

**Effects of Using Vocabulary Quizzes on Vocabulary
Memorization and Retention of First Year Students at the
Faculty of International Studies,
Prince of Songkla University, Phuket**

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Abstract

This study investigated the effectiveness of vocabulary quizzes on vocabulary memorization and retention. Vocabulary memorization and retention were measured using a pre-test, a post-test and a delayed post-test.

The subjects were 22 first year students at the Faculty of International Studies, Prince of Songkla University, Phuket. The students attended an English for Reading course with the target vocabulary for 20 lessons. In each lesson, students studied the target vocabulary by themselves and in class, the teacher checked if students memorized the correct meanings and checked if they could answer vocabulary exercises in the course textbook before having them take vocabulary quizzes after every lesson.

A pre-test was given at the beginning of the semester and a post-test was administered during the last period to examine whether students could memorize vocabulary. A delayed post-test was administered 28 days after the last lesson to investigate if vocabulary could be retained in the long term memory. Differences between the results of the pre-test and the post-test and those of the post-test and the delayed post-test were measured using mean differences and a T-test.

The results derived from the mean score of the pre-test and the post-test were significantly different at 0.000 ($p < .05$), and the post-test and the delayed post-test showed no statistically significant differences at 0.025 ($p < .05$). This indicated that using vocabulary quizzes could help students memorize vocabulary but could not lead to effective vocabulary retention.

Keywords: Vocabulary remembrance, Vocabulary retention, Periodic vocabulary short quizzes

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ผลของการใช้การสอบคำศัพท์ทุกคาบต่อการจดจำและการคงอยู่ของคำศัพท์ของ นักศึกษาชั้นปีที่หนึ่ง คณะวิทยาศาสตร์ มหาวิทยาลัยสงขลานครินทร์ วิทยาเขตภูเก็ต

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บทคัดย่อ

การวิจัยครั้งนี้ศึกษาประสิทธิผลของการใช้การสอบคำศัพท์ทุกคาบต่อการจดจำและการคงอยู่ของคำศัพท์ การทดสอบการจดจำและการคงอยู่ของคำศัพท์คำนวณโดยใช้การสอบก่อนเรียน การสอบหลังเรียน และการสอบเว้นระยะหลังเสร็จสิ้นการสอน

กลุ่มตัวอย่างเป็นนักศึกษาจำนวน 22 คนคณะวิทยาศาสตร์ มหาวิทยาลัยสงขลานครินทร์ วิทยาเขตภูเก็ต นักศึกษาเรียนวิชาภาษาอังกฤษเพื่อการอ่าน ทั้งหมด 20 บทพร้อมด้วยคำศัพท์เป้าหมาย ในแต่ละคาบ นักศึกษาเรียนคำศัพท์ด้วยตนเอง ในห้องเรียน อาจารย์ตรวจสอบว่านักศึกษาจดจำความหมายคำศัพท์เป้าหมายถูกต้องหรือไม่และตรวจสอบว่านักศึกษาสามารถทำแบบฝึกหัดคำศัพท์ในหนังสือเรียนถูกต้องหรือไม่ก่อนที่นักศึกษาเริ่มทำข้อสอบในแต่ละคาบ

นักศึกษาทำข้อสอบก่อนเรียนตอนต้นภาคการศึกษา และทำข้อสอบหลังเรียน คาบสุดท้ายของการเรียนเพื่อตรวจสอบการจดจำคำศัพท์ นักศึกษาทำข้อสอบเว้นระยะหลังเสร็จสิ้นการสอนหลังจากคาบสุดท้าย 28 วัน เพื่อตรวจสอบการคงอยู่ของคำศัพท์ ความแตกต่างระหว่างผลของข้อสอบก่อนเรียนและหลังเรียนและผลของข้อสอบหลังเรียนและเว้นระยะหลังเสร็จสิ้นการสอนคำนวณโดยใช้ความแตกต่างของค่ามัธยฐานและการใช้ค่าสถิติทีเทสต์

