

An Examination of the Usage of Vocabulary Retention Techniques (VRTs) of Thai Undergraduate EFL Students

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Abstract: *This study aimed to 1) investigate the usage of vocabulary retention techniques (VRTs) of the second-year students at Bangkok University 2) compare the usage of vocabulary retention techniques (VRTs) between achievers and underachievers 3) compare the usage of vocabulary retention techniques (VRTs) of the second-year students who have different reading behavior outside of class. The instruments used for collecting data were a questionnaire and an in-depth interview. Proportional stratified random sampling was employed to formulate a sample of 364 students from nine faculties of Bangkok University. The data were statistically analyzed in terms of mean and standard deviation. t-Test analysis was used to find the difference between achievers and underachievers on the usage of vocabulary retention techniques (VRTs). In addition, One-way Analysis of Variance (ANOVA) and Welch test were used to compare the usage of vocabulary retention techniques (VRTs) of students with different reading behavior outside of class. For the in-depth interview, six underachievers and six achievers were randomized through a simple random sampling technique to give their opinions on the questions provided, and the data were collected to assure the results of the study. The results of this study showed that the overall usage of vocabulary retention techniques (VRTs) of Bangkok University students was at a medium level, and significant differences existed in vocabulary retention techniques (VRTs) usage between the achievers and underachievers and of the students with different reading behavior outside of class. The findings of this research would help the teachers to improve the process and material for teaching and learning vocabulary retention techniques (VRTs) and raise awareness of vocabulary retention techniques (VRTs) among the students in order to enhance the students' lexical competence which can develop their reading comprehension. Pedagogical implications into teaching vocabulary retention techniques (VRTs) were suggested.*

Keywords: Reading comprehension, vocabulary retention

1. Introduction

Vocabulary is now a current focus in ESL pedagogy and research and has been increasingly recognized as essential to language use because inadequate vocabulary can lead to the learners' difficulty in language reception and production (Wei, 2007). Vocabulary knowledge is important because it encompasses all the words we must know to access our background knowledge, express our ideas, communicate effectively, and learn about new concept. Vocabulary is the glue that holds stories, ideas, and context together, making comprehension accessible for the readers. In addition, vocabulary knowledge is essential to reading comprehension and determines how well the readers will be able to comprehend the texts they read in middle and high school. If the readers do not know the meaning of a sufficient proportion of the words in the text, comprehension is impossible. Knowing at least 90 percent of the words enable the readers to get the main idea from the reading and guess correctly what many of unfamiliar words mean. In other words, the students will not be able to comprehend the text that has too many unfamiliar words more than 10 percent (Sedita, 2005). Likewise, Good and Cheng (2009) mentioned that reading comprehension is not successful because of the great unknown vocabularies that make it difficult or even impossible to get the main idea or specific detail of the text. Apart from the advantages to the language use, vocabulary knowledge was linked strongly to academic and professional success because the students who have a large amount of vocabularies can understand new ideas and concepts more quickly than the students with limited vocabularies. The high correlation in the research literature of vocabulary knowledge with reading

comprehension indicates that if the people do not adequately and steadily grow their vocabulary knowledge, reading comprehension will be affected (Chall & Jacobs, 2003 cited in Sedita, 2005; Beleghezadeh & Ashoori, 2010). In brief, vocabulary plays a vital role in language use, and academic and career advancement. As a result, a great deal of researches including empirical researches and theories about vocabulary learning and vocabulary acquisition to enhance vocabulary size which is directly linked to language use are in attention (Oxford, 1990; Nation, 2008; Wei, 2007; Good and Cheng, 2009). However, it is useless if the students learn a lot of words or possess a large number of vocabularies but they can't remember or retain in their long-term memories. Wei (2007) stated that nowadays long-term retention has received wide attention as one of the greatest problems in learning new words. Quinn and Irvings (1997) mentioned that the hardest way to learn the new words is to try to memorize a list of unrelated words and their meanings. The students need not only learn a lot of words, but to remember them. Unlike the learning of grammar which is essentially a rule-based system, vocabulary knowledge is largely a question of accumulating individual item. The important point is that the students must be able to store and retrieve the vocabularies when they read for comprehension (Thornbury, 2008). Similarly, the inability to recall the known words adversely affects not only reading comprehension but also spoken and written discourse (Wei, 2007). Therefore, the problem of remembering a large number of vocabularies is common for the English learners around the world as well as Thai students.

In Thailand, Thai students including Bangkok University students naturally like to learn word list by rote for examination which will disappear from their memories very soon, so this vocabulary retention method is proved useless and unproductive. This problem can lead to poor score of English reading test because they will forget the learned words very soon since they can't store and retrieve the words immediately (Folse, 2004). Moreover, there are several problems which make Thai students fail to learn new vocabularies which result in the inability to retain a large amount of new words in their long-term memories (Sribayak, Sirihanjanavong & Charoenchang, 2012). Here are the problems of Thai students.

