

CHAPTER III

METHOD OF THE STUDY

This chapter explains the methods and the procedures used in this study. The chapter first provides an overview of research questions. Second, the main study presents details on subjects, reading materials, instruments, data collection procedures and the method of data analysis for the study is described.

To test the effects of the three different types of vocabulary annotations -- text-only, picture-only, and text-plus-picture -- on elementary EFL learners' vocabulary learning, this study aimed to find out the effects of three different types of vocabulary annotations -- text-only, picture-only, and text-plus-picture -- on elementary EFL learners' vocabulary recall in the immediate test and the three-week delayed test. /

The principle independent variable was the three different types of vocabulary annotations -- text-only, picture-only, and text-plus-picture -- in the reading materials. The dependent variable in this study was the subjects' vocabulary test scores.

Subjects

The setting of the current study was an elementary public school in a northern province of Thailand. In the Thai education system, the elementary school consists of Prathom 1 to Prathom 6 (equivalent to US Grade 1-6). The curriculum of elementary schools is mandated by the Ministry of Education in Bangkok. The English curriculum for elementary schools is divided into three levels: the preparatory level (Prathom 1-2), the literacy English (Prathom 3-4), and fundamental English 1-4 (Prathom 5-6). Fundamental English 1-4 focuses on the practices of listening, speaking, reading, and writing skills which are used in daily life situations. A study of different types of Wh-questions is also included in this level (Ministry of Education, 1996).

In the school where the current study took place, there were five classes of Prathom 6 and each class consisted of 50 students. All of the students enrolled in Fundamental English 1-4 in the first semester of academic year 2004. These subjects had had eight years of English learning and their ages were between 11-12 years old. Based on the students' mean scores of their English course from the past academic year, three classes were selected to participate in the current study. The selected classrooms were 6/1, 6/2, and 6/3 and the mean

scores in English of each class were 69, 69, and 67 respectively.

Initially, all 150 subjects from these three classes were invited to participate in this study. However, after analyzing the data, the number of the subjects decreased to 128; 41 subjects in Group One (6/1), 42 subjects in Group Two (6/2); and 45 subjects in Group Three (6/3) (see detail discussion on p. 41).

Reading Materials

The passage used in the current study was taken from *English Is Fun Book 4*, which was the English text for Prathom 6 students in the school where this study took place. It was published by Ministry of Education (1996). It consists of 12 chapters (Lesson 34 to Lesson 45) and each chapter consists of a passage with a list of new vocabulary but no meaning is provided. At this school, the English teacher taught words in the vocabulary by giving meaning in Thai (L1) or by using pictures. The researcher selected Chapter 42 to be used in the current study because it would not be taught in class during the first semester. The passage from this chapter consisted of 318 words (see Appendix A).

The Selection of the Target Words

Before collecting data for the current study, the passage was given to 20 Prathom 6 students at another public school. They were instructed to read the text and underline the words that they did not know the meaning. The method used by Laufer and Hill (2000). Thirty most often underlined words were selected as target words in this study. After that, the 30 target words were presented to the English teacher who taught the current subjects and who had had more than 10 years experience in teaching English in elementary public schools. The teacher judged the difficulty of the target words and she agreed that the students' selection was reasonable. The target words consisted of five parts of speech - seven nouns, 16 verbs, four adjectives, two prepositions, and one adverb. The target words were then annotated in three forms: meaning in Thai (L1) (see Appendix B), picture vocabulary (see Appendix C), and meaning in L1-plus-picture (see Appendix D). Figure 2 presents steps in selecting the targets words.

