The Effect of Keyword Technique on Vocabulary Retention in an EFL Classroom Through Action Research

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Abstract

This paper endeavors to demonstrate the adequacy and effectiveness of keyword technique as a vocabulary retention method. In the present study a group of controlled high-school classroom setting consisting of 43 students, aged between 16-18 years old, was aimed to investigate the effect on vocabulary immediate retention ability and explore the attitude toward the use of keyword technique. The took over five weeks. The instruments were a questionnaire exploring opinion toward the keyword technique, and vocabulary tests. The results showed the effectiveness of the keyword technique and the positive attitudes of the students.

Keywords: Technique, Vocabulary retention

Introduction

In Thailand, Thai students normally use to learn word list by rote method for examination which will vanish from their memory very soon, so this vocabulary technique is demonstrated pointless. This issue can prompt poor score of English tests because they will forget the target words shortly since they can't recall and recover the words. In addition, there are a few issues which influence Thai understudies to neglect to learn new vocabularies which result in the failure to hold a lot of new words in their long-term memory (Sribayak, Sirihanjanavong and Charoenchang, 2012; Maharaj, 2017). Here are some issues of Thai learners.

1. They lack independent reading. They rarely read outside class, so they read less. The less the students read, the fewer the chance to acquire new words.

2. They do not utilize context clues during their reading. Along these lines, they can't construe and figure the word significance from setting. Henceforth, they can't open the significance of the new words and can't get the substance of the content.

3. They generally look into the words in a dictionary to locate the meaning of tricky words instantaneously when they face them which will interrupt the flow of the reading and its comprehension. Furthermore, they do not utilize a monolingual

dictionary (English-English word reference), however they utilize the pocket or electronic word reference that can be misdirecting.

4. When they look up the definition of the new words in a dictionary, they do not focus on word class, word origins, and examples sentences. As a result, they can't utilize those words appropriately and they will vanish from their memory.

5. They disregard the articulations and pronunciation of the new words they learned. Consequently, they misspeak the words which discourage the capacity to recall new words.

6. They do not repeat the learned words in spite of the fact that 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.

In order to solve the problem mentioned above, there are many effective ways to increase English language learners' vocabulary; therefore, many FL vocabulary teaching pedagogies have been spread in the last three decades, namely grouping and making acronym, word association, pronouncing the word correctly, making visual picture, repeating and reviewing, doing vocabulary exercises, mind map, keyword technique, rhyming, using word study and context, placing new words into a personal context, and checking etymology are in attention 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; Nation, 2008). Furthermore, vocabulary retention techniques 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 vocabulary retention techniques help the students to cope with this difficulty.

Among aforementioned 12 vocabulary retention techniques, keyword technique is the best-known technique and one of the most popular and the most extensively researched vocabulary teaching methods because the outstanding strength of this technique is that it combines verbal linkage and visual imagery in the memory process. Numerous studies have confirmed the effectiveness of the keyword technique in both foreign language and language vocabulary learning (Levin & Pressley, 1985; Cohen, 1987). Pressley et al., (1982) reached the conclusion of the advantages of keyword technique from his comprehensive survey of almost 50 studies accordingly.

Therefore, this research would like to find out how keyword technique affects the vocabulary retention ability of the students with difficult words and the opinion of the students to the technique.

To accomplish this investigation, the following research questions were formulated:

1. To what extent do the students improve their vocabulary retention ability after learning the keyword technique?

2. How did the students respond to the use of keyword technique?

Literature Review

Keyword technique is procedure that belongs to an ancient group of devices for memorization termed mnemonics. According to Solso (1995), mnemonics are techniques or devices, either verbal or visual in nature, that serve to improve the storage of new information, and the recall of information contained in memory. Mnemonics have been proven to be extremely effective in helping people remember things (Mastropieri and Scruggs, 1989). If material is presented in a way which fits in or relates meaningfully to what is already known, then it will be retained for relatively long periods of time and thus retrieval through verbal or visual clues becomes quite easy. In other words, by using mnemonic strategies, teachers can relate new information to inform students already have stored in their long-term memory.

