

CHAPTER THREE

METHODOLOGY

This chapter describes: (1) the subjects, (2) the materials, (3) the procedures used in the collection and analysis of the data, as well as (4) the data analysis.

3.1 SUBJECTS

For generalizability of Backward Design users in Bangkok, this study included three educational zones ascribed by the Ministry of Education. Judgmental or purposive sampling was applied as it was one of the non-random or non-probability sampling designs. The number of elements in a population was unknown and the budget and time were limited. Therefore, the target group was 108 English teachers teaching grade 7-12 (matthayom 1-6) from 10 government secondary schools in Bangkok.

As the exact number of English teachers in government secondary schools in Thailand and Bangkok could not be determined, Yamane's formula was used. Yamane suggested that if a researcher didn't know the exact number of a population, this formula could be used to calculate the sample size:

$$n = \frac{\frac{1}{3.84(d)^2}}{(S)^2}$$

In case of using the sample in a research paper or independent study (IS) 10% or 0.10 deviation should be used.

S = 1.96 (confidence = 95%)

d = 0.10 (deviation = 10 % or 0.10)

$$n = \frac{\frac{1}{3.84(.10)^2}}{(1.96)^2}$$

$$n = \frac{1}{0.0099958} = 100.04$$

Therefore, the sample size should be at least 100. (การใช้สถิติเพื่อการวิจัย, 2551).

One hundred and eighty questionnaires were distributed with the expectation of receiving 108 (60%) questionnaires in return. In delivering the questionnaire, the researcher should obtain at least 50 per cent response rate as stated in the Research Methodology textbook by Ranjit Kumar (Kumar, 1999, p. 114).

3.2 MATERIALS

The research instrument in the study was a self-administered questionnaire. The questionnaire distributed in the survey was in Thai language and included 26 questions. The subjects were asked to respond to five sections as follows:

Part 1: Closed-ended questions to collect demographic or general information

Part 2: Closed-ended and open-ended questions to obtain information about the knowledge of English teachers about Backward Design.

Part 3: A Likert Scale 5 to collect the information about English teachers' behaviors in obtaining supplementary knowledge about Backward Design

Part 4: Open-ended questions to collect suggestions about improvements that the Ministry of Education should make concerning knowledge of Backward Design.

3.3 PROCEDURES

This section describes the procedure for the study of behaviors to obtain knowledge of Backward Design: A case study of 108 English teachers in 10 government secondary schools in Bangkok.

3.3.1 Research Design

This research study was a survey study (cross-sectional design). There were 10 schools in 3 zones ascribed by the Ministry of Education. In zone 1, were (1) Surasukmontri School, (2) Satriwithaya School and (3) Samsen Wittayalai School. In zone 2, were (1) Bodindacha Sing Singhaseni School, (2) Triamudomsuksapattanakarn School and (3) Horwang School. In zone 3, were (1) Suksanari School, (2) Rattanakosinsompot Bangkhuntien School, (3) Matayom

Watsing School and (4) Taweethapisek School. More details are presented in the table below:

Table 1. Three Educational Zones of Bangkok

Educational Zones of Bangkok	Schools
Zone 1	1. Surasukmontri School 2. Satriwithaya School 3. Samsen Wittayalai School
Zone 2	1. Bodindacha (Sing Singhaseni School) 2. Triamudomsuksapattanakarn School 3. Horwang School
Zone 3	1. Suksanari School 2. Rattanakosinsompot Bangkhuntien School 3. Matayom Watsing School 4. Taweethapisek School

3.3.2 Data Collection

The questionnaires were sent by mail to the director of each school. The researcher also sent pre-paid, self-addressed envelopes with the questionnaires as this might increase the response rate. Each mailed questionnaire was accompanied by a covering letter of the Language Institute, Thammasat University and of the researcher explaining the purpose of the study.

3.4 DATA ANALYSIS

3.4.1 The Statistical Package for Social Sciences or SPSS Program Version 13 was used as a means to analyze the research questions such as tables of percentage and frequency.

3.4.2 For open-ended questions, the researcher used content analysis and tried to group them by category.

In summary, this chapter has shown the methodology of the assessment of 108 English teachers' behaviors in obtaining knowledge about Backward Design. In the next chapter, the results are presented.