

CHAPTER THREE

METHODOLOGY

This chapter deals with the procedures and methodology used in the study. It covers such topics as subjects, research design, research instruments, data collecting, as well as methods of data analysis.

SUBJECTS

The subjects of this study consisted of 96 Mathayom Suksa 5 students in Science-Maths programme (class 5-1-5/3) of Muang Chiang Rai School, Chiang Rai Province who took the English Core Course (Eng 0110) in the second semester, 2002 academic year. Firstly, the students of the three classes were randomly divided into four groups. Then each group was randomly assigned into either an experimental group or a control group. Lastly, each experimental group was randomly assigned into one of the three prereading activities.

RESEARCH DESIGN

The design of this study was as shown in table 1

Table 1: The Experimental Design

	Group	Treatment	Test
(R)	E ₁	X ₁	O
(R)	E ₂	X ₂	O
(R)	E ₃	X ₃	O
(R)	C	-	O

R means random sampling

E means the three experimental groups which received different kinds of prereading

activity which were defined as follow:

E_1 group received semantic mapping activity (X_1) before reading the given texts.

Then took the comprehension tests.

E_2 group received pictorial previewing activity (X_2) before reading the given texts. Then took the comprehension tests.

E_3 group received self-questioning activity (X_3) before reading the given texts.

Then took the comprehension tests.

X means the different kinds of prereading activities which consisted of :

X_1 is semantic mapping activity.

X_2 is pictorial previewing activity.

X_3 is self-questioning activity.

C means the control group which received no prereading activity.

O is the Comprehension Test

The stages of studying were as shown:

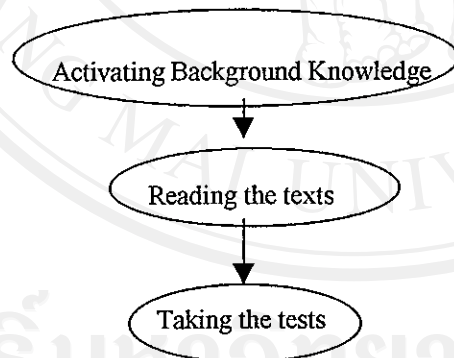


Figure 24: Three stages of studying

RESEARCH INSTRUMENTS

The instruments of this study consisted of the prereading activity plans, and the comprehension tests.

1. The prereading activity plans

The prereading activity plans for each experimental group were developed according to each prereading activity.

1.1 The prereading activity plans of the semantic mapping group consisted of

- 1.1.1 the semantic map of the 'Mosquito', the introductory text of the 'Mosquito', and the text 'Why was the Mosquito Man's Great Enemy?'
- 1.1.2 the semantic map of the 'Bloodhound', the introductory text of the 'Bloodhound', and the full text of the 'Bloodhound'.
- 1.1.3 the semantic map of the 'Supermarket', the introductory text of the 'Supermarket', and the full text of the 'Supermarket'.
- 1.1.4 the semantic map of the 'Greedy Fox', the introductory text of the 'Greedy Fox', and the full text of the 'Greedy Fox'.
- 1.1.5 the semantic map of the 'Air Pollution', the introductory text of the 'Air Pollution', and the text "What is Hurting the Environment?".

1.2 The prereading activity plans of the pictorial previewing group consisted of :

- 1.2.1 the picture of the cycle of the diseases which causes by the mosquito, the introductory text of the 'Mosquito', and the text 'Why was the Mosquito Man's Great Enemy?'.
- 1.2.2 the pictures of the 'Bloodhound', the introductory text of the 'Bloodhound', and the full text of the 'Bloodhound'.
- 1.2.3 the pictures of the 'Supermarket', the introductory text of the 'Supermarket', and the full text of the 'Supermarket'.

1.2.4 the strip stories of the 'Greedy Fox', the introductory text of the 'Greedy Fox', and the full text of the 'Greedy Fox'.

