# CHAPTER 3

# METHODOLOGY

The researcher presents the methodology under the following headings:

1. Population

2. Sample Group

2. Instruments for Data Collection

3. Construction of the Instrument

4. Data Collection

5. Data Analyses

6. Statistics Used in Data Analyses

## Population

The population of 10 instructors, who taught the foundation English course in semester 2/2007, was used in the interview process.

In addition, the population also consists of 434 undergraduate students, from the four faculties in Nakhon Sawan Rajabhat University, who studied the foundation English course in semester 2/2007. These students were questionnaire respondents and interviewees.

## Sample Group

The sample group of students consists of 244 undergraduate students who were selected from the population by way of cluster random sampling.

Both the student population and sample group are displayed in Table 1:

Table 1: The population and sample group

| Faculties | Population | Sample Group |
|---|---|---|
| Humanities and Social Sciences | 101 | 62 |
| Education | 52 | 32 |
| Science and Technology | 54 | 29 |
| Management Science | 227 | 121 |
| Total | 434 | 244 |

For the interview process, 10 students were further selected by way of stratified random sampling.

**Instruments for Data Collection**

There are two types of instruments for data collection:

1. The questionnaire. This is a two-part questionnaire.

Part 1 deals with personal information. The subjects are asked to put a tick (✓) in the ☐ in front of their own faculties.

Part 2 is concerned with problems in learning the foundation English course. These problems were divided into 4 areas: teachers, learners, curriculum and textbooks, and administration. Here, the subjects were asked to rate the levels of the problems on the scale of 1 to 5 as follows:

|   |   |   |
|---|---|---|
| 1 | = | very low |
| 2 | = | low |
| 3 | = | moderate |
| 4 | = | high |
| 5 | = | very high |

2. The interview. The questions are about how to solve the four areas of the students' problems in learning the foundation English course.

## Construction of the Instrument

The questionnaire was constructed in the following steps:

1. Some related literature and research on problems in learning English of Thai students were reviewed.

2. Preliminary interviews occurred with some students learning English as well as teachers of English in Nakhon Sawan Rajabhat University.

3. The information from these interviews was used in the designing of the initial questionnaire.

4. The questionnaire was presented to five content experts for comments. Their names are as follows:

    4.1 Miss Lee Anne, English instructor, Nakhon Sawan Rajabhat University.

    4.2 Mr. Fabian Donsbach, English instructor, Nakhon Sawan ECC.

    4.3 Mr. Jack Daniels,  English instructor, Nakhon Sawan ECC.

    4.4 Mr. Gaweth Jones, English instructor, Nakhon Sawan ECC.

    4.5 Mr. Micheal Mulligan, English instructor, Nakhon Sawan ECC.

5. Some improvements were made based on the suggestions made by the experts.

6. The improved questionnaire was then tried out with a group of students who were similar to the sample group.

7. The reliability of the questionnaire was calculated, and the alpha coefficient was 0.83.

8. The questionnaire was finally employed as an instrument for data collection with the sample group of students.

**Data Collection**

1. The researcher contacted the sample group of students, asked them for cooperation in answering the questionnaires. A brief explanation was needed for the students to understand that their answers would be treated with confidence and none of the participants would be identified in this study. As a result, the students were happy to answer the questionnaires voluntarily. Then, the questionnaires were collected for further analyses.

2. To collect the data on ways to solve the problems, the researcher approached 10 individual students in the sample group, asking them to act as interviewees. Like the above situation, a brief explanation was given so they understood that their identities would not be disclosed. Then they were willing to answer all questions. Each interview took only a short time (approximately 10–15 minutes). In addition, the researcher also approached 10 teachers of English, inviting them to participate in the interview. Like the student participants, they were assured that their names would not be identified.

**Data Analyses**

The data obtained from the questionnaire were analysed in the following:

1. The questionnaires were counted and sorted according to faculties.

2. The data were then analysed to find out the arithmetic means ($\overline{X}$) and the standard deviation (*S.D.*). The arithmetic means derived from this scale was interpreted based on the following range:

$$
\begin{array}{lll}
1.00 - 1.80 & = & \text{very low} \\
1.81 - 2.60 & = & \text{low} \\
2.61 - 3.40 & = & \text{moderate} \\
3.41 - 4.20 & = & \text{high} \\
4.21 - 5.00 & = & \text{very high}
\end{array}
$$

3. Further analyses were made to compare the means by using One-way Analysis of Variance.

4. Provided that there is a significant difference between the means, Scheffé Test will be conducted.

The data obtained from the interview were analysed by way of qualitative data anaysis.

## Statistics Used in Data Analyses

1. The arithmetic means was calculated using the following formula:

$$\overline{X} \quad = \quad \frac{\Sigma X}{N}$$

where:

$\overline{X}$ = mean score

$\Sigma X$ = sum of scores

$N$ = number of subjects

2. The standard deviation was calculated using the following formula:

$$S.D. \quad = \quad \sqrt{\frac{N\Sigma X^2 - (\Sigma X)^2}{N(N-1)}}$$

where:

$S.D.$ = standard deviation

$\Sigma X$ = sum of scores

$\Sigma X^2$ = squared sum of scores

$N$ = number of subjects

3. One-way analysis of variance:

$$F \quad = \quad \frac{MS_b}{MS_w}$$

where:

$MS_b$    =      Mean square between groups

$MS_w$    =      Mean square within group