1. They lack independent reading. That is, they do not like reading outside class, so they read less. The less the students read, the fewer the chances they encounter the new vocabularies.
2. They do not use context clues when reading. So, they can't infer and guess the word meaning from context. Hence, they can't unlock the meaning of the unfamiliar words and can't get the gist of the text.
3. They always look up the words in a dictionary to find the meaning of difficult words immediately when they encounter them which will interrupt their reading comprehension. Besides, they do not use a monolingual dictionary (English-English dictionary), but they use the pocket or electronic dictionary that can be misleading.
4. When they look up the meanings of the new words in a dictionary, they do not pay attention to parts of speech, word origins, and example sentences. Consequently, they cannot use those words appropriately and they will disappear from their memories soon.
5. They ignore the pronunciations of the new words they learned. So, they mispronounce the words which obstruct the ability to remember the new words.
6. They do not repeat the learned words despite the repetition promotes the word retention. What's more, they like to copy the vocabulary exercises from their friends, so they have no chance to repeat or recycle the learned words which will improve word retention.
7. They do not use the learned words to write the stories in their personal context.
8. They do not like independent study but they like being spoon-fed with the vocabulary knowledge and prefer the teachers to translate vocabulary.
9. They are usually overloaded with a large number of words each classroom time. This practice is not good because the words learned over spaced learning session were retained better than words that were learned in concentrated burst (Thornbury, 2008).

In order to solve the above-mentioned problems, Bangkok University teachers have educated the students about how to use vocabulary retention techniques abbreviated to VRTs in this research because they can help the students to store a large number of vocabularies in their long-term memories and recall or

retrieve to achieve reading comprehension (Oxford, 1990; Thornbury, 2008; Nation, I.S.P. , 2008; Nemati, 2009). Furthermore, VRTs will make the students happy to learn a lot of words as they can keep those words in memory which can contribute to optimistic attitude and increased confidence in learning vocabulary. Oxford (1990) stated that long-term retention has received wide attention as one of the greatest problems in learning the new words. Vocabulary is by far the most sizable and unmanageable component in language learning, but VRTs help the students to cope with this difficulty.

Therefore, this research would like to investigate what VRTs and how frequently the students employ as well as whether or not different groups of students (achievers and underachievers) and the students' reading behavior outside of class affect the usage of VRTs. The findings of this research will help the teachers to improve the process and material for teaching and learning VRTs usage and raise awareness about VRTs among the students in order to enhance the students' lexical competence which can develop their reading comprehensions when they read the text or other reading materials in their university courses and future careers.

2. Definitions of Terms

2.1 *Achievers* refer to the second-year students at Bangkok University who got grade A, B+, and B in an intermediate English course of the academic year of 2011.

2.2 *Underachievers* refer to the second-year students at Bangkok University who got grade C+, C, D+, and D in an intermediate English course of the academic year of 2011.

2.3 *Vocabulary retention techniques* which are abbreviated to VRTs in this research refer to the techniques by which the students use to store vocabularies in long-term memory and recall or retrieve easily to achieve reading comprehension. In this research, 12 types of VRTs which Bangkok University students have already learned are based on (Nemati, 2009; Thornbury, 2008; Oxford, 1990; Lenier and Maker, 1984). The definition of each type is examined as follows:

1. *Pronouncing the word correctly* refers to figuring out the pronunciations of the new words and speaking aloud and consistently.

2. *Using word study and context* refers to remembering the new words or expressions from collocation, word family or derivation, idiom usage, breaking down the new words, and context where the words are located.

3. *Checking etymology* refers to checking word history and origin of word. For example, to remember that "draconian" means strict and severe, the students have to read the history of Draco who is a lawyer passing a strict and severe law. To remember that "concur" means agree or happen at the same time, the students have to check the origin of word saying that it is from Latin and consists of "con" or "com" meaning together and "cur" meaning run. So, "concur" means run together, agree, or happen together which are closely similar to agreeing or happening together.

4. *Making visual picture* refers to either mental or actual picture of what has been heard or read. For example, to remember "taciturn" which means speaking very little and unfriendly, the students have to create the picture of their friends who have this characteristic, and whenever they see this word, they will close their eyes and make a mental picture of those friends. Another example is that when the students want to remember "pinnacle" which means the highest point, they will close their eyes and think of the picture of the mountain especially its top.

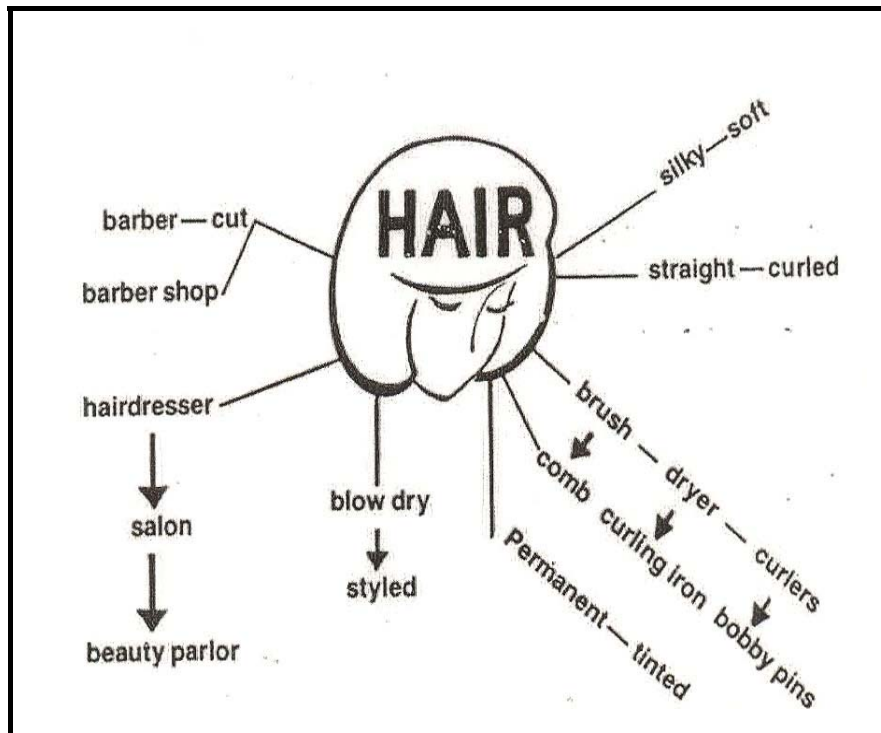
5. *grouping and making acronym*

5.1 *Grouping* refers to classifying words into categories in order to remember them easily. For instance, you group names of vehicles or tools as shown here.