For vocabulary learning, they are used to relate the word to some previously learnt information, using some form of imagery or grouping (Mastropieri & Scruggs, 1989). The main way, to transfer the vocabulary items from short term to long term memory and create a strong connection there is by finding some elements in the mental lexicon to attach the new lexical item to (Schmitt, 2000).

Taheri & Mohammad (2016) investigated the effect of mnemonics (the keyword technique) on vocabulary learning and long- term vocabulary retention in Iranian students learning English as a foreign language. There was a statistically significant difference in scores for control group (M=13.40, SD=3.60) and experimental group (M=18.04, SD=1.85, t (35) =5.71, P=0.00<0.05 two-tailed). The results confirmed that the treatment was effective. In other words, the experimental group outperformed the control group at the end of the treatment. The effect size (0.96) also proved the effectiveness of the treatment. Based on the results of quantitative data analysis, it was claimed that there was a significant difference between these two methods of teaching vocabulary. Hence, since the mean score of experimental group was higher than control group, it was confirmed that the subjects in the keyword group outperformed the rote memorization group. This study also suggested the role of teachers and students to help create association between sounds and mental image.

Keyword technique 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."

According to Siriganjanavong (2013), used the technique "Mnemonic keyword method" too low proficiency English learners, and to explore the effectiveness of the method in terms of short-term and long-term memory. The experiments were included 44 participants. They were first year university student, non-major in English. The materials used in this study consisted of 40 low frequency English word, they were separate into two group first half of them were tough by using Mnemonics keyword methods and others half were tough by using mix method including contextual clues, word structure analysis, and opposite word-pairs. The study showed that low proficiency EFL students can remember more words, both in short-term and long-term with MKM than with other mixed methods, though its effectiveness reduced over time. MKM's superiority might be attributed to the fact that the method combined both verbal and visual aids together, and it also linked the newly learned information to the existing knowledge in our mind.

In another study conducted by Sagara & Alba (2006), the Keyword technique was compared with two other methods of learning vocabulary, semantic mapping and rote memorization. The materials used in the experiment consisted 40 Spanish low frequency words to experiment among 778 beginning second language (L2) learners. The research concluded that the keyword method is more efficient than semantic mapping and rote memorization to learn and remember new L2 words and that rote memorization is better than semantic mapping.

Nation (2008) elaborated on the keyword technique that it is primarily a way of making a strong link between the form of an unknown word and its meaning. It involves two steps after the learner has met the unknown word and has found or been provided with its meaning. The first step is to think of a first language word (the keyword) which sounds like the beginning or all of the unknown words. The second step is for the learner to think of a visual image where the meaning of the unknown word and the meaning of the keyword is combined. The keyword technique works because it makes learners process more than one feature of a word and this processing is not superficial in the way that rote repetition is superficial. The only limit is the learner's imagination. The

keyword does not have to sound exactly like the foreign word to be learned, and it does not have to be like all of the word. If the form of the keyword is like the beginning of the foreign word, then that is usually enough.

Conforming to Tavakoli & Gerami (2013) where they investigated how the two different mnemonic non-verbal approaches, the Keyword Technique and Pictorial method to teaching lexical items affect learning and retention of vocabulary items. For this purpose, 60 adult female elementary students studying English at a language school in Isfahan were chosen to participate in this study. The results revealed that the participants who used the keyword technique could store and retain vocabulary items in their long-term memory better than those who used the Pictorial technique. The effectiveness of the Keyword technique makes that technique a unique tool for educators in order to let students acquire vocabulary in a successful way. This technique can enhance the confidence of students developing a new language. They Keyword technique helps students recall of vocabulary in order to understand incomes and make them comprehensible. In the same way, the KT help students to recall terms in order to produce outcomes. Basically, it acts as a mental dictionary that learners can consult anytime they need.

Research Method

1. This research is a preliminary study aiming to investigate how the students can use it and what impact of the technique to the students' attitudes. This study did not conduct a comparison because it more focuses on how the students can adopt and react to this technique. The data were collected from 43 students enrolling Matthayom 6 in the second semester of 2018 academic year at a private school in Songkhla. Among these participants, eighteen of them were males and other twenty-five students were females. The age of the participants ranged from 17 to 18 years old.

