significant difference was found between the keyword and rote learning groups in term of their performance on both immediate (sig. = .438) and cumulative (sig. = .559) posttest scores.

From the researcher's observation while participants were studying the target words, in the keyword group students mentioned that they were unfamiliar with this

funny technique. At the beginning of the class, some of them did not want to draw pictures of keywords but wanted to just have them remember the words as usual. This might implied that at the initial stage of learning new technique, students cannot adopt the new way of learning words properly since they were more accustomed to the rote rehearsal. Therefore, participants in both groups performed quite similar. Table 4 obviously showed how similarly participants from both treatments performed.

Table 5 The decrease in mean scores from immediate to cumulative posttests obtaining from the rote and the keyword method

	M	SD	Std. error mean	t-test	Sig.	Mean Difference
Rote	- 4.1250	.83452	.29505	.000	1.000	.00000
Keyword	- 4.1250	.64087	.22658			

Table 5 presented the decreasing rate in mean scores from immediate to cumulative posttests of both rote learning and the keyword learning conditions. When using an independent t-test to compare reducing scores between two teaching methods, it was found that there was no significant difference in the score for both treatments (t-test = .000, sig. = 1.000). The overall mentioned results suggested that the rate of learning and forgetting words taught by rote learning and keyword method was equal.

As Takac (2008) proposed that in learning vocabulary both learning and forgetting can occur. In order to retain the vocabulary knowledge words need to be recycled and repeatedly exposed to. (Gass and Selinger, 2008) Therefore the time might be too short for students to remember 18 words learn as their English proficiency is low. In addition, for short-term both treatments yielded the similar effect partly because the unfamiliarity to the new technique as well.

4.2 Part 2

To assess the effect of each treatment on long-term retention (2 weeks), a cumulative test results and delayed retention posttest results were investigated. The decreasing rates from cumulative posttest and 2-week delayed retention posttest were

compared. Table 6 revealed the mean scores the participants obtained from cumulative and delayed tests from different methods.

Table 6 Paired-Samples statistics shown the mean scores the participants obtained from cumulative and delayed tests from different methods

	M	SD	Std. error mean	t-test	Sig.
Rote					
Cumulative	11.88	.835	.295	11.014	.000
Delay	7.25	1.165	.412		
Keyword					
Cumulative	12.13	.835	.295	15.000	.000
Delay	8.38	.916	.324		

As regard the rote memorization method, the mean score from the cumulative posttest (M= 11.88. SD = .835) was higher than that of the delayed posttest (M= 7.25, SD= 1.165). The mean scores reduced significantly over two weeks. Likewise, as for keyword methods, the cumulative posttest score (M = 12, SD = .835) was higher than the delayed posttest (M = 8.38, SD= .916) and the reducing rate was significant. However, when the reducing rates of the two treatments were compared, it yielded no significant difference (t = -1.886, Sig. (2-tailed = .080) as shown in table 7.

Table 7 The decrease in mean scores from cumulative to delayed posttests obtaining from the rote and the keyword method

	M	SD	Std. error mean	t-test	Sig.	Mean Difference
Rote	-4.6250	1.18773	.41993	-1.886	.080	-1.00000
Keyword	-3.6250	.91613	.32390			

Table 7 presents the decrease in mean scores from rote learning and the keyword methods by comparing between the scores students obtained from cumulative translation and the delayed posttest. The mean score of rote learning (M = -4.6250, SD = 1.18773) showed the higher decreasing rate than that of the keyword method (M = -3.6250, SD = .91613). When using an independent t-test to compare the reducing scores between the two strategies, it was found that rate of forgetting words taught by rote learning is higher than those taught with the keyword method. Although the decreasing rates ware not statistically different (Sig. = 0.80), the comparison between the mean scores of the delayed posttests among two treatments indicated that the keyword learning group significantly outperformed the rote learning group. As can be seen in table 8, the participants in the keyword group (M = 8.38, SD = .916) performed significantly better(t = -2.147, Sig. = .050) than the rote memorization group (M = 7.25, SD = 1.165).

Table 8 Means and standard deviations from the delayed posttests according to the different teaching methods

	M	SD	Std. error mean	t-test	Sig.
Delayed (Rote)	7.25	1.165	.412	-2.147	.050*
Delayed (Keyword)	8.38	.916	.324		

Although the forgetting rate of the keyword learning seemed to be just a bit slower than the rote rehearsal, the mean score from the delayed posttest of the keyword method was significantly higher than that of the rote learning method. This finding partly was consistent with Sagarra and Alba's study (2006), which revealed that the keyword group attained the highest score in the delayed test, compared with rote learning and semantic mapping.