(Vehicle : car, bus, train) (Tool : hammer, axe, chisel)

5.2 *Making acronym* refers to joining the initial letters of each word in order to make a new word. For example, "boyfans" is an acronym created by joining the initial letters of the following words: but, or, yet, for, and, nor, so.

6. *Mind map* refers to creating a diagram in which the key concept (stated in word) is highlighted and linked with related concept via arrows or lines. Below is an example of mind map where the concept "hair" is mapped with its related concepts.



Source: Oxford (1990, p. 64)

7. *Rhyming* refers to linking the new words with other words which have very similar sounds. For example, the students rhyme "callow" with "shallow", "eschew" with "shoo", and "gigantic" with "titanic."

8. *Doing vocabulary* exercises refers to doing the tests or exercises, which is equivalent to recycling the learned words in a different way from the time the students first met them, not in their original contexts. The tests or exercises include matching definition, filling in the blank, which word does not belong to, and prefix and suffix.

9. *Placing new words into a personal context* refers to writing the learned words and expressions the students are trying to remember in a sentence, paragraph or story relating to their lives and interests.

10. *Word association* refers to associating new words with the known or familiar words or with things, events, or concepts already in memory. For example, to remember that "microscopic" means small, the students could associate it with the known word "micro" which also means small, or when they want to remember that "mayhem" means chaos and confusion, they could associate it with Thailand's uprising called "Bloody May" taking place in May, 1992 when chaos was widespread in Bangkok, killing many people.

11. *Using keyword* refers to connecting the pronunciation of the second language (English) with the meaning of the first language (Thai) plus generating an imagination. For example, the students connect the sound of the English word "condolence" with the meaning in Thai "CON-DO-LOM" which means that the condominium collapsed, and they further imagine that when the condominium collapsed, many victims will die and be injured, causing the great sorrow. Normally, people should offer the sympathy and sadness to the victims'

relatives, which is equivalent to the meaning of "condolence." Another example is that the students connect the sound of the English word "jeopardy" with the meaning in Thai "JEB-POR-DEE" which means at risk, dangerous, and be destroyed. So, when something is in jeopardy, it means that it is at risk, dangerous, and destroyed.

12. *Repeating and reviewing* refer to rehearsing and practicing the learned words by saying, listening, speaking and writing several times over spaced intervals until the students reach the stage of automatic use.

3. Purposes of the Study

This study aims to:

1. investigate the usage of vocabulary retention techniques of the second-year students at Bangkok University.
2. compare the usage of vocabulary retention techniques between the achievers and underachievers.
3. compare the usage of vocabulary retention techniques of the second-year students who have different reading behavior outside of class (often, sometimes, and never).

4. Research Questions

1. What is the vocabulary retention techniques usage of Bangkok University students?
2. Do the achievers and underachievers have different vocabulary retention techniques usage?
3. Do the students with different reading behavior outside of class have different vocabulary retention techniques usage?

5. Literature Review

5.1 Types of Vocabulary Retention Techniques (VRTs)

Oxford (1990) suggested memory strategies, sometimes called mnemonics, which have a highly specific function: helping the students store and retrieve new information when needed for communication. Eight types of memory strategies are examined as follows:

1. *Grouping* refers to classifying language material into meaningful units, either mentally or in writing, to make the material easier to remember by reducing the number of discrete elements. Groups can be based on type of word (e.g., all nouns or verbs), topic (e.g., words about weather), linguistic function (e.g., apology, request, demand), and so on. The power of this strategy may be enhanced by using acronym to remember the groups.

2. *Associating / Elaborating* refers to relating new language information to concepts already in memory or linking the new word with one the students already know to create association in memory. The associations can be simple or complex, mundane or strange, but they must be meaningful to the students. For example, to remember that "erroneous" means mistaken, the students could associate it with the word "error" or to remember that "nonpartisan" means unconnected with a political party, they could associate it with the phrase "no party."

3. *Placing new words into a context or retrieval* refers to placing a word or phrase in a meaningful sentence, conversation, or story in order to remember it. It is the best way of ensuring the new words will be added to long-term memory.

4. *Using imagery* refers to relating new language information to concepts in memory by means of meaningful visual imagery, either in the mind or in actual drawing.

5. *Semantic mapping* refers to making an arrangement of words into a picture, which has a key concept at the center or at the top linked with related words and concepts by means of lines and arrows.

6. *Using keyword* refers to remembering a new word by using auditory and visual links. The first step is to identify a familiar word in one's own language that sounds like the new word-this is the "auditory link." The second step is to generate an image of some relationship between the new word and a familiar one-this is the "visual link." Both links

must be meaningful to the students. For example, to learn the new French word *potage* (soup), the English speaker associates it with a pot and then pictures a pot full of *potage*. To use a keyword to remember something abstract, such as a name, associate it with the picture of something concrete that sounds like the new word. For example, Minnesota can be remembered by the image of a *mini soda*.

7. *Representing sounds in memory* refers to remembering new language information according to its sound, such as using rhyme to remember a word.

