

CHAPTER 3

RESEARCH METHODOLOGY

This chapter describes the design and procedures of the study. It is divided into four sections: research subjects, research instruments, data collection, and data analysis.

3.1 Research Subjects

The subjects of this experimental study were 90 Prathomsuksa 6 (Grade 6) students who were studying English in the first semester of the 2005 academic year at Pattani Municipality School 4. They were in two classes consisting of forty-five students each with similar level of English proficiency.

3.1.1 Selection of the Subjects

3.1.1.1 Experimental and Control Groups

The two classes with 90 subjects were selected from the four Prathomsuksa 6 classes which totaled 178 students. Each class' mean scores calculated from the mid-term and final test scores of English class in the second semester of the 2004 academic year were compared. The two classes with similar mean scores were chosen, and then they were identified as the experimental and the control groups. The comparison of the mean scores of students' English achievement in the second semester of 2004 academic year is presented in **Table 1**. It can be seen that the mean scores of class 6/2 and 6/4 were similar, 72.07 and 73.29 respectively.

Table 1: Mean Scores of the English Mid-term and Final Tests

Classes	No. of the Students	Mean Scores of the Sum of the Mid-term & Final Test	S.D
6/1	44	76.91	11.57
6/2	45	72.07	10.11
6/3	44	69.55	9.37
6/4	45	73.29	12.40

To ensure that the subjects of both classes (6/2 and 6/4) had a similar levels of English achievement, the mean scores of these two classes were compared using a paired samples t-test as shown in **Table 2**.

Table 2: Comparison of the Mean Scores of the Subjects' English Achievement

Class	No. of the Students	Mean	S.D	t-value	Two-tailed test
6/2	45	72.07	10.11	-514	.610
6/4	45	73.29	12.40		N=45

According to the data presented in **Table 2**, the result of the t-test score was .610 which did not indicate a statistically significant difference ($p > 0.05$). Then, the 6/2 class was randomly assigned as the experimental group and learned how to read through the pre-, while-, and post-reading questioning strategies. The 6/4 was used as the control group and learned to read the following procedures as recommended in the Teacher's manual of **Say Hello 6**. These include reading after the teacher, translating one paragraph of each text in groups, re-telling the text in Thai to the whole class and then concluding important points of each text at the end of reading lessons.

Initially, all 90 students of the two classes of 6/2 and 6/4 participated in the study. However, two students from each group missed either one or two tests. Therefore, only 86 students were taken as the research subjects so there were forty-three students in each group.

3.1.1.2 High and Low Proficiency Groups

The experimental group consisting of forty-three students was further divided into the high and the low proficiency groups based on their pre-test scores. The scores were arranged from the highest to the lowest. Using a 27% technique (Hughes, 1989), the top twenty-seven percent or twelve students were considered as the high proficiency group. The bottom twenty-seven percent or twelve students were considered as the low proficiency group. Thus, there were a total of twelve students in each group.

3.2 Research Instruments

The research instruments used to acquire information for this study consisted of a pre- and post-test and ten reading passages taken from **Say Hello 6** to be used as material for the training. Lesson plans were also to be used with them.

1.2.1 Pre- and Post-Test

The pre- and post-test was administered to determine the English reading comprehension ability of both groups. This test was composed of 20 multiple-choice items of two levels of reading questions: literal and reinterpretation (See Appendix A). Forty minutes were allocated for the students to complete the test. The same test was administered twice as a pre-test and post-test before and after the experiment. The details of test construction will be presented in three aspects as follows.

3.2.1.1 Types of Text Selected

Heaton (1988:118) suggests that “the sampling of the reading passage must be related to the broader aims of the language teaching situation.” Besides, “the reading passages should be similar to the type of reading material with which the students must

be confronted in their work at school.” The subjects in this study were in Prathomsuksa 6 and the upper elementary level syllabus requires them to read fables and short stories or narratives and a students’ book selected consists of these two text types.

That is why, three passages: one fable and two narratives have been chosen for the test. These were “Camping is Fun” and “A Greedy Monkey” taken from M1. English Entrance Examination Book, and “A Grandma’s Exciting Story” taken from Headway Elementary (1993).

3.2.1.2 Levels of Reading Questions

After selecting the texts, unfamiliar words which were not recommended in Prathomsuksa 6 students’ vocabulary list, (according to the upper elementary 2001 curriculum), were listed with the Thai meaning. After that the 20 multiple-choice items were designed to tap two levels of reading comprehension which were required by the syllabus. They were literal questions requiring students to find the information directly stated in the passages and reinterperation questions requiring students to reinterpret the meaning implied in the passages.