One possible reason that might obstruct the students to effectively learn and retain vocabulary was their weakness in English spelling. According to my observation, when students in both the keyword and rote groups were taking tests, they often asked me to spell the words so that they might be able to recall their meanings. Since the participants in this study had low proficiency in English, spelling is one of the

significant problems they need to be assisted. Nevertheless, the results yielded not a strong effectiveness of the keyword method over the rote memorization, the significant higher score of the keyword in delay posttest supported Schmitt's suggestion (2000) that to recall the meaning of the lexicon, memory aided technique such as keyword can effectively help learners find some preexisting information of the lexical item in the longer term memory than repetition only. The finding was also consistent with the learning theories proposed by Gass and Selinker (2008) that successful learners who use variety of modalities in learning styles are equipped with various modes for learning so they can retain the information longer. In contrast, employing only one learning style as in rote learning group, throughout the whole semester could lead to a boring class environment. Therefore, at the beginning of learning, students might feel uncomfortable with the new method but somehow its weirdness made them recall the meanings of the words better. During the test, participants in the keyword learning condition also referred to the keyword they learned when they read the words. This reflection partly supported the Depth-of-Processing Theory by Craik and Lockhart, 1972 in which learners link L2 words' sound with the familiar sound in L1.

CHAPTER 5

CONCLUSION

This chapter gives the conclusions of the study and their pedagogical implications including the current research's limitations and suggestions for the future research.

This study has practical significance for classroom teachers. Although the findings reveal a small piece of evidence supporting the effectiveness of the keyword method, the results from delayed posttest shows that the students in the keyword method group outperformed those in rote learning group. Even though, the keyword method is claimed to be effective for its imagery and acoustic cues that help words retrieval, in term of short-term memory, a traditional method as rote rehearsal can help students learn the words as well as a more elaborative keyword method. The results from both immediate and cumulative tests measuring short-term words recalling show that both strategies appear to be useful tools to help students learn English words. There was slightly difference in performance between the two techniques which seem to be due to the students' lack of experience or the unaccustomed feeling toward the new techniques. This finding is in line with suggestions proposed by O'Mally and Chamot (1990) saying culture should be taken into consideration when teaching L2 because opinions and familiarity toward the learning technique can play an important role in learning. Rote memorization is a type of technique that target students have been accustomed to, so students might not work well with the new technique at the beginning of the study or they might even rely rote learning sometimes. This is also corresponded to De Groot and Van Hell (2005) comments on rote learning pointing that rote learning is beneficial for its directness for retrieving words' meanings. Retrieval gets faster without keyword to get through.

However, the results from immediate and cumulative tests reveal a potential of students to hold word knowledge for just a short period of time. While the purpose of

vocabulary learning as proposed by Schmitt (2000) is to transfer words learned in short-term memory into long-term memory. Storing a large number of words in memory is a challenging task which individual need to work on their own to retain words, so when we learn words it is important to hold it in a long run. Therefore this study suggested that the memory-boosting potential of the mnemonic keyword method will take a greater part in enhancing long-term memory. In addition, the findings also indicate that there is a significant difference in the delayed posttest among students in rote and keyword methods. Students in keyword group outperform the students in rote learning group in recalling words' meaning after 2 weeks of studying. This finding is consistent with the previous studies. (Sagarra and Alba, 2006 ; Rodrígue and Sadowki, 2000 and Siriganjanavong, 2013) However, the difference between keyword and rote rehearsal groups was quite less than that reported in previous studies. This may be partially due to the level of students and their English proficiency as well as their lack of familiarity to the new technique. As reported in Chamot (1990) that Asian students are more familiar with the rote learning.

5.1 Pedagogical Implication

Based on the experimental results of the current study, the findings lead to several implications for pedagogical practice. First of all, introducing keyword method to grade 6 students with low proficiency in English can help to enhance their word learning retention. Secondly, the researcher observed that the students in keyword technique group enjoy creating the keywords after feeling awkward to the new funny method. During the experimental period specifically on the last couple periods, some students even shared their ideas on creating new keyword they felt it sounds closer to the target L2 words. The students said they want to learn other techniques. Usually students always enjoy learning new technique or new interesting activities that teachers provide. Therefore, teachers should try to apply new techniques or activities to the class in order to arouse them to learn. Strategies other than the mnemonic keyword method should be added to produce a variety of valuable information that would be practical in classroom.