8. *Structured reviewing* refers to reviewing in carefully spaced intervals, at first close together and then more widely spaced apart. This strategy might start, for example, with a review 10 minutes after the initial learning, then 20 minutes later, an hour or two later, a day later, 2 days later, a week later, and so on.

In addition, Pickrell (2010), Thornbury (2008), and Lenier & Maker (1984) also proposed other techniques for vocabulary retention. Here is the definition of each technique.

1. *Repetition* refers to repeated rehearsal of the material. The important repetition is not rote learning but repetition of encounter with a word since it has been estimated that, when reading, words stand a good chance of being remembered if they have been met at least seven times over spaced intervals.

2. *Motivation* refers to the students' wanting to learn new words and spend more time on rehearsal and practice, which in the end will pay off in terms of memory.

3. *Repeating new words out loud regularly* refers to taking the time to learn the pronunciation of certain words and practice saying them clearly with consistency. Repeat these words as often as possible and use them in a sentence to increase the retention skills.

4. *Practicing context* refers to practicing using words in the context or avoidance of learning fragments of word and phrase without context so that the students learn how to use the words correctly.

5. *Creating your own vocabulary list* refers to creating a list of words around a particular subject so that the students can learn them in context and practice using as often as possible in order to improve their rate of retention.

6. *Reading in the new language* refers to reading foreign newspaper, book, or magazine. Even if the students do not understand all of the words, they can pick out new words and look up their definitions as they go along. This will help them understand a lot of new words in context and also help them learn about sentence pattern and structure.

7. *Using flashcards* refers to putting the words on a flashcard by writing the word and its pronunciation on one side of the card, and writing the definition and a sentence using the word on the other side.

8. *Recycling* refers to doing the tests or exercises in which the students can encounter the learned words in a different way from the time they first met them, not in their original contexts. The tests or exercises include matching definition, filling in the blank, which word does not belong to, and prefix and suffix.

9. *Checking etymology* refers to checking word history and origin of word.

5.2 Related Researches on Vocabulary Retention Techniques (VRTs)

A number of related researches about the benefits of VRTs have been done. Some compare the advantages of VRTs while some experiment the benefits of a variety of VRTs. Two pieces of researches were done to compare the effect of 2 types of VRTs on students' long-term memories. The first one was carried out by Baleghizadeh & Ashoori (2010) who compared the effect of keyword and word list method on immediate retention of English vocabulary in a natural classroom setting. The results showed that the keyword method produced better recall compared to word list method, suggesting a promising educational value for its utility. Secondly, Pishghadam & Khodadady (2010) did an action research to compare the impact of visual and

verbal intelligence-based teaching on vocabulary retention and written production. Visual intelligence-based teaching is based on pictures, drawings, graphic symbols, and imaginations whereas verbal intelligence-based teaching is based on storytelling, brainstorming, tape recording, journal writing, and paper completion in traditional classroom. The subjects were 71 male and female Iranian EFL students. The results showed that the students' retention of words in visual experimental group was enhanced by visual intelligence-based teaching of vocabularies, while the students' retention of words in verbal experimental group was not. Moreover, the results of writing test exhibited that visual intelligence-based teaching of vocabularies could change the passive vocabulary knowledge of the visual experimental group into an active one.

In addition, the following researches have examined the usefulness of VRTs. Nemati (2009) examined the effect of teaching memory strategies consisting of grouping, making acronym, and using imagery in his study on experimental group in comparison to control group. The findings revealed that the students of experimental group outperformed both in short-term and long-term scores, portraying the superiority of memory strategies in short-term and long-term retention. Giving strategy awareness to the students can facilitate them to store and retrieve new vocabulary items as well. Another research which showed the benefit of vocabulary retention techniques was conducted by Baleghizadeh and Naeim (2011). They would like to explore the effect of etymology presentation of 30 low frequent words on short-term and long-term vocabulary retention of EFL learners. The participants were 30 students divided into experimental and control group. While both groups were asked to look up the meaning of the words in their dictionaries, the experimental group received a short instruction on the etymologies of the words. The results of both immediate and delayed posttests demonstrated the mnemonic efficacy of etymology presentation.

Semantic mapping is another vocabulary retention technique which Baleghizadeh and Naeim (2011) experimented in his research with a single-subject study: a 45-year-old male learner learning English at the pre-intermediate level. The results showed that the use of semantic mapping improved the learner's ability to remember and recall the words and their definitions better. The last research involving utilizing e-mail as learning tool was conducted by Fahim and Motallebzadeh (2011). His study aimed to examine the effect of e-mail on vocabulary retention of Iranian EFL learners. Forty participants were assigned into experimental and control groups. The participants received English words as well as definitions and example sentences either on paper or through e-mail messages in a spaced and scheduled pattern of delivery three times a week throughout 10 sessions. The results showed that the use of e-mail technology can enhance the retention of vocabulary.

In conclusion, a number of researches conducted in different countries where English is taught as a foreign language showed that using a variety of VRTs, such as using keyword, using visual imagery, grouping, using acronym, checking etymology, and mind map are beneficial to the students' word retention. Therefore, it is worth investigating Bangkok University students' preference for VRTs usage and problems of using VRTs so that the teachers can effectively manage the teaching and learning vocabulary. As a result, the students will enjoy learning vocabularies which will bring about better word retention skill.