1.2.5 the pictures of the 'Air Pollution', the introductory text of the 'Air Pollution', and the text "What is Hurting the Environment?".

1.3 The prereading activity plans of the self-questioning group consisted of the worksheets in which the students were required to self-question, the introductory text, and the full text of each story.

1.4 The control group received no prereading activity. The plans consisted of the introductory text, and the full text of each story.

The five reading texts: 'Why was the Mosquito Man's Great Enemy?', 'The Bloodhound', 'The Supermarket', 'The Greedy Fox', and "What is Hurting the Environment?" were taken from English textbooks level 2 (M.5). Selection was made on the basis of the following: (a) the length of the text is about 1500-3000 words, (b) appropriateness of illustrations, and (c) appropriateness of conceptual and vocabulary difficulty.

2. The Comprehension Test

Students in each group took the same reading comprehension tests. The tests consisted of 40 items of multiple choice tests of the five texts. The questions required both literal and interpretive level of comprehension.

DATA COLLECTING

First of all the comprehension tests were pilot tested with 160 students in Mathayom 5 at Samakkhee 2 School and Mengrai Maharaj Witthayakhom School which the students had the average level of English proficiency as the target group. After that the data were analyzed to find the reliability of the whole tests by SPSS programme for Windows (KR 20) and the result is 0.8375. In analyzing the difficulty and the discrimination of the comprehension tests, technique 25 % were used. The details were shown in the appendix (page 129).

Then the study was conducted through the second semester. The details of the experiment were as follow:

The semantic mapping experimental group

Background knowledge of students in semantic mapping group was activated by having a prereading discussion in which they tried to predict the information they were going to learn before reading the introductory texts. After reading the introductory texts and studying the given map, they discussed what they had already known on the topic and predicted information to be learned by writing their predictions on the map. After reading the full texts students expanded the map. After that they took a test.

The pictorial previewing experimental group

Background knowledge of students in pictorial group were activated by discussing what they had already known about the picture and what they thought the picture would tell them. Students tried to depict information from the picture. After reading the introductory texts, they related the information with the pictures. Then read the full text and took a test.

The self-questioning experimental group

Background knowledge of students in self-questioning group was activated by teacher's encouragement. Students were required to ask as many questions as possible from the title and the introductory texts. Teacher encouraged them to talk about what they knew about the topic then wrote them in the worksheet which adapted from KWL worksheet. After that students generated questions that they thought they would find answers from the text they were going to learn. The questions they generated were varied from factual questions to critical and evaluative questions. Three level of questioning proposed by Call (2000) were employed in this stage. The three level of questioning consist of level 1 or factual question is questioning about the facts in the text. Learners are required to ask questions begins with who, what, where, or when. Question level 2 or inferential and interpretative question is question in which readers have to make an

interaction with the text. Learners are needed to generate question begin with why, how, to summarize, and to compare. And question level 3 is critical and evaluate question. Learners are required to evaluate the text based on their background knowledge.

After reading the introductory texts, students added information in the worksheet. After that they read the full texts and took a test.

The students in the control group

The students in the control group did not have a prereading activity. They studied the introductory texts by themselves without guidance, then read the full text and took a test.

The table below were the design of data collecting.

Table 3 : Data Collecting

Group Stage	Semantic mapping group	Pictorial previewing group	Self-questioning group	Control group
Prereading	/	/	/	x
Introductory text	/	/	/	/
Full text	/	/	/	/
Test	/	/	/	/

DATA ANALYSIS AND STATISTIC ANALYSIS

Data were analyzed through the following statistic procedures.