Finally, many of the research papers suggested that the mnemonic keyword method is effective for teaching students with learning disabilities, LD henceforth. Nowadays, every school has an assistant system to help these LD students, it would be useful if researchers try this keyword technique with these students.

5.2 Limitations of the present study and Suggestions for future research

While keyword works quite well, it has some limitations. For example, it is difficult to think of keywords that sound like foreign words. In this case, it is more beneficial to apply other vocabulary retention strategies to help students retain and recall words' meanings. Moreover, since keywords, most of the time, sound silly to others, students should be motivated that they can make use of this technique. Students have to find the keywords that make sense for them and make the most meaningful link for them

As mentioned in Chapter 4 about some students' weakness in pronunciation and spelling that obstruct them to read out the words themselves. Another area of research should do in the future would concern about this problem. The key of the keyword technique is the sound that link L2 to L1, it would be problematic if the students cannot pronounce the words. Therefore, further research should consider taking phonics along with keyword method. In addition, since the keyword seek for L1 word that sound like L2, so it could affect the accuracy of pronunciation because sometimes we changed the L2 sound a bit to make it sound like L1. Especially when the students are beginning learners, the accuracy of words should not be neglected. In this study, the tests only measure the students' spelling ability, oral performance is excluded. Thus, it is recommended that future research can investigate the effect of the keyword method on word pronunciation.

Finally this study adopted two groups of students and the experiment was done in a normal classroom, while most of the previous studies have only one group of participants. There could be many limitations and factors differed among the two groups. The proficiency level of the two groups might not equally close enough and during the experiment they might share the technique with other groups.

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APPENDICES

APPENDIX A

Vocabulary List Items

Vocabulary List Items

	Word	Frequency	L1 Equivalents	Keyword
1	wizard	2,860	พ่อมด	(วี้-สาด) พ่อมดเสกให้สาด บิน (มีเสียง วี้ วี้) เป็นเสียงสาดลอยไปมา
2	toilet	6,398	ห้องน้ำ (ห้องสุขา)	(ทอย-เลต) เด็กชายทอยยืนคอยเข้าห้องน้ำเป็นคนสุดท้ายจนฉี่จะเล็ด
3	statue	5,583	รูปปั้น	(สแตช – ชู) รูปปั้นยืนชูมือ
4	tunnel	7,629	อุโมงค์	(เทิน-เนิล) อุโมงค์ที่สร้างอยู่บนเนินเขาถล่มลงมาเทินทับกัน
5	turtle	3,093	เต่า	(เทอ-เทิล) เธอ..เมื่อไหร่จะถึง ช้าเป็นเต่าเลย
6	reward	7,338	รางวัล	(รี-วาร์ด) รีบๆ วาดรูปให้เสร็จ จะได้ไปรับรางวัล
7	sunlight	8,334	แสงแดด	(ซัน-ไลท์) น้ำยาล้างจานยี่ห้อซันไลท์สีเหลือง เหมือนแสงแดดส่องสว่าง
8	poison	4,704	ยาพิษ	(พอย-สั้น) ชีวิตสั้น โดนวางยาพิษ
9	pirate	1,980	โจรสลัด	(ไพ-เรท) โจรสลัดอยู่ในป่าดงพงไพร
10	peacock	1,096	นกยูง	(พี-คอก) นกยูงตัวอ้วนพีถูกเลี้ยงไว้อยู่ในคอก
11	orchid	1.077	ดอกกล้วยไม้	(ออ-คิด) อาจารย์เอาปากกาไปเขียนบนกลีบดอกกล้วยไม้
12	noodle	920	ก๋วยเตี๋ยว	(นู้ด-เดิ้ล) หนูเดินเสริฟ์ก๋วยเตี๋ยว
13	napkin	2,098	ผ้าเช็ดปาก	(แนบ-คิ่น) เวลากินข้าวให้เอาผ้าเช็ดปากแนบตัว
14	kitten	1,178	ลูกแมว	(คิต-เท่น) คิตตี้เป็นลูกแมวตัวเล็กๆ กำลังเต้น
15	greeting	3,167	ทักทาย	(กรีต-ติ้ง) ติ่งเกาหลีร้องกรี๊ดกร๊าดเวลาดาราทักทายแฟนๆ
16	elbow	5,931	ข้อศอก	(เอล-โบ) เอาโบมาผูกข้อศอกไว้กับเอว