6. Research Methodology

6.1 Research Design

This research is a survey design. The population of this study was 3,762 second-year students enrolling in intermediate English course of the academic year of 2011 at Bangkok University, and 364 samples were selected from Stratified Random Sampling technique. The estimated sample size was based on Taro Yamane table. A 95% of confidence level was selected with a precision rate of $\pm 5\%$. In this study, the independent variables are two groups of the students (achievers and underachievers) and reading behavior outside of class while the dependent variable is VRTs usage.

6.2 Instrument

The instruments used for collecting data were a questionnaire and an in-depth interview. The questionnaire consists of two parts. The first part is about the respondent's background and the second part is based on VRTs proposed by (Nemati, 2009; Thornbury, 2008; Oxford, 1990; Lenier and Maker, 1984). This part consists of 30 items in the form of Likert rating scales ranging from very frequently, frequently, sometimes, rarely, to never. The congruence index of the questionnaire was 0.8 and Cronbach's Coefficient Alpha was used to calculate the reliability of the questionnaire. It was found that the reliability of this questionnaire was 0.95. Besides, the in-depth interview was conducted to elicit the further information about the usage of VRTs.

6.3 Data Analysis

6.3.1 Percentage was used to demonstrate the background information of the students and mean and standard deviation were employed to analyze the level of VRTs usage. The computed weighted means of VRTs usage were interpreted in the form of range as shown below.

Mean range	Level of vocabulary retention techniques (VRTs) usage	Meaning
4.50-5.00	very extensive	using VRTs with most frequency
3.50-4.49	extensive	using VRTs with much frequency
2.50-3.49	Medium	using VRTs with medium frequency
1.50-2.49	Little	using VRTs with little frequency
1.00-1.49	very little	using VRTs with very little frequency

6.3.2 A t-Test analysis was used to compare the mean scores of the opinions on VRTs usage of the achievers and underachievers.

6.3.3 One-way analysis of variance (ANOVA) or Welch test was employed to test the mean scores of the opinions on VRTs usage of the students who have different reading behavior outside of class. If there is a statistically significant difference, post hoc test method (Bonferroni for equal variance and Dunnett's T3 for non-equal variance) will be used to compare each pair.

7. Result, Discussion, and Conclusion

This part will present the result, discussion, and conclusion of the research questions

1-3 as well as the result of the in-depth interview which will be used to assure the research findings. The results are shown as follows:

7.1 Result, Discussion and Conclusion of the Research Questions 1-3

Research Question 1: What is the vocabulary retention techniques (VRTs) usage of Bangkok University students?

Table 1: The result of the usage of VRTs by Bangkok University students

Vocabulary Retention Techniques (VRTs)	\bar{X}	S.D.	Level
1.Grouping and Making Acronym	3.35	.87	Medium
2.Word Association	3.33	.86	Medium
3.Pronouncing the word correctly	3.29	.82	Medium

4.Making Visual Picture	3.26	.87	Medium
5.Repeating and Reviewing	3.25	.86	Medium
6.Doing Vocabulary Exercises	3.24	.86	Medium
7.Mind Map	3.23	.95	Medium
8.Using Keyword	3.21	.91	Medium
9.Rhyming	3.20	.89	Medium
10.Using Word Study and Context	3.19	.71	Medium
11.Placing New Words into a Personal Context	3.09	.89	Medium
12. Checking Etymology	2.98	.93	Medium
Total	3.21	.98	Medium

Table 1 shows the result of VRTs usage of Bangkok University students and leads to the discussion and conclusion of the research question 1: What is the vocabulary retention techniques (VRTs) usage of Bangkok University students?

According to table 1, the overall usage of VRTs was ($\bar{X} = 3.21$) which could be interpreted that the students use all VRTs moderately. The three most frequently used VRTs were grouping and making acronym ($\bar{X} = 3.35$), word association ($\bar{X} = 3.33$), and pronouncing the word correctly ($\bar{X} = 3.29$) respectively. These items were at a medium level. However, the three least frequently used are checking etymology ($\bar{X} = 2.98$), placing new words into a personal context ($\bar{X} = 3.09$), using word study and context ($\bar{X} = 3.19$).

As stated in the result, the three VRTs which were used most by the students are discussed accordingly. The result is in line with Nemati (2009) claiming that the students preferred using grouping and making acronym because they act as the hooks to help the students to retrieve better in the long run. However, for the technique of grouping, the teacher should encourage the students' awareness of using this technique because Oxford (1990) suggested that the arrangement things in order like grouping must be personally meaningful to the learners, otherwise the retention will be failed. Regarding word association, the students also realized the benefit of using this technique. However, the teacher should stimulate them to use it more often by encouraging them to actively construct links between new information and previously known information about a word because being active and cognizant of this process will result in better memory for the new words (Sedita, 2005). In terms of pronouncing the word correctly which was placed the third of VRTs usage, the students are on the right track because they realize that the knowledge of a word must include knowing not only how it is written, how it is used as a part of speech, but also how it sounds (Sedita, 2005). However, they should be encouraged to practice this technique continuously since if the students take time to learn the pronunciations of certain words and practice saying them clearly with consistency, it will increase their retention skills (Pickrell, 2010). Similarly, Thornbury (2008) proposed that the teacher should direct attention to the sounds of the new words particularly the way the words are stressed because the students can exploit the sound of the words to facilitate storage in memory. In order to improve the word pronunciation of the students, it is necessary to guide them to use English-English dictionary effectively. Since the students can't tell the pronunciations of the words from their spelling, they have to look up the words in pronunciation guide in the dictionary. If they can pronounce a new word to themselves, they are more likely to remember it (Lenier and Maker, 1984). In addition, to remember the meaning of a new word, the teacher should tell the students to make the best use of the dictionary to reword the definition in their own words, to identify synonyms and antonyms for the word, to use the word in their own meaningful sentences, and to explore the meanings of the words when they are used in other contexts.

