

CHAPTER 3

RESEARCH METHODOLOGY

This chapter describes the approach used to conduct a research in order to evaluate the improvement of students' writing ability by using genre-based approach of grade 6 students. The chapter is organized into five sections as follows: population and samples, the instruments and how to construct them, the data collection, the data analysis, and the statistics used in data analyses.

3.1 Population and Samples

The population of this research were 88 grade 6 students from 3 classes who took fundamental English (E16101) course during the second semester of academic year 2013 at Thatumsanitratwitthayakhom School, Thatum District, Surin Province under Surin Primary Educational Service Area Office 2.

The samples of this research were 26 students from one class of grade 6 students, who took fundamental English (E16101) course during the second semester of academic year 2013 at Thatumsanitratwitthayakhom School, Thatum District, Surin Province under Surin Primary Educational Service Area Office 2. The samples were selected by using simple random sampling technique with classroom as a sampling unit by drawing a slot.

3.2 Research Instruments

The main instruments employed in this study were as follows:

3.2.1 Six lesson plans of English writing on genre-based approach for grade 6 students. The whole lesson plans took a total of 20 hours.

3.2.2 Achievement test on “genre-based approach” for grade 6 students constructed by the researcher including 2 types of genres: narrative writing and procedural writing.

3.2.3 The questionnaire on students’ self-efficacy towards writing designed to collect the information from the samples before and after learning through genre-based approach.

3.3 The Construction of Research Instruments

The procedures of research instruments construction and the determination of the instruments’ quality explained as follows:

3.3.1 Lesson Plans for Genre-Based Approach

Lesson plans of English writing on genre-based approach for grade 6 students constructed by the researcher as the following steps:

3.3.1.1 The researcher studied and analyzed the causes and problems while learning and teaching writing from observation and students’ writing.

3.3.1.2 The researcher studied the Basic Education Core Curriculum B.E. 2551 (A.D. 2008) about vision, principles, goals, learners’ key competencies, desirable characteristics, learning standards, indicators, learning areas, and strands and learning standards of foreign languages.

3.3.1.3 The researcher studied methodologies, principles, theories and writing techniques of lesson plans.

3.3.1.4 The researcher chose the appropriate contents and designed the purposes, objectives and contexts of lesson plans based on Basic Education Core Curriculum B.E. 2551 (A.D. 2008).

3.3.1.5 The researcher constructed six lesson plans by using 2 types of genres including narrative writing and procedural writing:

Lesson plan 1: Orientation, doing the pre-test, and answering the questionnaire on self-efficacy toward writing before learning through genre-based approach.

Lesson plan 2: Narrative writing about myself.

Lesson plan 3: Narrative writing about my family.

Lesson plan 4: Procedural writing about how to make omelet.

Lesson plan 5: Procedural writing about how to make orange juice.

Lesson plan 6: Doing the post-test and answering the questionnaire on self- efficacy toward writing after learning through genre-based approach.

3.3.1.6 The lesson plans were given comments and examined by the thesis advisors about key concepts, indicators, learning strands, activities, and learning assessment. Then, the researcher improved the lesson plans based on their suggestions.

3.3.1.7 The lesson plans were examined by 3 experts about content validity quality by using five-point Likert scale as follows (Srisa-ard. 2002 : 102).

5 marks for the most appropriate

4 marks for more appropriate

3 marks for moderate appropriate

2 marks for less appropriate

1 mark for the least appropriate

The names of three experts were as follows:

1. Dr. Saowaroj Ruangpisan, Ph. D. (English as International Language), the English lecturer at Buriram Rajabhat University.
2. Assistant Professor Dr. Akkarapon Nuemaihom, Ph.D. (Linguistics), the English lecturer at Buriram Rajabhat University.
3. Mr. Suthat Sangkhaphan, M.Ed. (Curriculum and Instruction), the English Supervisor of Surin Primary Educational Service Area Office 2.

3.3.1.8 The researcher analyzed the scores from the experts to find out the mean scores and compared with five-point Likert scale (Srisa-ard. 2002: 99-103).