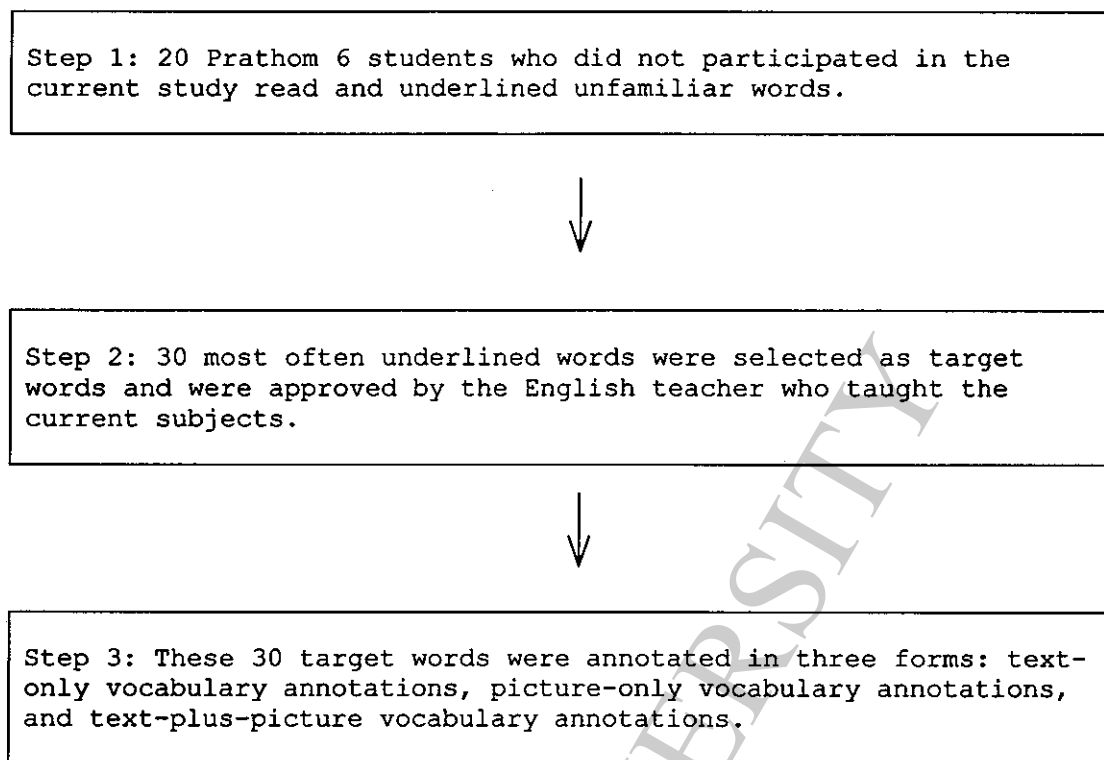


Figure 2. Steps in selecting the target words

The Selection of Pictures

To ensure the accuracy of the pictures used to define the meaning of each target word, 20 Prathom 6 students identified the picture that best represented the target words. The researcher asked each student to select one of the three pictures defining each word. The most often selected picture was later used to annotate that particular word. The pictures were used in both picture vocabulary annotations and text-plus-picture vocabulary annotations.

Instruments

The instruments used in this study were questionnaire and vocabulary test. These instruments were constructed by the researcher under the approval of the thesis advisor.

Questionnaire

The questionnaire asked the subjects about their previous knowledge of the target words. It consisted of four columns. The first column listed 30 target words. The subjects were asked to select the second column if they had seen and known the meaning of each word, to select the third column if they had seen a word but were not sure or could not recall its meaning, and to select the last column if they had never seen a word and did not know its meaning (see Appendix E).

Vocabulary Test

The vocabulary test consisted of 30 target words. It asked the subjects to write the meanings of each word in Thai (see Appendix F). The subjects were given the test twice, immediately after reading the text and three

weeks after the reading task. The researcher chose the three-week delay because most studies investigated the effects of vocabulary annotations on L2 learners' recall after two weeks (Chun & Plass, 1996a; Kost et al, 1999; Wu, 2002). Therefore, it would be beneficial to compare students' recall of words after two weeks and their word recall after three weeks.

To ensure the validity and reliability of the instruments used in the current study, both questionnaire and vocabulary test were pilot tested with 20 Prathom 6 students at another public school in order to see whether the students had any problem understanding the questionnaire and performing the vocabulary test. Since, they had no problems understanding and performing the test, no correction was made.

Scoring

A vocabulary test was scored by the researcher and two English teachers, one from the subjects' school and the other from another public school. These teachers' age were between 45-50 years old and they had had more than 10 years experience in teaching English in elementary public schools. Moreover, the teachers were not informed of the classification of the subjects in

each group. Before scoring the vocabulary test, both the teachers and the researcher discussed and set the following criteria for scoring the answer. If the answer was correct in both meaning and spelling, 2 scores were given. If the answer was correct but misspelled, for instance, old = แก้ or tree = ต้นไม, 1 score was given because misspelling in the Thai language could affect the meaning of words. A score of "0" was given when the answer was incorrect. In case of dissimilar grading, the graders discussed and came up with an agreement. The inter-rater reliability was 90%.

