

## CHAPTER 3

### RESEARCH METHODOLOGY

In chapter two, the related theories supporting the study have been briefly explained. For this chapter, the research methodology related to the study will be explained. This chapter will cover: the research method, including research design and variable, research procedure (before, during, and after treatments given); teaching materials, the role of teacher in the study, and teaching procedure; subjects, including population, sample, and method of selection; instrumentation, including pretest and posttest, and scoring method; data collection; and data analysis, which covers students' writing task analysis, data analysis on the pretest (t-test), data analysis in the posttest (t-test).

#### 3.1. HYPOTHESIS

- $H_0$  : Process-genre approach in teaching writing at Indonesian vocational school cannot effectively improve students' writing ability.
- $H_1$  : Process-genre approach in teaching writing at Indonesian vocational school can effectively improve students' writing ability.

## **3.2. THE RESEARCH METHOD**

### **3.2.1. Research Design**

This study mainly used a quasi-experimental design with pretest and posttest, because this research design utilized a comparison between two groups in exploring the answers to the research questions (Mackey and Gass, 2005). In this research design, the samples were randomly selected. Two groups were engaged in the research, the experimental group and the control group. The comparison group design was also be implemented in the research that allowed the comparison between the current treatment with another equal treatment.

In this design, participants were randomly assigned to one of the groups, with the treatment (the independent variable) differing between groups (Mackey and Gass, 2005). The treatment, process-genre approach to teaching writing, was given to the experimental group. Meanwhile, the control group was given another treatment, genre-based approach to teaching writing, as the comparison to ensure the comparison with the process-genre approach.

### **3.2.2. Research Variables**

Research variables engaged in the research consisted of 2 groups, the experimental group and the control group. In each respective group, the independent variables were as followed:

- The experimental group was guided in the teaching of writing 3 different texts using process-genre approach
- The control group was guided in the teaching of writing 3 different texts using genre-based approach

The dependent variables were students' proficiency in writing as measured by the comparison of results of pretests and posttests.

### **3.3. RESEARCH PROCEDURE**

In this study, the following procedure was the guidance to the researcher:

#### **3.3.1. Before the Process of Implementing Treatments**

- a. The consideration of instruments to be used in gathering the data was done.
- b. The validity, reliability, and practicality test of the instruments were conducted.
- c. The approval of the instruments to be used in gathering the data was obtained.

#### **3.3.2. During the Process of Implementing Treatments**

- a. The pretest to both experimental and control groups was conducted.
- b. The analysis of the pretest results from both groups will be done by using t-test if the assumptions for t-test were fulfilled or using Wilcoxon test if the assumptions for t-test were not fulfilled.

c. In the next 5 meetings, the treatment was implemented in the teaching process of writing. Process-genre approach was implemented to the teaching of writing in the experimental group. Likewise, genre-based approach was implemented to the teaching of writing in the control group.

### 3.3.3. After the Process of Implementing Treatments

- a. In the end of the study, the posttest was conducted to both groups. The t-test will be used to examine the data if the assumptions for t-test were fulfilled. Otherwise, the Wilcoxon test will be used to examine the data if the assumptions for t-test were not fulfilled. In addition, text analysis was also carried out.
- b. The questionnaire was given to the experimental group to find out the responses of students toward the use of process-genre approach to teaching writing. Students' real names were replaced by pseudonyms.

### 3.4. TEACHING MATERIALS

The teaching materials were following the syllabus for the eleventh grade designed by Kementerian Pendidikan Nasional (2006). The materials to be taught were as followed:

Meeting	Teaching Materials
First meeting	Composing short messages
Second and third meeting	Composing personal letters

Fourth and fifth meeting	Composing building descriptions
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### 3.5. THE ROLE OF TEACHER IN THE STUDY

As what Badger and White (2000) and Kim and Kim (2005) suggested, teacher's role was the assistant and the guide in the process of writing. Students were actively engaged to the process of writing.

### 3.6. TEACHING PROCEDURE

In this study, two different approaches to writing were employed to different groups. The control group was taught by using genre-based approaches, while the experimental group was taught by using process-genre approach. Each group was treated appropriately.