2. Two instruments were employed in the study: 1) vocabulary test for new words retention, 2) the questionnaire surveying the students' attitude towards using the keyword technique.

3. The data obtained from the vocabulary test and the questionnaire were analyzed quantitatively through weighted mean and descriptive statistics.

4. Treatment procedure was presented accordingly.

Week 1: The teacher had the students take a vocabulary test of 100 words. The words were selected from GAT English vocabulary exam preparation.

These words were proved to have a frequency lower than 6000 based on The Corpus of Contemporary American English (COCA) containing more than 560 million words. The purpose of the screening test was to eliminate words already known by the participants. The screening test is to provide the students tick words that they do not know. A total of 40 unknown words out of 100 tokens were finally selected as shown in the following.

barren	craving	enact	flourish	greasy	miraculous	pedestrian	prodigy
blemish	culprit	exultant	foliage	hasty	morbid	perplex	propagate
catastrophic	dwindle	facelift	fragrant	inoculate	nausea	pessimist	reassess
clamor	ecstasy	feasible	gamy	leakage	nuisance	plagiarism	rigorous
clatter	eloquence	filthy	gauge	lenient	oblige	pledge	senility

Week 2: The teacher introduced the students to know the keyword technique. The teachers taught the students how to apply the keyword technique to help them remember new vocabulary in the following steps:

Step 1: Check the right pronunciation of the target words from dictionaries.

Step 2: Connect the pronunciation of an English word with the meaning of a Thai word or with the familiar word.

Step 3: Devise or create the visual image of the English word interacting with the meaning of Thai word or the familiar word.

For example a word fiasco, pronounce Fiew-co the student may visualize that a gang of motorcyclist ride in a very dangerous and aggressive way, which people have perception that they will not become successful in the future. In Thai, people condominium collapsed, which say in Thai con-do-lom (คอนโดล้ม). This incident brings about deaths and injuries; people feel deeply sad hearing the incident.

Week 3: The teacher assigned the students how to use keyword technique to remember the new 40 words selected from the screening test. The teachers had the students practice in groups of eight with five words each. At the end of the period, the students presented their application of the keyword technique with the target words.

Week 4: The students were asked to do a vocabulary test. They have 30 minutes to complete the test. This test was designed to test the students knowledge of word definitions which all are multiple choice and fill in the blank. The test was aimed at checking the students' memory of the word definitions that they memorized by using the keyword technique.

Week 5: The students had to complete a survey consisting of 10 questions. The teacher corrected the test and recorded the scores.

Results

To answer the first question, "To what extent do the students improve their vocabulary retention ability after learning the keyword technique?", concerning the student's vocabulary retention ability, the result is shown in Table 1.

Table 1: Students' Test Scores of Vocabulary Retention

No.	Part 1 (15 scores)	Part 2 (15 scores)	Total (30 scores)	No.	Part 1 (15 scores)	Part 2 (15 scores)	Total (30 scores)
1.	6	6	12	23.	8	9	17
2.	7	7	14	24.	3	6	9
3.	7	8	15	25.	6	5	11
4.	8	10	18	26.	5	2	7
5.	9	9	18	27.	5	5	10
6.	10	13	23	28.	3	8	11
7.	9	4	13	29.	4	7	11
8.	6	7	13	30.	7	6	13
9.	8	11	19	31.	3	5	8
10.	6	7	13	32.	4	5	9
11.	7	7	14	33.	6	6	12
12.	3	7	10	34.	3	13	16
13.	3	4	7	35.	2	14	16
14.	2	7	9	36.	4	14	18
15.	5	4	9	37.	6	12	18
16.	6	2	8	38.	6	12	18
17.	9	8	17	39.	5	9	14
18.	5	7	12	40.	4	14	18
19.	3	7	10	41.	5	13	18
20.	8	8	16	42.	4	12	16
21.	3	4	7	43.	7	14	21
22.	5	10	15				
	$\bar{x} = 5.47$	$\bar{x} = 8.09$	$\bar{x} = 13.56$				

As obviously shown that the score comes from two parts of the vocabulary test, Part I is to merely to check retention of word definition, and Part II is to assess whether the students would use the meaning they learnt and still memorized it in a sentence correctly. In that sense Part II seemed to be harder for the students, but the scores evidenced that Part I appeared harder because the scores the students' Part I scores were lower that that of Part II. Overall scores were low, the highest scores were 10 and 14 in Part I and Part II respectively. Obviously all of the students did better in Part II than Part I.