ผลจากค่ามัธยฐานของข้อสอบก่อนเรียนและหลังเรียน มีความแตกต่างอย่างมีนัยสำคัญที่ 0.000 (ค่าความเชื่อมั่น $< .05$) และผลของข้อสอบหลังเรียนและเว้นระยะหลังเสร็จสิ้นการสอน ไม่มีความแตกต่างอย่างมีนัยสำคัญทางสถิติที่ระดับ 0.025 (ค่าความเชื่อมั่น $< .05$). ซึ่งระบุว่าได้ว่าการใช้การสอบคำศัพท์ทุกคาบช่วยในการจดจำแต่ไม่ช่วยให้เกิดการคงอยู่ของคำศัพท์อย่างมีประสิทธิภาพ

คำสำคัญ: การจดจำคำศัพท์ การคงอยู่ของคำศัพท์ การสอบคำศัพท์ทุกคาบเรียน

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Introduction

Most first year students at the Faculty of International Studies (FIS) attending an English for Reading course always encounter problems related to incomprehensible reading. One of the most important causes found is insufficient or limited vocabulary size because knowing meanings of words is a very significant factor facilitating reading comprehension (Anderson and Freebody, 1981; Davis, 1994; Singer 1965). Moreover, insufficient vocabulary does not only hinder students from understanding but also impedes their ability to use reading strategies which eventually leads them to be independent readers.

As stated by Biemiller (1999), poor readers or low proficient learners do not utilize some reading strategies such as guessing meanings from contexts, which is one of the essential strategies assisting learners to continue reading and understanding a whole passage. It is obvious that if learners lack sufficient vocabulary size, it is very difficult for them to be able to understand more difficult passages. Therefore, expanding vocabulary span seems to be the most essential skill needed for students to improve.

Having taught this course for a few semesters, many techniques have been employed to encourage students to study and memorize new words such as using a vocabulary notebook, giving students examples of words in different contexts and sometimes using some games to promote a fun atmosphere. Nevertheless, those techniques did not seem to suit most students. This has been observed by checking whether students could memorize the meanings of the words which appeared in other passages. Most students' notebooks were another evidence showing that they could not choose correct definitions or correct examples suitable for specific contexts, and that they were not really concerned about the corrections.

Lack of motivation may be another factor hindering them to put their effort on vocabulary memorization. Gardner (1985, in Lightbown and Spada, 1993) stated that motivation is a key factor in learning a foreign language. Most students do not pay much attention or put much effort because they lack motivation. This fact leads to the idea of using vocabulary quizzes distributed to students in every lesson to encourage them to memorize vocabulary. As proposed by Thornbury (2002, p. 15), "at the most basic level, knowing a word involves knowing its form and its meaning." In this study, students were first year's who lacked sufficient knowledge of English; thus, testing on their word knowledge at a simple level (spelling and meanings) should be appropriate, and can avoid students' not knowing other words in contexts. Thus, the use of vocabulary quizzes was utilized as a way to arouse students' vocabulary memorization. Moreover, as suggested by Atkinson and Shiffrin, 1986, quoted in Silakwaw, 1995, if information can be maintained or stored in the short term memory for fourteen days, it will be retained in the long term memory. Therefore, a delayed post-test was given after a month to check whether vocabulary quizzes could effectively help them with vocabulary retention.

The Purpose of the Study and Research Questions

The study aimed at examining whether the vocabulary quizzes could assist students to memorize vocabulary in their short-term memory and to retain it in their long-term memory. In order to find out the effectiveness of the vocabulary quizzes, two research questions were addressed:

1. Did the vocabulary quizzes help students memorize new vocabulary?
2. Did the vocabulary quizzes help students retain new vocabulary?