According to the upper elementary level 2001 curriculum and syllabus, students are required to understand and interpret the text. However, since literal comprehension is the basis for students’ global comprehension, and the subjects were only in Prathomsuksa 6 which means that they have limited reading ability, so more concentration is put on the literal level of question. Hence, twelve items were designed to tap the literal comprehension and eight items were designed to tap reinterperation comprehension as can be seen in **Table 3**.

Table 3: Number of Test Items of Two Comprehension Levels

Contents	Types of Reading Questions		Number of items
	Literal	Reinterperation	
A Greedy Monkey	3	3	20
Camping is Fun	4	3	
A Grandma’s Exciting Story	5	2	

3.2.1.3 Piloting of the Test

The main purpose of the pilot test was to test the validity and reliability of the test. It also helped the investigator develop and revise the test. The test was piloted on Monday, June 20th, 2005 with a group of 50 Prathomsuksa 6 students at Pattani Municipality School 5 who were not involved in the main study. The test time lasted 40 minutes, from 8.30 a.m. to 09.10 a.m. This group of the students was chosen because their learning background, learning context, and English proficiency level were comparable to those of the subjects in the main study. They all came from Pattani Municipality in Pattani province and were required to learn English under the same upper elementary syllabus.

After piloting, an item analysis of the test was conducted by first dividing the students using a 27% technique (Hughes, 1989) to assign them into the high and the low ability groups. There were 14 test takers in each group (i.e. the top and bottom groups) to determine how well the top and bottom groups did on each item. The mean (X), the standard deviation (S.D.), item difficulty index or facility value (F.V.), the item discrimination index (D.I) of each item, and the reliability (R^{tt}) of the whole test were calculated. The reliability of the test was .86 as can be seen in Table 4.

Table 4: The Pilot Study Results

Test	No. of items	Highest possible score	No. of Test Takers		X	S.D.	KR20
Pre-, and Post-test	20	20	50		9.62	2.93	R^{tt}
			Top 27%	Bottom 27%			0.86
			14	14			

Only items which met the item difficulty index between 0.02 and 0.80 and the item discrimination index > 0.02 were chosen to be used in the main study (Harris, 1969, Heaton, 1988, Alderson, Clapham and Wall, 1995 and Brown, 1996). Five items (i.e four, five, thirteen, nineteen, and twenty) have been revised.

3.2.2 Teaching Materials

Teaching materials consist of ten reading passages taken from **Say Hello 6**. These ten passages are for both the experimental and the control groups. Lesson plans were written as two sets. The first one follows the Teacher's manual of **Say Hello 6** to be used with the control group and the second one applied the pre-, while-, and post-reading questioning strategies for the experimental group.

3.3 Data Collection

The steps of data collection are as follows.

3.1 After selecting two classes of the Prathomsuksa 6 students, the pre-test was administered to both groups. The pre-test was conducted on Monday, July 11th, 2005. The test time lasted 40 minutes. The control group started the test at 09.30 a.m. until 10.10 a.m and the experimental group started the test at 10.30 a.m. until 11.10 a.m. The subjects in the control group were kept in the class for 20 minutes after they finished the test to ensure that they would not discuss the test with the subjects in the experimental group.

3.2 The training was conducted over 50 minute class period for each group. The total time of 10 periods were from Tuesday, July 12th, to Thursday, August 10th, 2005. The experimental group was trained with the use of the pre-, while-, and post-reading questioning strategies. The control group was taught the same contents, but with all stages listed in the Teacher's manual of **Say Hello 6**.

3.3 After the training, on Thursday, August 11th, 2005, the post-test was administered to both groups. The test time lasted 40 minutes. The control group started at 08.30 a.m. until 09.10 a.m. and the experimental group started at 09.30 until 10.10 a.m. Again, the subjects in the control group were kept in the class for 20 minutes after they finished the test to ensure that they would not discuss the test with the subjects in the experimental group.

3.4 Data Analysis

There are two main variables in this study.

The independent variables are the two teaching methods which include

1. Teaching reading using the pre-, while-, and post-reading questioning strategies.
2. Teaching reading using the reading procedures recommended in the Teacher's manual of **Say Hello 6**.

The dependent variables are:

1. Scores on the pre- and post-test of the control and experimental groups
2. Scores on the pre- and post-test of two levels of questions: literal and reinterpretation of the control and experimental groups
3. Scores on the pre- and post-test of the high and low proficiency students
4. Scores on the pre- and post-test of two levels of questions: literal and reinterpretation of the high and low proficiency students

The data in this study were analyzed by using an SPSS/PC version 12 (Statistical Package for the Social Science) program.