

CHAPTER 3

METHODOLOGY

This research study is quasi-experimental in nature, so the researcher has considered various methods to respond to the research questions of the study.

This chapter includes a detailed discussion of the population and sampling, data collection, the construction of the relevant instruments, and the statistical method used.

Population and Sample Size

The population of the study consists of 220 Mattayomsuksa 5 students from five classes at Sarawittaya School, a government secondary school located in a Bangkok suburb, during the 2010 academic year. All of them were enrolled in the course E32201 (Successful Reading and Writing). The one hundred and twenty students who were voluntary participants in the experiment were divided into two groups according to whether they were interested in reading or whether they were only interested in taking the test. Each group was then evaluated by means of a pretest. After that, the experimental group started the free voluntary reading part of the program by reading the books they had chosen, and did interval test 1 and interval test 2, their progress being recorded in their report form. At the end of the study, the

two groups of subjects did the post-test to compare their progress in terms of reading. The following tables below show the equal number of two groups of students.

Table 1

The number of students in each group

Group of (Population) students	Number of Students
Control group	60
Experimental group	60
Total	120

Table 1 presents data on the number of students in each group who participated voluntarily in this study.

Table 2

The English skills contents on the pre-test and post-test

Section	English Skills	Number of Items
1	Vocabulary	10
2	Grammar and Writing	10
3	Comprehension	10

Table 2 shows the number of items pertaining to the content of the English skills for the pre-test and post-test selected from a pool of 20 items for each skills test.

Table 3*The content of the English skills on the interval tests*

Section	English Skills	Number of Items
1	Vocabulary	10
2	Grammar and Writing	10
3	Comprehension	10

Table 3 presents the content of intervals Test 1 and 2, consisting of three sections: vocabulary, grammar and writing and comprehension used for the monitoring process.

Research Instruments

In this study, the researcher used different instruments, both quantitative and qualitative in nature, to collect the data in order to respond to the research questions. Since this study applied the quasi-experimental technique, using both quantitative and qualitative data, it was also necessary to use the triangular method of investigation, or triangulation, as well, consisting of English skills tests questionnaires and interviews. The English skills tests, adapted from the English Language Development Center, consisted of three sections: vocabulary, grammar and writing, and comprehension, developed from the Development of English Center under the Ministry of Education. These were used as the pre-test and post-test for the study to gather data regarding the students' vocabulary, grammar and writing and comprehension

before and after the experiment. There were 30 questions with each question containing four answer options only one of which was correct. Each correct answer is awarded one mark. The test duration was 50 minutes and a full score was 30 marks. Initially, the test was piloted with 120 Mattayomsueksa 5 students at Sarawittaya School for its discrimination power, difficulty index and reliability.

The Experimental Design

In conducting the experiment, the researcher used 4 steps, as follows:

- (1) Selection of the population and sample size
- (2) Data collection
- (3) Experimental procedures
- (4) Data analysis.

Selection of the population and sample size

The population and sample size, as selected for both the control group and experimental group, were used as the source of data for this study.

Experimental Procedures

The researcher began the study by consulting with her thesis advisors regarding the testing, as well as the language and content of the research. A pilot test was then administered to another group of Mattayomsueksa students at Sarawittaya School to determine its discrimination power, difficulty index and level of reliability. The three tests yielded results of between 0.20-0.80, the difficulty index was from 0.20 to 1.0, while the Kuder-Richardson

reliability value (K-R 20) was 0.90 and 0.92 respectively. The 60 students from volunteer experimental group and the 60 control group students then did the test within 50 minutes.

The experimental group and the control group then did the 30 multiple-choice items, including the vocabulary, grammar, writing and comprehension test. During the ten-week experiment, the researcher consulted with her advisor. Finally, the students did the attitude test on reading and underwent a structured interview adapted from the Likert rating scale. (For example, if students check 5, it may be interpreted that they strongly agree with the statement regarding their attitude towards reading. The results of the test were compared to determine the differences between the two groups by using the Statistical Package for Social Sciences (SPSS) for Windows.

Monitoring Process

1. Interval test 1 and interval test 2 were administered to check the students' progress in the development of their language skills.
2. Marks were assigned for the reading activities

Data Analysis

This section deals with the method used to analyze the data obtained from each method of collection in order to respond to the research question. In the part dealing with the quantitative analysis, the data obtained from the pre-test and post-test scores were analyzed in terms of mean (\bar{X}), standard deviation (SD), a t test, and the Statistical Package of Social Science (SPSS).

The data obtained from the questionnaires concerning the value of reading was also subjected to qualitative analysis and the results presented in terms of means, followed by a detailed description of the results at the end of the research.

The data collected from the structured interviews was transcribed and coded. Finally, the researcher discussed the findings and recommendations for their application in Thai schools and for further research in to this field of study.

The Construction of Instruments

The instruments in this study are divided into two parts: quantitative and qualitative. The quantitative part (pre-test, interval test 1, 2, post-test) focuses on three main areas of concern: the first is the impact of free voluntary reading on vocabulary, the second is the impact of free voluntary reading on grammar and writing and the third is free impact of free voluntary reading on comprehension. The procedure began with the researcher constructing the English skills test, which contained 60 items. Then the researcher consulted the thesis advisor to check that the language and the content were correct. Then the tests were tested through a pilot study with about one hundred other students. Next select the students who got the high scores about 27% and got the low scores 27% to check the reliability and discrimination power and the difficulty index by using B (B-Index) program. The discrimination power was between 0.20-0.80. The difficulty index was

from 0.20 to 1.0. The Kuder-Richardson reliability value (K-R 20) was 0.90, 0.91 and 0.92 respectively. After that the researcher selected good 30 items out of 60 question items to test the students in the two groups. Consequently, those students who completed the 30 question items got 30 full marks, namely 30 out of 30. These tests were multiple choice in nature, a test format which is reliable and one with which all students were familiar, so they knew what was required of them.

To investigate whether the data from that the students reading records from the books they had read was reliable, during the experiment, the students were required to record the progress made during their reading in the set of application forms .

To investigate the students' attitudes toward reading, questionnaires comprising five options and open-ended questions were used to reflect the students' thinking, and their attitudes toward free voluntary reading.

Another instrument used in the study was the structured interview. At the end of the experiment, five students from each group were selected to undergo in-depth interviews as to their attitudes regarding their free voluntary reading experience, and to assess improvements in their vocabulary, grammar and writing and comprehension skills.

Another tool used in the study was reading materials. During the ten-week experiment, members of the experimental group were asked to borrow the books from the teacher, which were all in the same range in terms of the number of headwords.

Summary

The aim of this chapter was to provide information regarding (1) The selection of the sample size and population (2) Data collection (3) Experimental procedures and (4) Data analysis. The setting of the study has been introduced in brief, in addition to which the sampling method and construction of the instrument were discussed as well.