On the other hand, the three VRTs which the students used least are checking etymology, placing new word into a personal context, and using word study and context. The result was in line with Sribayak, Sirihanjanavong & Charoenchang (2012) who compiled the problems which make Thai students fail to learn the new vocabularies, resulting in the inability to retain a large amount of new words in their long-term memories. The result can be explained as follows:

1. Thai students lack independent reading. That is, they do not like reading outside of class, so they read less. The less the students read, the fewer the chances they encounter new vocabularies. In this case, checking etymology consumes time to read a long story, so the students do not prefer using this technique.
2. Thai students do not use the learned words to write the stories in their personal contexts, so they do not prefer using the technique of placing new word into a personal context.
3. Thai students do not use context clues when reading. So, they can't infer word meaning and can't guess the words from context. As a result, they can't unlock the meaning of the unfamiliar words and can't get the gist of the text.

According to the result, the students also prefer making visual picture because it is a simple and effective way to remember the words. The findings are in consistent with Oxford (1990) who confirmed the importance of using picture to aid memory for four reasons. First, a large proportion of learners have a preference for visual learning. Second, the mind's storage capacity for visual information exceeds its capacity for verbal material. Third, the most efficiently packaged chunks of information are transferred to long-term memory through visual images. Fourth, visual images may be the most potent device to aid recall of verbal material.

With regard to the technique of doing vocabulary exercises and of repeating and reviewing which are equal to vocabulary recycling. Thornbury (2008) proposed the idea of recycling which is the remedy against forgetting. He stated that spaced review of learned material can dramatically reduce the rate of forgetting, but it's not enough simply to repeat the words in their original contexts. Much better is to recycle them in different ways, and, ideally, at successive levels of depth. He suggested that if learners see or use a word in a way different from the way they first met, then better learning is achieved. Hence, in order to provide the students with an opportunity to recycle vocabulary, the teachers should review the vocabulary exercises after teaching reading passage because the students will re-encounter and repeat words in a way different from the way they first met them in a reading passage. As a result, they can retain vocabulary better.

For the techniques of grouping and making acronym, word association, mind-map, using keyword, and rhyming which need creativity and personalization, the teachers should encourage the students to realize that these VRTs must be self-generated or self-created, i.e. not borrowed from other learners or teachers. The students must be aware that these VRTs can be simple, complex, mundane, unusual, and silly in the eyes of others, but they must make sense and be meaningful to the students themselves because the students themselves not other who will use these techniques to remember vocabularies (Oxford, 1990; Thornbury, 2008).

In conclusion, based on the result and discussion of research question 1, it is recommended that the teachers should boost the students to integrate every vocabulary retention technique and use them interchangeably since there is no single technique which is regarded the best and works well. What's more, some VRTs have limitation, such as using keyword which cannot be applied with the abstract words, and it is difficult to think of keyword that sounds like foreign words. In such case, the students must use other VRTs to help retain vocabularies (Thornbury, 2008; Baleghizadeh & Ashoori, 2010).

Research Question 2: Do the achievers and underachievers have different vocabulary retention techniques usage?

Table 2: The result of vocabulary retention techniques usage between the achievers and underachievers

Vocabulary Retention Techniques (VRTs)	Achievers		Underachievers		Statistical test	
	\bar{X}	S.D.	\bar{X}	S.D.	t	p
1. Grouping and Making Acronym	3.53	.84	3.20	.87	3.682**	<.001
2. Word Association	3.58	.80	3.12	.84	5.405**	<.001
3. Pronouncing the word correctly	3.48	.76	3.12	.83	4.306**	<.001
4. Making Visual Picture	3.44	.89	3.12	.83	3.624**	<.001

5. Repeating and Reviewing	3.42	.79	3.12	.89	3.369**	<.001
6. Doing Vocabulary Exercises	3.43	.81	3.09	.87	3.860**	<.001
7. Mind Map	3.39	.97	3.10	.91	2.960**	<.004
8. Using Keyword	3.47	.83	2.99	.91	5.266**	<.001
9. Rhyming	3.40	.88	3.03	.86	4.098**	<.001
10. Using Word Study and Context	3.39	.66	3.03	.71	4.952**	<.001
11. Placing New Words into a Personal Context	3.24	.85	2.95	.91	3.104**	<.001
12. Checking Etymology	3.07	.96	2.90	.91	1.684	.093
Total	3.39	.96	3.06	.97	4.929**	<.001

Table 2 shows the result of VRTs usage between the achievers and underachievers and leads to the discussion and conclusion of the research question 2: Do the achievers and underachievers have different vocabulary retention techniques (VRTs) usage?

According to table 2, both achievers and underachievers had a medium level of VRTs usage, but the mean of the achievers was higher than that of the underachievers (\bar{X} =3.39 and 3.06 respectively). In terms of statistical test, it was also found that there was a statistically significant difference between the achievers and underachievers in the overall VRTs usage at the level of .05. Every technique had statistically significant difference except checking etymology. In short, both achievers and underachievers employed VRTs differently, and the former used VRTs more frequently than the latter. The possible explanation for this is that the achievers tended to set learning goal, so they tried to study hard every subject in order to acquire a good grade. For English subject taught at Bangkok University, especially reading part, the exam paper would require the students to summarize and give response from what they read. They knew that VRTs were the key factor to help them to understand the passage better, making them to be able to summarize and give response well. So, they paid more attention to practice using VRTs effectively so that they could accomplish the reading exam and get a good grade (Srichanyachon, 2006). In addition, the achievers are generally more motivated to learn English than the underachievers; consequently, they spend more time on rehearsal and practice using VRTs, which is the end will pay off in terms of memory (Thornbury, 2008).