#### 1.6.1. The Control Group

The control group was taught by using genre-based approach. In this approach, the knowledge of the text is emphasized and the process of writing is disregarded (Badger & White, 2000). The teaching stages used in the study were the teaching cycle proposed by Feez and Joyce (1998, as cited in Feez, 2000), which was described as followed:

#### 1. Building the Context

Students were exposed with the text they were going to work on (Feez, 2002). This stage was obligatory to be conducted as this stage prepared students with knowledge of the text, which was

essential to move on the next stage. Brainstorming and discussion were recommended in this stage. This stage was conducted in the first, second, and fourth meeting.

## 2. Modelling and Deconstructing the Text

Language features of the text, including grammar, were introduced (Feez, 2002). This stage was conducted in the first, second, and fourth meeting.

## 3. Joint Construction of the Text

Teacher and students were working together to compose the text in which the text served as the basis for students' writing later (Gray, 1987, as cited in Feez, 2002). Later, students in groups were asked to work on the text jointly. This stage was conducted in the first, second, and fourth meeting.

## 4. Independent Construction of the Text

Students were working on their texts independently with less scaffolding from teacher (Feez, 2002). Students were writing their composition without drafting, editing, and conferencing. This stage was conducted in the third and fifth meeting.

### **1.6.2. The Experimental Group**

The experimental group, on the contrary, was taught by using process-genre approach. Unlike genre-based approach, this approach appreciated the nature of the texts as well as the nature of writing itself (Badger & White, 2000). The teaching procedure used was the

teaching cycle proposed by Badger and White (2000), which was described as followed:

1. Building the Context

Similar with genre-based approach, students were introduced to the text they were going to work on (Feez, 2002). Brainstorming and discussion were used in this stage. This stage was conducted in the first, second, and fourth meeting.

2. Modelling

Students were exposed to the features of the text (Feez, 2002). Grammars were reviewed, but not over-emphasized. This stage was conducted in the first, second, and fourth meeting.

3. Joint Construction

Teacher and students were working together in composing the text that would become the sample text that they were going to compose later (Gray, 1987, as cited in Feez, 2002). This stage was conducted in the first, second, and fourth meeting.

4. Collaborative Writing

Students in groups were working on their own text that was based on the sample text (Yan, 2005). This stage was conducted in the first, second, and fourth meeting.

5. Independent Construction

Planning and drafting students' composition were the main foci of this stage (Badger & White, 2000).



## 6. Conference and Revision

Feedbacks were the basis for students to revise their composition before submitted to the teacher (Kim & Kim, 2005).

### 3.7. SUBJECTS OF THE STUDY

This study involved two groups, experimental and control group, in eleventh grade of a state vocational school in Bandung, West Java, Indonesia. The groups were assigned by the school as the researcher did not have authority to do so.

#### 3.7.1. Population

The population of the samples was the students of a state vocational school. To be specific, the school regulated which classes were available to be researched. In relation to the materials to be taught, the likely chance was to have the eleventh grade classes with almost equal number of members in each respective class.

#### 3.7.2. Samples

The samples of the research were two classes with similar needs of English writing to be taught. 60 students in total were the participants with 30 students in each class. These classes were randomly assigned by the school. Because of other factors, some classes were unavailable to be researched as the students were currently doing practice in the industry.



### **3.7.3. Method of Selection**

In relation to what had been stated before, the researcher did not have the authority to purposively assign the groups in which the study was conducted. The school assigned two classes with equal or almost equal number of students in each respective class.

The group to receive treatments was determined through pretest results. Whether or not both groups did not share differences, the pretest determined it. If one group was found out to have weaker test results, that group was the experiment group (Lodico, Spaulding, and Voegtle, 2006).

## **3.8. INSTRUMENTATION**

This study largely utilized a quasi-experimental research design to obtain the data. The qualitative part of the study utilized text analysis and open-ended questionnaire.

### **3.8.1. Pretest and Posttest**

Pretest and posttest were utilized to guarantee the comparability of the participant groups prior to their treatment and to measure the effects of treatments given (Mackey & Gass, 2005). The comparison of the t-test to both tests determined whether or not the treatments gave effects to learners.

### **3.8.2. Scoring Method**

This study used scoring rubrics developed by Rose (2007, as cited in Emilia, 2011) to measure the results of pretest and posttest as well as the basis of text analysis.