To answer the second research question concerning students' views in self-report, "How did the students respond to the use of keyword technique?" the results of which have been shown in Table 2.

Table 2: Survey Response

Statements for checking students' attitude towards using keyword technique	Response	Total number of students (n=43)	
		No. of students	Percentage
1. I have never used the keyword technique before.	Strongly Agree	21	48.8
	Agree	9	20.9
	Undecided	4	9.3
	Disagree	6	14.0
	Strongly Disagree	3	7.0
2. The keyword technique is interesting and challenging in vocabulary learning.	Strongly Agree	23	53.5
	Agree	17	39.5
	Undecided	3	7.0
	Disagree	0	-
	Strongly Disagree	0	-
3. The keyword technique helps me to remember the meaning of English words.	Strongly Agree	21	48.8
	Agree	20	46.5
	Undecided	2	4.7
	Disagree	0	-
	Strongly Disagree	0	-
4. It is difficult to create visualizations for the technique.	Strongly Agree	7	16.3
	Agree	24	55.8
	Undecided	10	23.3
	Disagree	1	2.3
	Strongly Disagree	0	-

5. The keyword technique does not help me to store and recall vocabulary easily.	Strongly Agree	4	9.3
	Agree	6	14.0
	Undecided	16	37.2
	Disagree	12	27.9
	Strongly Disagree	5	11.6
6. The keyword technique cannot retain my vocabulary in long-term memory.	Strongly Agree	3	7.0
	Agree	6	14.0
	Undecided	15	34.9
	Disagree	15	34.9
	Strongly Disagree	4	9.3
7. I like to memorize vocabulary through keyword technique. It makes me feel relaxed and have fun when studying English.	Strongly Agree	8	18.6
	Agree	27	62.8
	Undecided	5	11.6
	Disagree	2	4.7
	Strongly Disagree	0	-
8. Keyword technique is a very complex technique and difficult to use it properly.	Strongly Agree	9	20.9
	Agree	13	30.2
	Undecided	12	27.9
	Disagree	6	14.0
	Strongly Disagree	3	7.0
9. Keyword technique expands and enhances my imagination and creativity.	Strongly Agree	23	53.5
	Agree	16	37.2
	Undecided	4	9.3
	Disagree	0	-
	Strongly Disagree	0	-
10. Keyword technique motivates me to learn new vocabularies.	Strongly Agree	28	65.1
	Agree	13	30.2
	Undecided	2	4.7
	Disagree	0	-
	Strongly Disagree	0	-

Table 2 shows that the students' attitude towards the keyword technique responded to each statement. This questionnaire was designed to understand students' attitudes to this technique. The result shows that Question 1 connotated that the previous experience of the students with the keyword technique. The students answered that 69.8 % had never used the keyword technique before.

Questions 2, 3 7, 9 and 10 connotated positive aspects of the keyword method. The students answered that about 93 % of the students expressed that the keyword technique was interesting and challenging. 95.3 % of the students reported that the keyword technique helped them remember the meaning of the difficult English words. 81.4 % of the students said that the keyword technique made them feel relaxed and had fun when studying English. They found the keyword technique likeable. 95.3 % of the students reported that the keyword technique motivated them to learn new vocabularies.

Questions 4, 5, 6, and 8 connotated negative aspects of the keyword method. The students' responses are about 72.1 % of the students affirmed that it was difficult to create visualization the keyword technique. 23.3 % of them expressed that the keyword technique did not help them store and recall vocabulary easily. 20.9 % of them reported that the keyword technique could not vocabulary in long-term memory, and 51.2 % of the students affirmed that the keyword technique was complex and difficult to apply properly.