When considering the usage of VRTs of the achievers, they frequently used the techniques of word association and pronouncing the words correctly. This also corresponds with Thornbury (2008) suggesting that the good vocabulary learners always pay attention to pronunciation (how the words are stressed) and association, and they know how to organize their own learning particularly using memorizing technique.

However, the three least used VRTs of both achievers and underachievers are checking etymology, placing new word into a personal context, and using word study and context. According to the in-depth interview, the students said that they don't like these VRTs because they involve grammar and vocabulary rules and language pattern. Hence, the teachers should design the teaching of grammar and vocabulary rules to be entertaining and easy to understand, and motivate the students to adopt VRTs. To be more specific, first of all, as Lenier & Maker (1984) stated that taking time to read the etymology is important in vocabulary building and retention, the teachers should stimulate the students to realize the importance of the technique of checking etymology by having them prepare funny and interesting histories of words and the word origins. Then let them report in the classroom and share their ideas with their friends and teacher. By doing this constantly, they will gradually enjoy using this technique and use it more frequently. Next, the teachers should stimulate the students to use the learned words by having them write a paragraph or story linking the words and expressions they want to remember or having them write a diary in which they will note down the words concerning their daily lives. By doing this, the word retention skills will be increased (Thornbury, 2008). Lastly, the teachers should train the students to use context clue until they enjoy using it because when they read or encounter a word in context, they remember something about the word, and those words will be retained in their long-term memories (Sedita, 2005).

In conclusion, based on the result and discussion of research question 2, and the in-depth interview, it is recommended that the teachers should

1. teach vocabulary learning strategies including using word cards, guessing from context, and using dictionary to the students because they find them effective and enjoyable. Furthermore, vocabulary learning strategies help the students to enhance retention skill.
2. make words easy to learn because they are better retained. Also, they should emphasize the pronunciation because the studies show that the words that are difficult to pronounce are more difficult to learn (Lenier & Maker, 1984; Nation, 2008).
3. not overload the students with vocabulary in one time because the overloaded new words will overwrite the previously learned ones. That is, it is better to distribute memory work across a period of time than to mass it together in a single block. For example, when teaching the students with a new set of words, it is best to present the first two or three items, then go back and test these, then present some more, then backtrack again (Thornbury, 2008).
4. motivate especially the underachievers to use the following VRTs more often because when reading they must be able to use every technique interchangeably. Those VRTs are doing vocabulary exercises, using keyword, rhyming, using word study and context, placing new words into a personal context, and checking etymology.

Research Question 3: Do the students with different reading behavior outside of class have different vocabulary retention techniques (VRTs) usage?

Table 3: The result of vocabulary retention techniques (VRTs) usage by the students with different reading behavior outside of class

Vocabulary Retention Techniques (VRTs)	Often		Sometimes		Never		Statistical test	
	\bar{X}	S.D.	\bar{X}	S.D.	\bar{X}	S.D.	F	p
1. Grouping and Making Acronym	3.64	1.02	3.37	.83	2.83	.77	9.11**	<.001
2. Word Association	3.76	.81	3.34	.83	2.70	.75	16.08**	<.001
3. Pronouncing the word correctly	3.75	.77	3.29	.79	2.74	.74	15.68**	<.001
4. Making Visual Picture	3.57	.94	3.28	.84	2.79	.89	8.25**	<.001
5. Repeating and Reviewing	3.70	1.02	3.26	.79	2.67	.86	14.91**	<.001
6. Doing Vocabulary Exercises	3.58	.84	3.26	.83	2.69	.88	9.345a*	
7. Mind Map	3.55	.97	3.25	.92	2.66	.91	9.29**	<.001
8. Using Keyword	3.65	.97	3.22	.84	2.54	1.01	15.73**	<.001
9. Rhyming	3.70	.88	3.21	.84	2.53	.87	18.29**	<.001
10. Using Word Study and Context	3.48	.58	3.21	.70	2.69	.63	13.18**	<.001
11. Placing New Words into a Personal Context	3.35	1.06	3.12	.84	2.50	.87	10.02**	<.001
12. Checking Etymology	3.26	.78	2.99	.94	2.57	.89	5.40**	<.001
Total	3.55	1.05	3.23	.95	2.68	.94	18.60**	<.001

^a Welch test

Table 3 shows the result of VRTs usage of the students with different reading behavior outside of class and leads to the discussion and conclusion of the research question 3: Do the students with different reading behavior outside of class have different VRTs usage?

According to table 3, the students who (often, sometimes, and never) read outside of class had different level of VRTs usage. That is, the students who often read outside of class had an extensive level of VRTs usage (\bar{X} =3.55) while the students who sometimes and never read outside of class had a medium level of VRTs usage (\bar{X} =3.23 and 2.68 respectively). The result, obtained from applying ANOVA, revealed that the students who had different reading behavior outside of class employed overall VRTs at the level of significance at .05. In short, reading behavior outside of class affects the usage of VRTs as the result showed

that the students who often read outside of class use VRTs more frequently than the students who sometimes and never read outside of class.