Data Collection Procedures

The three classrooms were assigned as Group One (6/1), Group Two (6/2), and Group Three (6/3). Each group consisted of 50 subjects. The researcher worked with Group One who read the passage with text-only vocabulary annotations. Two English teachers, who were thoroughly informed of data collections procedures, were in charge of Group Two and Group Three. Group Two read the passage with picture-only vocabulary annotations and Group Three read the passage with text-plus-picture vocabulary annotations.

Before distributing the reading passage and different types of annotations to each group, the researcher and the two teachers informed the subjects in each group that this experiment did not affect their English scores in order to make them feel comfortable to perform the task. Each group was given 15 minutes to read the passage. After that, the passage was collected then the questionnaire about vocabulary knowledge (see Appendix E) was distributed. This questionnaire was used to ask the subjects' previous knowledge of the target words. The subjects who reported that they knew the meaning and could provide a correct meaning of any target word were eliminated from the study, the same method used by Laufer and Hill (2000) in their study. Each group was given 10 minutes to do this questionnaire. The vocabulary test was distributed after all the subjects finished the questionnaire. Each group was given 20 minutes to do the test. After finishing the immediate test, the results from the questionnaire and the immediate test were analyzed. Any subjects who claimed that they knew the meaning of any word and could give correct its answer were eliminated from the current study (see detail on page 47). Three weeks later, the same test was distributed to the final numbers of these three groups without being informed. The data collection

procedures are illustrated in Figure 3.

| Step 1 | | |
|--|--|---|
| Group One (6/1) 50 subjects | Group Two (6/2) 50 subjects | Group Three (6/3) 50 subjects |
| Step 2 | | |
| read a passage with text-only vocabulary annotations. | read a passage with picture-only vocabulary annotations. | read a passage with text-plus-picture vocabulary annotations. |
| Step 3 | | |
| spent 15 minutes to Read the passage | same | same |
| Step 4 | | |
| spent 10 minutes to do the questionnaire. | same | same |
| Step 5 | | |
| spent 20 minutes to do the immediate test | same | same |
| Step 6 | | |
| analyzed the questionnaire and the immediate test | same | same |
| Step 7 | | |
| Those who reported that they knew the word (from the questionnaire) and gave the correct meaning of any word (from the test) were deleted. | same | same |
| Step 8 | | |
| The final number is 41 subjects. | The final number is 42 subjects. | The final number is 45 subjects. |
| Step 9 | | |
| 41 subjects did the three-week delayed test. | 42 subjects did the three-week delayed test. | 45 subjects did the three-week delayed test. |

Figure 3. The data collection procedure

Data Analysis

The vocabulary test scores from the immediate tests and the three-week delayed test were analyzed and compared. A standard version of the Statistical Package for the Social Sciences (SPSS) program was used in the statistical analyses of the data. A one-way ANOVA was used to compare the vocabulary test scores of the three groups -- the text-only group, the picture-only group, and the text-plus-picture group -- in both the immediate test and the three-week delayed test, the same method used by Nagata (1999), Kost, Foss, and Lenzini (1999), and Yoshii and Flaitz (2002). If the difference of the mean scores was significant, a further analysis of each pair was conducted. The *t* test was used to assess whether the means of two groups were statistically different from each other. Thus, it was used to compare the mean difference between each pair of the groups (between Group One and Group Two, between group One and Group Three, and between Group Two and Group Three). It was also used to compare the test scores of the same groups which were taken at different time (the immediate test and the three-week delayed test). The results of these analyses will be reported in the next chapter.

Summary of the Chapter

Chapter III described the design and methodology of this study. Initially, the subjects were 150 Prathom 6 students at an elementary public school in a northern province of Thailand. They were divided into three groups. Each group read a passage with 30 target words, which were annotated in three forms: text-only annotations, picture-only annotations, and text-plus-picture annotations. Group One (6/1) read a passage with text-only vocabulary annotations, Group Two (6/2) read a passage with picture-only vocabulary annotations and Group Three (6/3) read a passage with text-plus-picture vocabulary annotations. After reading the passage, they were given the questionnaire and the vocabulary recall test. Three weeks later, the same test was distributed to these three groups without telling them in advance. The one-way ANOVA was used to compare the test score of three groups and the *t* test was used to compare the test scores of the same group from the immediate vocabulary test and the three-week delayed vocabulary test.