Vocabulary List Items

	Word	Frequency	L1 Equivalents	Keyword
17	diver	1,127	ดำน้ำ	(ได-เวอ) ได้เวอะ! ดำน้ำลงไปหาของเจอหรือยัง
18	diamond	8,066	เพชร	(ได-ม่อน) ผู้หญิงที่ได้ถือหมอนจะได้แต่งงานสวมแหวนเพชร
19	dessert	5,280	ของหวาน	(ดี-เชิร์ท) ดีๆ เอาของหวานมาเสิร์ฟ
20	orchard	2,216	สวนผลไม้	(ออด-เชิ้ด) ออดมากินผลไม้ที่สวนแล้วเชิดไม่จ่ายเงิน
21	guava	245	ฝรั่ง	(กัว-ว่า) กินฝรั่งแล้วกลัวว่าเมล็ดจะเกิดในท้อง
22	gadget	853	อุปกรณ์ขนาดเล็ก	(แกจ-จิด) ของก็อกๆแก๊กๆ กิ๊กก๊อก
23	florist	697	คนขายดอกไม้	(ฟอ-ริส) คนขายดูแลดอกไม้ดอกไหนฟ่อก็จะคอยลิดใบหรือดอกออก
24	fish sauce	341	น้ำปลา	(ฟิช-ซอส) ซอสที่มีกลิ่นฟุดฟิด คือน้ำปลา
25	dairy	4,360	ผลิตภัณฑ์เกี่ยวกับนม	(แด-รี่) แดดแล้วรีบไปรีดนม
26	costume	4,390	เครื่องแต่งกาย	(คอส-ตูม) เสื้อคอตูม
27	collar	5,685	ปกเสื้อ	(คอ-หล่ะ) มองเห็นแต่ปกเสื้อ ไหนคอหล่ะ มองไม่เห็น
28	closet	8,750	ตู้เสื้อผ้า	(คลอส-เซท) คล้องเสื้อผ้าไว้ในตู้เสร็จเรียบร้อย
29	canal	6,244	คลอง	(เคอ-แนล) ขุดคลองเป็นแนวยาว
30	candle	3,681	เทียน	(แคน-เดิล) ช่างแกะสลักเทียนเป็นรูปเทียนแล้วเดินแห่ไปรอบเมือง
31	balloon	4,041	ลูกโป่ง	(บัล-ลูน) ลูกบอลลูกนั้นลอยขึ้นไป
32	ankle	5,601	ข้อเท้า	(แอง-เคิล) แอ่งน้ำตื้นเขิน คนเดินมองไม่เห็นจึงลื่นล้มข้อเท้าพลิก
33	alley	6,150	ตรอก, ซอย	(แอล-ลี่) แอบลี่อยู่ตรงตรอกซอกซอย
34	chimney	1,729	ปล่องไฟ	(ชิม-นี่) ลองชิมนี่ดูขนมอบจากปล่องไฟ

APPENDIX B

Pretest

Pretest (1)

ให้นักเรียนเขียนความหมายของคำศัพท์ภาษาอังกฤษต่อไปนี้ให้ถูกต้อง

ข้อ	คำศัพท์	ความหมาย
1	wizard	
2	toilet	
3	statue	
4	tunnel	
5	turtle	
6	reward	
7	sunlight	
8	poison	
9	pirate	
10	peacock	
11	orchid	
12	noodle	
13	napkin	
14	kitten	
15	greeting	
16	elbow	
17	diver	
18	diamond	

Pretest (2)

ให้นักเรียนเขียนความหมายของคำศัพท์ภาษาอังกฤษต่อไปนี้ให้ถูกต้อง

ข้อ	คำศัพท์	ความหมาย
19	dessert	
20	orchard	
21	guava	
22	gadget	
23	florist	
24	fish sauce	
25	dairy	
26	costume	
27	collar	
28	closet	
29	canal	
30	candle	
31	balloon	
32	ankle	
33	alley	
34	chimney	
35	needle	

APPENDIX C

Immediate Posttest

Immediate Posttest (1)

1. ให้นักเรียนเขียนความหมายของคำศัพท์ภาษาอังกฤษต่อไปนี้ให้ถูกต้อง

ข้อ	คำศัพท์	ความหมาย
1	Diamond	
2	Dessert	
3	Napkin	
4	Chimney	
5	Closet	
6	Poison	

Immediate Posttest (2)