Meaning	Opinion Level
4.51 - 5.00	The Most Appropriate
3.51 - 4.50	More Appropriate
2.51 - 3.50	Moderate Appropriate
1.51 - 2.50	Less Appropriate
1.00 - 1.50	The Least Appropriate

Appropriate score at 3.50 and over was considered that the lesson plans could be utilized (See Appendix B). The mean score obtained was 4.54 (S.D.=0.17). Therefore, it was confident that the instruments used in this research present accept validity.

3.3.1.9 The researcher improved lesson plans according to the experts' suggestions and proposed them to check again.

3.1.10 The lesson plans were tried out three steps with 42 students from two classes of grade 6 students who were not the samples in academic year 2013

at Thatumsanitratwitthayakhom School in Thatum District, Surin Province in order to find out the weak points and then improved lesson plans before using with the samples (See Appendix C).

To appraise the efficiency of lesson plans, there were three steps to perform. The three steps of the pre-trials were as following (Phromwong. 1978):

1) The Individual Trial

Lesson plans were utilized with 3 different proficiency level students, namely, 1 high, 1 moderate and 1 low proficient student at Thatumsanitratwitthayakhom School who were not the samples in the research. The criteria of discrimination to divide the students into different levels of English learning achievement were: 1) the student who had got grade 3.5 or grade 4 in English in grade 6 in the first semester of the academic year 2013 was high proficient student, the student who had got grade 2, grade 2.5 or grade 3 was moderate proficient student, and the students who had got grade 1 or grade 1.5 was low proficient student; and 2) the three students were allocated to carry out pre-test for 2 hours, do questionnaire about their self-efficacy toward writing and learn writing by utilizing genre-based approach for 16 sixty minutes periods. While the students were studying via genre-based approach, they were requested to do the exercises. After that, they were requested to do post-test for 2 hours, do a questionnaire about their self-efficacy toward writing and give some opinions about genre-based approach. In this step, the students suggested that teacher should decrease the time for doing tests to from 120 minutes to be 90 minutes, put more details in the model of myself and my family, and have more exercises of each topic. In addition, the researcher found that the students

had many problems about writing such as they did not know how to start writing in each topic and which words they should use.

2) The Small Group Trial

Lesson plans were utilized with 9 different proficiency level students, namely, 3 high, 3 moderate and 3 low proficient students at Thatumsaniratwiththayakhom School who were not the samples in the research. The criteria of discrimination to divide the students into different levels of English learning achievement were: 1) the students who had got grade 3.5 or grade 4 in English in grade 6 in the first semester in the academic year 2013 were high proficient students, the students who had got grade 2, grade 2.5 or grade 3 were moderate proficient students, and the students who had got grade 1 or grade 1.5 were low proficient students; and 2) the nine students were allocated to carry out pre-test for 90 minutes, do a questionnaire about their self-efficacy toward writing and learned writing by utilizing genre-based approach for 16 sixty minutes periods. While the students were studying via genre-based approach, they were requested to do the exercises. After that, they were requested to do post- test for 90 minutes, do a questionnaire about their self-efficacy toward writing and give some opinions about genre-based approach. In this step, the students suggested that lesson plans should be more interesting and more colorful. In addition, some students wanted to do some exercises and write following to the model in pairs or in group in order to help them to decrease their anxiety and lastly be more confident to write individually. In addition, the researcher found that the students made many mistakes when writing such as spelling, using sentence structure, using grammar and using punctuations.

According to the problems found in writing, the researcher solved the problems about spelling by using dictation to let them to write vocabulary about the topic they are going to learn in order to help them write the words correctly.