Subjects

The subjects in the study were 22 FIS first year students who attended an English for Reading course in the academic year 2011. They were majored in International Business in China (IBC), Chinese Studies (CNS) and Thai Studies (THS). These students received lower than 400 TOEIC scores, so they were required to study an English for Reading course which is one of the three English compulsory courses (English for Writing, English for Listening and Speaking, and English for Reading) intended as a preparation before studying other English courses.

Research Instruments

Two main types of instruments were employed in the study: 1) a pre-test, a post-test and a delayed post-test, and 2) twenty vocabulary quizzes.

1. Pre-test, post-test and delayed post-test

A pre-test, a post-test and a delayed post-test were the same tests that contained the 274 target words obtained from 20 chapters that students had to study in a semester. Only content words and two-word verbs were included in the study. The pre-test was given at the beginning of the semester while the post-test was given during the last class. The delayed post-test was distributed after 28 days. The tests provided two empty columns for parts of speech and Thai meanings. Students were required to write down word classes and Thai equivalent definitions. If students could write the correct meaning of a particular target word, they were scored with one point for one word and one more point for parts of speech. However, during the correction procedures, only a few students wrote some parts of speech or words classes, so only the scores of Thai definitions of the pre-test, post-test and delayed post-test were taken into account.

2. Vocabulary quizzes

Vocabulary quizzes referred to dictations and gap filling tests that students had to take after every lesson.

The tests consisted of 20 tests for 20 chapters following the course textbook. The

tests contained two parts: 12 blank spaces for vocabulary dictation and 10 gap-filling items (see an example in the Appendix). Students were required to finish the first part by listening to the target words from teachers and writing those words on the 12 blanks. After that words in the upper part or first part were used to fill in the gaps in the second part.

Research Procedures

There were four steps in the study: word selection, vocabulary quiz construction, pilot study and the study.

1. Word selection

A commercial textbook, **New Password 3**, was selected according to the words shown in the corpus research to ascertain that they were high frequency words. The book chosen was made to enhance reading skills and consisted of 20 chapters. Each chapter contained a reading passage, a chart of target words asking students to identify their related parts of speech or word classes, 2 vocabulary exercises, reading comprehension exercises and reading strategies with an exercise. Every chapter followed the same patterns.

2. Vocabulary quiz construction

Quizzes were constructed before the semester began and they were proofread for grammatical correctness by native English teachers.

3. Pilot study

The first test was piloted with another section of students taking the English for Reading course to check whether it was feasible.

4. The Study

Students were required to self-study vocabulary before coming to class. They were informed to memorize spelling, learn meanings of words, complete the part of speech chart, and do vocabulary exercises before studying in class.

During the lesson, the teacher began by asking them to tell the meanings of words. If they could not come up with the right meanings suitable for the context of the passage, the teacher would then explain the words and give examples of all target words in contexts. After that, part of speech charts of target words and vocabulary gap-filling exercises were checked. This step was taken before having students take periodical vocabulary tests and lasted 20 minutes. A periodical vocabulary quiz was distributed to the students after they finished being given vocabulary instruction. Each test lasted 15 minutes.

Finally, the post-test was given in another lesson of English for Reading class after the last chapter was taught.

Findings

The results of the pre-test and the post-test and of the delayed post-test were analyzed for differences using a paired sample T-test.

Vocabulary memorization

It can be noticed that the mean scores of the post-test are much higher than the pre-test's (84.72). The mean scores of both tests are statistically different at 0.000 ($p < .05$). This indicates that using vocabulary tests could lead to vocabulary memorization.

Table 1: Comparison of Mean Scores on the Pre-Test and Post-Test

Tests	N	Total Scores	Mean	Mean Differences	t	Sig. (2-tailed)
Pre-test	22	274	66.59	84.72	16.105	.000**
Post-test	22	274	151.31			

** Significance at .05 level

Vocabulary retention

The results derived from the post-test and the delayed post-test reflect the students' vocabulary retention. There is no statistically significant difference at 0.025 ($p < .05$). This shows that using vocabulary short quizzes could lead to only some levels of vocabulary retention.