1. ให้นักเรียนเขียนความหมายของคำศัพท์ภาษาอังกฤษต่อไปนี้ให้ถูกต้อง

ข้อ	คำศัพท์	ความหมาย
1	Kitten	
2	Dairy	
3	Collar	
4	Greeting	
5	Canal	
6	Gadget	

Immediate Posttest (3)

1. ให้นักเรียนเขียนความหมายของคำศัพท์ภาษาอังกฤษต่อไปนี้ให้ถูกต้อง

ข้อ	คำศัพท์	ความหมาย
1	Pirate	
2	Wizard	
3	Turtle	
4	Peacock	
5	Tunnel	
6	Elbow	

APPENDIX D

Cumulative Test

Cumulative Test
ให้นักเรียนเขียนความหมายของคำศัพท์ภาษาอังกฤษต่อไปนี้ให้ถูกต้อง

ข้อ	คำศัพท์	ความหมาย
1	Chimney	
2	Closet	
3	Dessert	
4	Diamond	
5	Napkin	
6	Poison	
7	Greeting	
8	Canal	
9	Collar	
10	Dairy	
11	Gadget	
12	Kitten	
13	Peacock	
14	Tunnel	
15	Wizard	
16	Pirate	
17	Elbow	
18	Turtle	

APPENDIX E

Posttest

Posttest
ให้นักเรียนเขียนความหมายของคำศัพท์ภาษาอังกฤษต่อไปนี้ให้ถูกต้อง

ข้อ	คำศัพท์	ความหมาย
1	Chimney	
2	Closet	
3	Dessert	
4	Diamond	
5	Napkin	
6	Poison	
7	Greeting	
8	Canal	
9	Collar	
10	Dairy	
11	Gadget	
12	Kitten	
13	Peacock	
14	Tunnel	
15	Wizard	
16	Pirate	
17	Elbow	
18	Turtle	

APPENDIX F

Lesson Plan

LESSON PLAN

GRADE : 6th Grade (Room No.1)

UNIT : Tutoring Class (1st Class)

TIME : 10 minutes (before normal study starts)

ACTIVITY : Vocabulary Teaching (Rote)

VOCABULARY ITEMS : Diamond, Dessert, Napkin, Chimney, Closet, Poison

PROCEDURES

-   Teacher says the word and spell, while students write down the words as the teachers spells each alphabet for them. Then all 6 words are presented on the board, so students can check themselves if they write the correct words.

    Ex. Teacher : Word number 1 is "Diamond", D I A M O N D.

    Students : (Say the word and write it down)

-   After learners write down all the correct words, they spell and pronounce the words along and after a teacher.

-   Students look up for the meaning of the word in a dictionary.

    (The dictionary is recommended by the teacher, it provides only one to two definition(s) of each word which is considered appropriate for their level.)

-   Teacher presents the meaning of the words and students check their answers.

-   Teacher gives an example of each word in sentences.

-   Students memorize the words by repeating them for several times.

LESSON PLAN

GRADE : 6th Grade (Room No.2)

UNIT : Tutoring Class (1st Class)

TIME : 10 minutes (before normal study starts)

ACTIVITY : Vocabulary Teaching (Keyword)

VOCABULARY ITEMS : Diamond, Dessert, Napkin, Chimney, Closet, Poison

PROCEDURES

- Teacher says the word and spell, while students write down the words as the teachers spells each alphabet for them. Then all 6 words are presented on the board, so students can check themselves if they write the correct words.

> Ex. Teacher : Word number 1 is "Diamond", D I A M O N D.

> Students : (Say the word and write it down)

- After learners write down all the correct words, they spell along and pronounce the words along after a teacher.

- Teacher pronounce the word "diamond" and ask students to think of any Thai words that sound like "diamond", if students cannot figure out teacher gives them the Thai keyword and encourage students to draw a picture that can help them think of the meaning of "diamond" when hearing the keyword.

> Ex. Teacher : Diamond in Thai students may say "Dai Mon" which means getting pillow. * So when you say "Dia Mon" you can think of a woman getting pillow and about to get a diamond ring from her soon-to-be husband. Diamond means a precious stone.

> (If students do not suggest any keyword teacher then ask students to draw a picture related to the word.)

- Teacher presents the meaning of the words and students check their answers.

- Teacher gives an example of each word in sentences.

- Students memorize the words by repeating them for several times.

- • In Thai culture, if a woman holds a pillow in a man's ordination, they are going to marry.

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