3) The Field Trial

In this step, there were 30 students with three different proficiency levels of English achievement participated from 1 class of grade 6 students at Thatumsaniratwittayakhom School who were not the samples in the research. They took pre-test for 90 minutes. After that, they did a questionnaire about their self-efficacy toward writing. Then, they learned through genre-based approach for 16 sixty minutes periods, they did the activities while learning via genre-based approach. After learning, they took a post-test for 90 minutes and did a questionnaire about their self-efficacy toward writing. The scores of the activities in genre-based approach in English writing, and the post-test scores from the field trial were decided to find out the efficiency of genre-based approach based on 75/75 standard level (Phromwong, 1978). In this step, it was found that most students were able to do the post-test better than the pre-test clearly. Moreover, the result of the field trial showed that the efficiency of lesson plans of English writing on genre-based approach was 85.67/75.22 which met the specific criteria.

To conduct this research, the assessment of efficiency of lesson plans was performed as shown in the following figure.

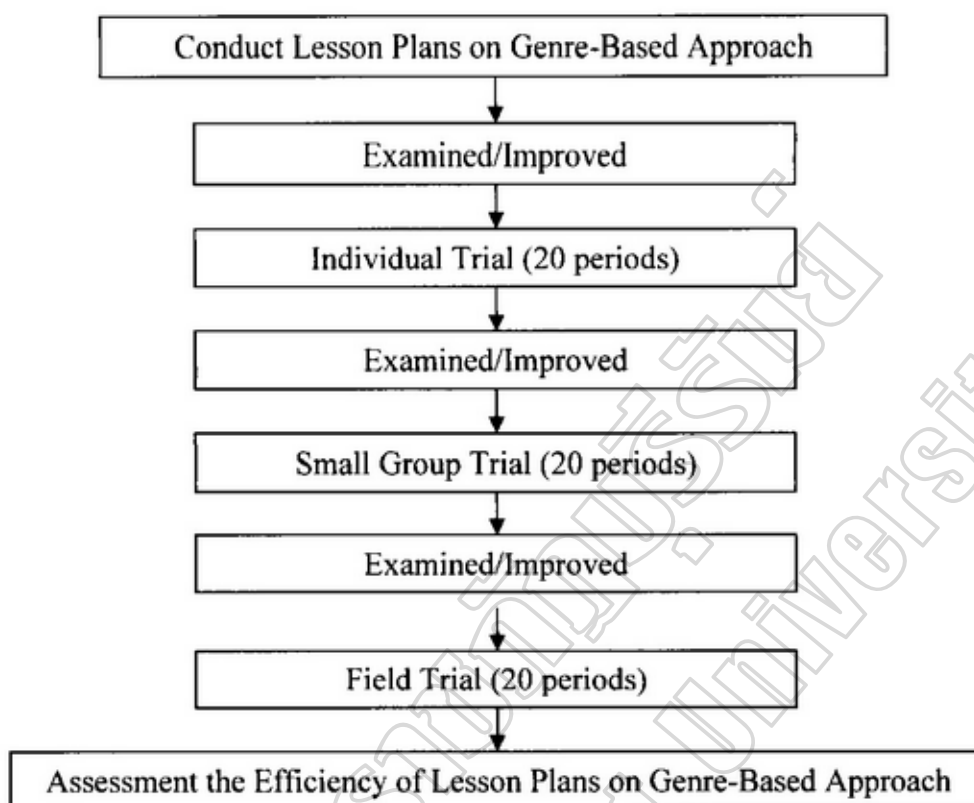


Figure 3.1: Steps of Trying out Lesson Plans

Source: Suwanbenjakul (2002 : 52).

3.3.1.11 The researcher conducted the complete lesson plans with the samples (See Appendix D).

3.3.2 Achievement Test

Pre-test and post-test consisted of one narrative writing and one procedural writing that the samples could choose topics themselves. They had to write at least 50 words within 90 minutes, and 20 points per topic. The pre-post tests were constructed by the researcher as the following steps:

3.3.2.1 The researcher studied a syllabus for primary level of English subject and contents of writing for grade 6 students.

3.3.2.2 The researcher constructed the achievement test: narrative writing and procedural writing (See Appendix E).

3.3.2.3 The test was edited and revised by the thesis advisors before proposing to the experts to examine the validity by using IOC formula as follows (Phattiyathani. 2003: 221).