Table 2: Comparison of Mean Scores of the Post-Test and the Delayed Post-Test

	N	Total Scores	Mean	Mean Differences	t	Sig. (2-tailed)
Post-test	22	274	151.4091	14.318	2.411	.025*
Delayed Post-test	22	274	137.0909			

* Significance at .05 level

Discussions

This discussion begins by examining the possible reasons explaining why vocabulary quizzes help students memorize and retain vocabulary, followed by mistakes found in students' quizzes, and some suggestions derived from the findings of this study.

1. Explanations of the Effectiveness of the Quizzes

1.1 Vocabulary Memorization

The results of the post-test show that vocabulary quizzes help students memorize new vocabulary. The following two explanations are possible.

The first explanation is the motivation to pass the tests. Most students were concerned about their scores. Gardner (1985, in Lightbown and Spada, 1993) stated that motivation plays a positive role in learning a second language, so the desire to receive high scores on the tests motivated them to memorize the target words.

The second explanation is the use of short and simple words. Most vocabulary used in the study is simple as many words contain a single meaning, and they are one or two syllable words, so it is easy for students to memorize them without confusion and effort. Evidence of this can be clearly seen in the results of the post-tests. Most students could not memorize the meanings of phrasal verbs or of two word verbs.

1.2 Vocabulary Retention

In terms of vocabulary retention, the significant decrease of retention indicates that although quizzes can help them memorize and retain new vocabulary at a certain level, they are not effective enough to help students retain words in the long run. In the study, students were not required to review vocabulary since most of their midterm and final exams needed their reading strategies and background knowledge in taking reading comprehension tests. There were no big parts of vocabulary test. Since students were not required to retest vocabulary, they did not review it. This may be a possible reason explaining why they could not memorize vocabulary after time passed.

2. Types of Mistakes Found in Students' Quizzes

At a closer look, students' work in the post-test and the mistakes found can be grouped into four main types.

The first type of mistake is similar pronunciation. Many students were confused with words that have similar sounds. Another reason for their confusion may be a result of their mispronunciation. For example some students wrote the meaning of "calm" with the meaning of "climb", the meaning of "speech" with the meaning of "speed", the meaning of "whether" with the meaning of "weather", the meaning of "patience" with the meaning of "patient", the meaning of "certain" with the meaning of "curtain", and

the meaning of “chance” with the meaning of “change”.

The second type of mistake is background knowledge interference. There are many meanings students wrote showing that they used their background knowledge of word formation to write down the meanings of target words. For instance, some wrote the meaning of “about to” as the meaning of “about”, the meaning of “nearly” as the meaning of “near”, the meaning of “on purpose” as the meaning of “purpose”, the meaning of the word “hardly” as the meaning of the word “hard”, the meaning of the word “highly” as the word “high” the meaning of “in person” as the meaning of “person”, and the meaning of “weigh” as the meaning of “weight”.

The third type of mistake is similarity of form between the target words and other words. For example, some students wrote the meaning of the word “concern” with the meaning of the word “concert”, the meaning of the word “personal” with the meaning of the word “personnel”, the meaning of the word “melt” with the meaning of the word “belt”, the meaning of the word “partly” with the meaning of the word “party”, the meaning of the word “compete” with the meaning of the word “complete”, and the meaning of the word “warn” with the meaning of the word “warm”.

The last type of mistake found was that some students did not write anything on the paper or wrote totally incorrect meanings. This is probably because they could not memorize the meanings of the words.

Pedagogical Implications

Based on the results found, it was evident that the use of vocabulary quizzes with score provision could arouse students’ interest to study and motivated them to memorize vocabulary. In addition, it facilitated vocabulary retention at a certain level, so teachers may have students self-study vocabulary and take vocabulary quizzes every lesson.