1. The quality of the research tools.

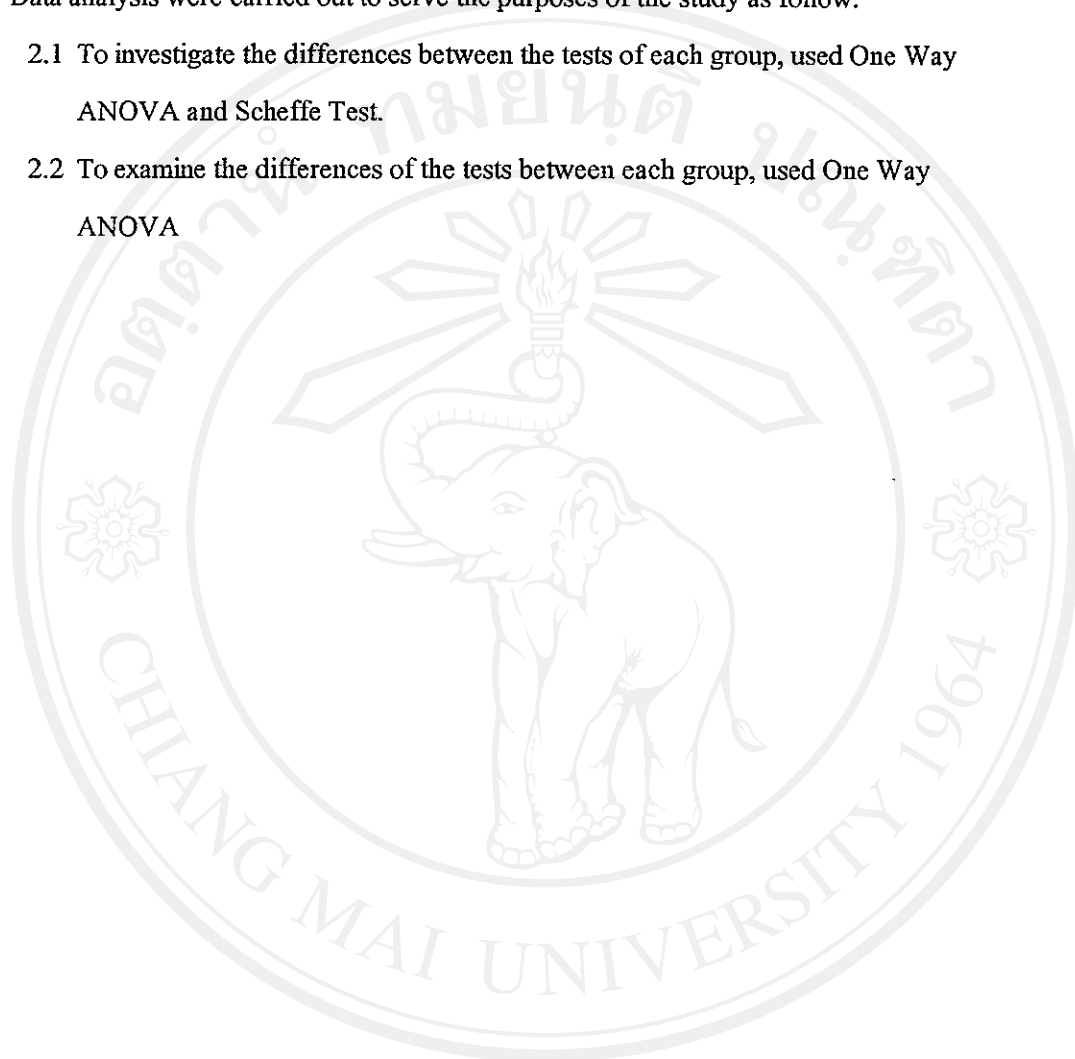
1.1 To investigate the Difficult (p), and the Discrimination (r) of the comprehension tests using technique 25 % of Item Analysis.

1.2 To investigate the reliability of the whole tests, used SPSS for Windows KR 20 (Kuder- Richardson).

2. Data analysis

Data analysis were carried out to serve the purposes of the study as follow:

- 2.1 To investigate the differences between the tests of each group, used One Way ANOVA and Scheffe Test.
- 2.2 To examine the differences of the tests between each group, used One Way ANOVA



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