- +1 = When it is sure that items of the test are coincident with objectives.
- 0 = When it is not sure that items of the test are coincident with objectives.
- 1 = When it is sure that items of the test are not coincident with objectives.

3.3.2.4 The researcher calculated the IOC index, and chose the questions which had the IOC index at level 0.5-1.00 to be achievement test (See Appendix E).

3.3.3 Self- efficacy Questionnaire

The questionnaire was adopted and modified from the writing self-efficacy scale used by Pajares, Hartley, and Valiante (2001). It was used to measure how confident the students had about their writing ability which had 2 mains part as following:

Part 1: Self-efficacy toward writing. This section comprised of 10 statements of five-point rating scales questionnaire with Likert's rating scale. It aimed to elicit students' self-efficacy toward writing before and after learning through the genre-based approach. Five-point Likert scales were used for rating their self-efficacy were as follows (Srisa-ard. 2002 : 102):

Meaning	Opinion Level
5 means	The Most Agree
4 means	More Agree

3 means	Moderate Agree
2 means	Less Agree
1 means	The Least Agree

Part 2 : This section was about additional information or other opinions in learning English writing through genre-based approach apart from part 1. The question was in the open-ended form in which the subjects could write down their suggestions or comments in the questionnaire.

The self-efficacy questionnaire constructed and developed gradually as following:

3.3.3.1 The researcher reviewed the literature on self-efficacy.

3.3.3.2 The researcher studied literature review on how to construct the self- efficacy questionnaire as explicated by using Likert's method or five-point rating scales.

3.3.3.3 The researcher gathered and arranged the issues concerning the students' self-efficacy toward writing into a list.

3.3.3.4 The researcher proposed the statements to the thesis advisors before creating 12 statements based on the students' self-efficacy (See Appendix F).

3.3.3.5 The statements were examined by 3 experts to check for the correctness and appropriation. There were five scales as follows (Srisa-ard, 2002: 102):

Meaning	Opinion Level
5 means	The Most Agree
4 means	More Agree
3 means	Moderate Agree

2 means Less Agree

1 means The Least Agree

The researcher calculated the obtained data to find out the mean scores. The appropriate scores at 3.50 and over were considered as the questionnaire item statements. The mean score was 4.57 (See Appendix G). The researcher edited and revised the questionnaire if they had weak points. Next, the questionnaire was proposed to the experts again.

3.3.3.6 The researcher organized the statements and tried out with grade 6 students who were not the samples at Thatumsanitratwiththayakhom School in academic year 2013.

3.3.3.7 Each item of five-point rating scales was calculated by utilizing Pearson's correlation coefficient formula (R_{xy}) to find out the discrimination power which had to be at 0.2792-1.00 level (Srisa-ard. 2002 : 110). The discrimination was at 0.28- 1.00 (See Appendix H).

3.3.3.8 The researcher selected 10 statements which had the most significant differences at level of 0.05 to be the questionnaire. Then, it was tried out again to find out the reliability.

3.3.3.9 The method of coefficient alpha of Cronbach (α -Coefficient) (Srisa-ard. 2002 : 99) was used to find out the reliability coefficient of which the value must be more than 0.80. The data was calculated by a software program. The reliability coefficient of the questionnaire was 0.84 (See Appendix H).

3.4 Data Collection Procedures

The design of this study was quasi-experimental one group pre-test- post-test design as shown in table 3.2 below:

Table 3.2 Research Design (Sai-yot. 1995 : 248-249)

Group	Pre-test	Treatment	Post-test
Quasi - Experimental	T ₁	X	T ₂

As shown in Table 3.2 above, T₁ was pre-test, X was the treatment, and T₂ was post-test, respectively.

To collect the data, the present research included lesson plans, achievement test, and self-efficacy questionnaire. The procedures for collecting data were as follows:

3.4.1 A pre-test was given to all of samples at the beginning of a class.

The test consisted of one narrative writing and one procedural writing which the samples could choose the topics themselves. They had to write at least 50 words within 90 minutes. There were 20 points for each.