As mentioned in Klatzky, 1980, retention can occur through repetition. Therefore, it may be better for teachers to help students review words from time to time and have them do some activities on the target words to help them retain vocabulary better. In addition, many students were confused by similar sounds or mispronunciation. Teachers may then need to put more emphasis on pronunciation. This allows repetition to occur when students repeat after teachers many times, so it may help students remember the new words better.

Nevertheless, most students cannot memorize meanings of two-word verbs. Miller (1956, quoted in McGaugh, 1973) states that if words are learned or memorized in a meaningful way, it will promote memorization. Therefore, teachers may provide students with more sentence samples to allow words to be used in meaningful contexts in order to ease memorization and retention.

Furthermore, most of them cannot memorize parts of speech or word classes; as a result, teachers may have them write sentences using target words in the quizzes to encourage them to study harder. Writing sentences with the target words allows teachers

to examine whether students can use vocabulary to produce the target language and this way may be better than checking whether they can identify parts of speech.

Recommendations for Further Study

This study identifies some problems found in teaching vocabulary and provides areas for further study.

1. The pre-test, post-test and delayed post-test were designed to examine only whether students could memorize the meaning of the target words. In a further study, the tests may be designed by having students write the spelling of words in English instead of giving Thai definitions to check if they can write the form correctly.

2. The pre-test, post-test and delayed post-test in this study checked only if students could provide definitions of the target words in Thai. A further study may have students take a pre-test, post-test and delayed post-test that have the same format as vocabulary quizzes instead. The similar format may help students to do better in the tests as a result of familiarity, and contexts may enable students to be able to guess the meanings-especially of two words verbs that are hard for them to memorize.

3. In this study, the delayed post-test was given to the students 28 days after teaching. In a further study, the interval between the immediate post-tests and the delayed post-tests may be longer than 28 days in order to clearly see the proportion of words that can be retained.

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Appendix

An example of a pre-test, a post-test and a delayed post-test

Write down the definition of each word in the blanks.

Vocabulary	Parts of speech/ Word class	Definition	Vocabulary	Parts of speech/ Word class	Definition
about to			available		
accept			average		
according to			aware		
active			awful		
actually			basis		
advanced			behavior		
affect			boring		
afford			brave		
after all			bright		
a great deal			bring about		
alike			by accident		
all of a sudden			calm		
allow			career		
although			carry out		
amazing			case		
amount			cause		
apply			certain		
area			challenge		
as a matter of fact			chance		
attack			change one's mind		
attraction			choice		
come down with			claim		
come out			clearly		
come up			divide		
comfortable			dusty		
communication			effect		
compete			effort		
concern			emotion		
connection			encourage		
consider			end up		

contain			enemy		
control			energy		
couple			entire		
cover			escape		
create			exactly		
culture			except		
daily			expect		
danger			explain		
deaf			explanation		
deal with			express		
destroy			female		
develop			field		
difference			figure		
difficulty			find		
direction			first of all		
disappear			in person		

An example of a vocabulary quiz

Vocabulary: Chapter 1

Part I: Write down vocabulary according to what you hear.

- | | | |
|-----------|-----------|-----------|
| 1. _____ | 2. _____ | 3. _____ |
| 4. _____ | 5. _____ | 6. _____ |
| 7. _____ | 8. _____ | 9. _____ |
| 10. _____ | 11. _____ | 12. _____ |

Part II: Use the vocabulary above to fill in the blanks.

1. Your room looks _____. You need to clean it up.
2. This book is 500 baht. But I only have 400 baht. I cannot _____ it.
3. I am going to _____ my diary under my bed. I hope no one sees it.
4. My sister did not _____ her muffin, and she ate it all.
5. He made a rabbit appear from his hat! He must have learned _____.
6. It is easy to _____ how to use this washing machine.
7. My father knows everything about computers. He is such a _____.
8. I _____ go to Paris this summer. It is awesome.
9. There are only a few _____ in this laboratory.
10. She _____ the guests to enter.