Discussion and Conclusions

The research results indicated that keyword technique contributes to the improvement of students' vocabulary retention ability, even quite low as seen by low scores from the vocabulary test. Having said that the students may learn only a few words and it should be emphasized that these are words that may beyond their level. Even though the keyword technique becomes a tool for storing and retrieving and expanding vocabulary size. The study sis not conduct to test a long term retention due to time limitation. The research method and results showed that the students learned in a way that Nation (2008) and Levin & Pressley (1985) described.

A small vocabulary size gained

Regarding how the students can remember difficult vocabulary. Considering the data collection methods, in Week 2, the students worked in a group of five, they were assigned eight difficult vocabulary and they listened to others group to learn the meanings. Each group was engaged in the steps to visualize the sound and definitions of their eight words given, they are likely able to memorize and retain the words they assigned rather words assigned by other groups. This study seems to disagree with Taheri & Mohammad (2016) in a way that this study emphasizes self-creation and self-visualization when one uses this technique because the students were assigned only 8 words per group and it seems that they could not learn from other groups visualization as seen from their scores. On another issue, Taheri and Mohammad (2016) claimed that

the Iranian students used the technique easily in a very short time, but the students in the current study expressed that this technique was complex.

Basically the researchers presumed that the students did not learn or memorize these sets of vocabulary from different learning strategies such as rote memory, mind mapping, doing exercise, etc. having said that the students Some studies indicated that the keyword method is a technique that leads to better retention than the rote rehearsal method. For example. The long term was not proved in this study, but for a short term retention, the researchers believed that the students remembered the meaning after study.

Imagination and Visualization

The production of the technique requires certain ability and domain of creativity and imagination that is a difficult part of its application. Issues of ages of learners and the level of difficulty of vocabulary may needs to be considered. To apply this keyword technique, it is demanding that learners should possess some creativity and imagination so this technique many not be suitable for very young learners aged below 12. Additionally, the process as Levin & Pressley (1985) suggested the technique has complicated steps so young learners may not be able to cope with it. Considering the vocabulary adopted in this study, the researchers ensures that the students would not know these words before so that the design eliminated the known vocabulary by the students and all these words were repeatedly checked on the COCA list to ensure that they would never been seen by the students because they were low frequency words. In a way many of these words are highly abstract; for example, propagate, plagiarism, exultant.

A Demanding Technique

The keyword technique is one of useful techniques to learn and memorize vocabulary efficiently. This study partially showed that the students can enjoy learning vocabulary, and they make senses of the vocabulary they are learning by themselves. This study sets a controlled context which ensures the students mostly learn new words by this technique, which were not much illustrated in previous study. However, it can be concluded that this technique is relatively demanding in many regards. Levin and Pressley (1985) has argued three stages of mnemonic technique: recording, relating, and retrieving. Consider, for example, when an Iranian student is trying to learn the English word "parrot". In the first stage of the process, one records the unfamiliar word "parrot" into a more familiar concrete representation that acoustically is similar to "parrot". The students need to fully participate in the stages and they can make full use of the

technique. However, regarding the students' attitudes, they have positive ideas towards this technique to learn with joy and fun, yet they agree that visualization is a difficult part. The technique however promotes creativity.

Based on the conclusion of this research, it is recommended that the teacher should Introduce ready-made keyword technique examples to the students first to arouse their imagination and creativity and later encourage the students to realize that keyword technique must be self-generated or self-created, i.e. not borrowed from other learners or teachers. Train students with optional activities or exercises to develop their imagination and creativity because the students may not make much sense of visualization of what their fellows make and not bring about a long-term memorization. Moreover, the teachers should teach other vocabulary retention techniques to the students and boost them to integrate every vocabulary retention technique and use them interchangeably.

- Investigate techniques that better complement the Keyword techniques.
- Investigate specifics aspects in the creation of the visualizations.
- Investigate the importance of imagination and creativity.

This study has a limitation which the scope of the techniques was checked in the duration of 3 weeks, it was not conducted a long-term memory test.

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