3.4.2 After doing a pre-test, the samples were asked to fill out the questionnaires focusing on their self-efficacy toward writing before learning via genre-based approach.

3.4.3 The samples were orientated to understand about genre - based approach. Then, they were taught by utilizing genre-based approach and did the activities for 16 periods.

3.4.4 A post-test was administered with all of the samples after attending the course for 90 minutes.

3.4.5 After doing a post-test, the samples were asked to fill out the questionnaires focusing on their self-efficacy toward writing after learning via genre-based approach. The steps in data collection could be illustrated below.

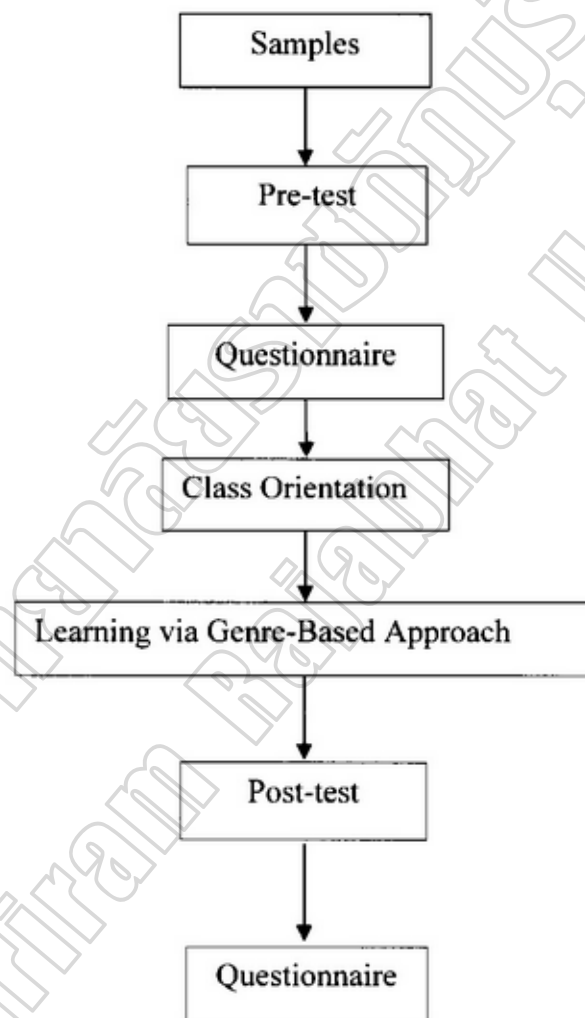


Figure 3.2 Steps in Data Collection

3.5 Data Analysis Procedures

The collected data were analyzed and deduced procedures by using the data analysis methods as follows.

3.5.1 The Data Obtained from the Exercises, the Pre-test and Post-test

3.5.1.1 In order to evaluate the students' writing ability before and after being taught through genre-based approach, the pre-test and post-test were computed to find out percentage (%), mean (\bar{x}) and standard deviation (S.D.).

3.5.1.2 The scores obtained from the activities and post-test were calculated to find out the efficiency of process (E_1) and the efficiency of the outcomes (E_2), respectively.

3.5.1.3 Dependent samples t-test was used to compare the difference between pre-test and post-test mean scores with statistically significant difference set at .05 level.

3.5.2 Writing Rubrics

The researcher evaluated the students' writing by using writing rubric adapted from West Virginia Writing Rubric for Grade 6 (2013) which consists of organization, development, sentence structure, word choice/grammar usage, and mechanics (See Appendix M). Besides, there were two teachers who were the writing raters from Anubanthong-oon School, the private school in Thatum district, Surin Province. The names of them were as follows:

- 1) Mr. Robert Carton, English native speaker from England.
- 2) Miss. Jena Lamboso, English native speaker from the Philippines.

The scores obtained from each rater were combined with the score rated from the researcher, then divided by three in order to get the real score.

3.5.3 The Data Obtained from the Self-efficacy Questionnaire

3.5.3.1 In order to evaluate the students' self-efficacy toward writing before and after learning via genre-based approach, the data from questionnaire were computed for mean (\bar{x}) and standard deviation (S.D.).