The findings proved that reading outside of class serves the students' interests because they can choose their own books to read. When they read they have multiple exposures to words, so they can use words in daily life until those words become part of their every speech and thought. Every time they encounter a word in context, they develop VRTs and their long-term memories (Jacobus, 2001; Sedita 2005). Similarly, Thornbury (2008) and Harmer (2001) said that the students require repeated visits and conscious study of vocabularies, and much of this revisiting and studying of words will have to take place outside class time since there simply isn't time enough in class for review and recycling. Much of outside reading of class will allow the students to choose material specially written for them; hence, it will improve their overall comprehension skill and enable them to read without constantly stopping. As a result, the automatic word recognition will be increased. Besides, Oxford (1990) suggested that the students must seek out or create opportunities to practice any and all of the four language skills. If the students want to reach moderate to high proficiency, classroom time cannot usually provide adequate practice opportunities. Therefore, they will need to find additional chances to practice the language and must realize it is up to them to search for these occasions.

In conclusion, according to the result and discussion of research question 3, it is recommended that the teachers should assign the students to read external reading materials every week, and they have to write a review or summary of what they read to communicate with the teachers. However, teachers have to let them choose the reading materials in which they are interested because if the students have an opportunity to select the books or topics they like, their reading comprehensions will be improved since they have learned to use a variety of VRTs by themselves automatically. As a result, the automatic word retention will be increased (Oxford, 1990; Harmer, 2001; Sedita, 2005).

7.2 Result of the In-depth Interview

The achievers gave their opinions that they realized the importance of VRTs which will help them to improve their reading comprehension and most of them use the technique of using word study and context because they believed that the vast majority of words could be learned and remembered from context. In addition, they often used word association especially they usually related the new words to the words they already know. On the other hand, the underachievers gave their opinions that they always used the technique of visual picture because they thought that a picture will help them remember the words easily and store them in long-term memory. However, they did not like the technique of using keyword because it was rather difficult due to complex steps, and they thought that it is useless to use this technique to remember the new words. In addition, they did not like VRTs involving grammar and vocabulary rules, such as using word study and context, placing new word into a personal context, and checking etymology.

References

- Baleghizadeh, S., & Ashoori, A. (2010). The effect of keyword and word list method on immediate vocabulary retention of EFL learners. *Pakistan Journal of Sciences (PJSS)*, 3(2), 251-261.
- Baleghizadeh, S., & Naeim, M. (2011). Enhancing vocabulary retention through semantic mapping: a single-subject study. *The International Journal-Language Society and Culture*, 32, 11-16.
- Baleghizadeh, S., & Naeim, M. (2011). Promoting vocabulary retention through etymology presentation. *Journal of Theory and Practice in Education*, 7(1), 111-123.
- Fahim, M., & Motallebazdeh, K. (2011). The effect of e-mailing on vocabulary of Iranian lower intermediate EFL learners. *Journal of Language Teaching and Research*, 2(6), 1385-1391.
- Folse, K.S. (2004). *Vocabulary myths*. Ann Arbor, MI : University of Michigan Press.

- Good, R. L., & Cheng, Y. (2009). L1 gloss: Effects on EFL learners' reading comprehension and vocabulary retention. *Reading in a Foreign Language, 21*(2), 119-142.
- Harmer, J. (2001). *The practice of English language teaching*. England : Pearson Education limited.
- Jacobus, L. A. (2001). *Improving college reading*. USA : Harcourt College Publishers.
- Klein, M. L. (1988). *Teaching reading comprehension and vocabulary (a guide for teachers)*. New Jersey: Prentice-Hall, Inc.
- Lenier, M., & Maker, J. (1984). *College reading*. USA : Wadsworth, Inc.
- Mansoor, F., & Khalil, M. (2011). The effect of e-mailing on vocabulary retention of Iranian lower intermediate EFL learners. *Journal of Language Teaching and Research, 2*(6), 1385-1391.
- Nation, I.S.P. (2008). *Teaching vocabulary (strategies and techniques)*. Boston: Heinie.
- Nemati, A. (2009). Memory vocabulary learning strategies and long-term retention. *International Journal of Vocational and Technical Education, 1*(2), 14-24.
- Oxford, R. L. (1990). *Language learning strategies: What every teacher should know*. New York: Newbury House Publishers.
- Pickrell, J. (2010). *How to retain and learn new vocabulary words*. Retrieved December, 2010, from <http://ezinearticles.com>
- Pishghadam, R., & Khodadady, E. (2010). The impact of visual and verbal intelligences-based teaching on the vocabulary retention and written production of Iranian intermediate EFL learners. *MJAL, 2*(5), 379-395.
- Quinn, S., & Irvings, S. (1997). *Active reading in the arts and sciences*. USA: McGraw- ill.
- Sedita, J. (2005). Effective vocabulary instruction. *Insights on Learning Disabilities, 2*(1), 33-45.
- Sribayak, V., Sirihanjanavong, V., & Charoenchang, W. (2012). *Teaching vocabulary*. Retrieved March, 12, 2012, from <http://www.litu.tu.ac.th/en2011>
- Srichanyachon, N. (2006). An analysis of goal setting for learning and obstacles to improve English learning based on the perception of Bangkok University students taking the general English course. *BU Academic Review, 6*(2), 15-27.
- Thornbury, S. (2008). *How to teach vocabulary*. England: Pearson Education Limited.
- Wei, M. (2007). *An examination of vocabulary learning of college-level learners of English in China*. Retrieved April 12, 2007, from <http://www.asian-efl-journal.com>