### **3.8.3. Questionnaire**

In the questionnaire, open-ended questions were used. Open-ended questionnaire allows researcher to obtain richer information than quantitative data (Dornyei, 2003). Questionnaire was conducted after the posttest given. An 8-items questionnaire was expected to examine the responses of the students toward the use of process-genre approach to teaching writing.

## **3.9. DATA COLLECTION**

The data to answer the research questions was expected to be obtained from the result of pretest and posttest as well as students' responses in the questionnaire. The results of pretest and posttest were obtained through paired t-test if the assumptions for t-test were fulfilled. In case of non-normality of data distribution, Wilcoxon test will be used. Students' writings were analyzed by using scoring rubrics developed by Rose (2007, as cited in Emilia, 2011). As for the questionnaire, the responses were analyzed to draw the answer to research questions.

## 3.10. DATA ANALYSIS

### 3.10.1. Pretest

Researcher utilized a quasi-experimental design where random sampling was done. In preparation to the classes to be experimented, either paired t-test or Wilcoxon test was used to analyze the data, depending on the data obtained to meet the assumptions of parametric tests (Mackey & Gass, 2005).

In analyzing the data using paired t-test, the following procedure was conducted (Kranzler & Moursund, 1999):

- a. State the hypothesis
- b. Ensure the assumptions of parametric test fulfilled
- c. Select the level of significance,  $\alpha = .05$
- d. Select the degree of freedom
- e. Determine the mean of both classes' pretests
- f. Calculate  $s^2$
- g. Determine the variance of both classes' pretests ( $sd^2$ )
- h. Calculate  $sd$  (the square root of  $sd^2$ )
- i. Calculate the  $t$  value using t-test formula
- j. Test the  $t$  value with the table value

Meanwhile, if the data were not normally distributed and failed to meet the assumptions of parametric, the procedure of Wilcoxon test was to be conducted.

### 3.10.2. Posttest

Similar to pretest, researcher used either paired t-test or Wilcoxon test to analyze the data, depending on the data obtained to meet the assumptions of parametric tests (Mackey & Gass, 2005).

In analyzing the data using paired t-test, the following procedure was conducted (Kranzler & Moursund, 1999):

- a. State the hypothesis
- b. Ensure the assumptions of parametric test fulfilled
- c. Select the level of significance,  $\alpha = .05$
- d. Select the degree of freedom
- e. Determine the mean of both classes' pretests
- f. Calculate  $s^2$
- g. Determine the variance of both classes' pretests ( $sd^2$ )
- h. Calculate  $sd$  (the square root of  $sd^2$ )
- i. Calculate the  $t$  value using t-test formula
- j. Test the  $t$  value with the table value

Meanwhile, if the data were not normally distributed and failed to meet the assumptions of parametric, the procedure of Wilcoxon test was to be conducted.

### 3.10.3. Text Analysis

Students' compositions were analyzed by using Rhetorical Genre Studies' guidelines for analyzing genres (Bawarshi & Reiff, 2010).

The guidelines are as follow:

- a. Collect samples of the genre
- b. Identify the scene and describe the situation in which the genre is used
- c. Identify and describe patterns in the genre's features
- d. Analyze what these patterns reveal about the situation and scene

#### **3.10.4. Questionnaire**

The analysis of questionnaire was conducted in the following procedure (Dornyei, 2003):

- a. Clarify the questions
- b. Analyze sentence completion tasks
- c. Analyze short-answer questions
- d. Analyze participants' responses by marking any distinct content elements, substantive statements, or key points
- e. Form broader categories which allow researcher to compare with another response
- f. The conclusion of questionnaire is drawn

### 3.11. CLARIFICATION OF KEY TERMS

To avoid confusion and misunderstanding, several terms are clarified as follows:

1. Process-genre approach

This approach is a synthesis of process approach and genre (Badger & White, 2000; Kim & Kim, 2005; Nordin & Mohammad, 2007) which retains decent knowledge of social contexts of the text and the nature of writing itself (Kaur & Chun, 2005).

2. Vocational School

Vocational School (or known as Sekolah Menengah Kejuruan) is a school which primarily prepares its students to work in specific field (Kementerian Pendidikan Nasional, 2009).