3.5.3.2 Dependent samples t-test was used to compare the difference between students' self-efficacy before and after learning through genre-based approach with statistically significant difference set at .05 level.

The data obtained by students' opinions and suggestions were interpreted to find out their self-efficacy and reactions toward learning English writing through genre-based approach.

3.6 Statistics Used in Data Analysis

3.6.1 Statistics Used to Find out the Quality of Instruments

3.6.1.1 Discrimination power of each item for five-point rating scale questionnaire by using Pearson's Correlation Coefficient (Srisard, 2002 : 110).

$$r_{xy} = \frac{N \sum XY - (\sum X)(\sum Y)}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}}$$

r_{xy} = Correlation Coefficient between Variable X and Variable Y

X = Total Scores of Variable X Index

$\sum Y$ = Total Scores of Variable Y Index

$\sum XY$ = Total of Multiplied Result between Variable X and Variable Y

$\sum X^2$ = Total Scores of Variable X Index's Square

$\sum Y^2$ = Total Scores of Variable Y Index's Square

N = Number of a Pair of Variables Index or Number of Samples

3.6.1.2 Reliability coefficient of the self-efficacy questionnaire by using Cronbach's Alpha-coefficient (α -Coefficient)(Srisa-ard. 2002 : 99).

$$\alpha = \frac{k}{k-1} \left[1 - \frac{\sum S_i^2}{S_t^2} \right]$$

α = Reliability Coefficient

k = Number of Statements

$\sum S_i^2$ = Total of Each Statement's Variance

S_t^2 = Variance of Total Scores

3.6.1.3 The efficiency of lesson plans (E_1/ E_2) (Kitrakarn. 2002 : 44-49).

$$E_1 = \frac{\frac{\sum X}{N}}{A} \times 100$$

E_1 = Efficiency of the Process

$\sum X$ = Total Scores of Post-test

N = Number of Samples

A = Total Score of the Exercises in the Lessons

$$E_2 = \frac{\sum F}{B} \times 100$$

E_2 = Efficiency of the Outcomes

$\sum F$ = Total Score of Students who Pass the Post-test

N = Number of Samples

B = Total Score of the Post-test in the Lessons

3.6.2 Basic Statistics Used to Analyze the Data

3.6.2.1 Percentage (Srisa-ard. 2002 : 104)

$$P = \frac{f}{N} \times 100$$

P = Percentage

f = Frequency of the Data

N = Numbers of Total Frequency

3.6.2.2 Mean (\bar{x}) (Srisa-ard. 2002 : 105)

$$\bar{x} = \frac{\sum x}{N}$$

$$\bar{x} = \text{Mean}$$

$$\sum x = \text{Total Scores in Group}$$

$$N = \text{Number of Scores in Group}$$

3.6.2.3 Standard Deviation (S.D.) (Srisa-ard. 2002 : 106)

$$\text{S.D.} = \sqrt{\frac{\sum (X - \bar{X})^2}{N-1}}$$

$$\text{S.D.} = \text{Standard Deviation}$$

$$X = \text{Score of Each Item}$$

$$\bar{X} = \text{Mean}$$

$$N = \text{Number of Scores in Group}$$

$$\sum = \text{Total Scores}$$

3.6.3 Dependent Samples t-test

The differences between pre-test and post-test mean scores and the difference between students' self-efficacy toward writing before and after learning through genre-based approach were calculated by using dependent samples t-test formula (Srisa-ard. 2002: 112).

$$t = \frac{\sum D}{\sqrt{\frac{n \sum D^2 - (\sum D)^2}{(n-1)}}}$$

t = Statistics Index Used to Compare with Critical Index to Find out Significant Difference

D = Different Result of Minus between a Pair of Scores

n = Number of Samples or a Pair of Scores

3.7 Summary of the Chapter

This chapter presents population and samples. Then, the research instruments and the construction of research instruments are described. In addition, data collection and data analysis were indicated. Finally, statistics are used in data analysis. The results of the research are presented in the next chapter.