CHAPTER III

METHODOLOGY

This chapter presents the methodology of the study. It consists of research design, data collection technique, research procedures, and data analysis technique.

3.1 Research Design

3.1.1 The Experimental Design

In conducting this research the quantitative research design was used as a basic framework since it was purposed to test a hypothesis through collecting and analyzing the numerical data. Sugiyono (2008) claims that quantitative method is used when the study aimed to test a hypothesis. This is in line with Brannen (2005) who states that quantitative research shows the implementation of numeric approach towards data collection and analysis.

Quasi-experimental design was applied in this research by assigning one class as experimental group, which received teacher written indirect feedback and control group, which received teacher oral indirect feedback. Hatch & Farhady (1982) reveal that quasi-experimental design enable the researcher to control as many variables as the researcher can and also limit the kinds of interpretation that the researcher make about cause-effect relationship and cover the power of general statements.

A quasi-experimental design was used in this study, due to the limited time and cost. A true experimental design will not be practicable because of long time period. Additionally, Hatch & Farhady (1982) assert that quasi-experimental design is a comparison group design. The experimental group was treated by giving them the teacher written indirect feedback. In addition, the students were asked to write a recount text and revise the text based on written indirect feedback that had been given by the teacher. Meanwhile, the students in the control group were asked to write a

recount text and revise the text based on oral indirect feedback that had been given by the teacher.

3.1.2 Variables

According to Alison Mackey & Gass (2005), variable is characteristics that vary from person to person, text to text, or object to object, or it can be concluded as features or qualities that change. There are two variables in this study, namely independent variable and a dependent variable. According to (Cohen, Manion, & Morrison, 2007) independent variable is used to influence or make a change in the value at least one other variable and dependent variable is the variable that is presumed to be affected by independent variable. In this study, the independent variable was teacher written feedback by using indirect feedback strategy. Indirect feedback from the teacher was given and applied to improve students' recount text writing. Concurrently, students' score in writing recount text was the dependent variable that was observed and measured so as to determine the effect of teacher indirect feedback towards students' score, especially in writing a recount text.

3.1.3 Hypothesis

Hatch & Farhady (1982) claim that the null hypothesis is the most common hypothesis. The null hypothesis of this study is that there is no significant difference between the students' writing score in pre-test and post-test score which means that teacher written indirect feedback is not effective to improve writing skill in writing recount text. Meanwhile, the alternative hypothesis of this study is there is significant difference between the students' writing score in pre-test and post-test score; means the technique is effective to improve writing skill in writing recount text.

3.2 Research Subject

3.2.1 Population

Fraenkel et al. (2012) stated that population is the group of interest as the destination that the researcher would like to generalize the result of the study (p.92). They further explained that in educational research, the population is usually a group of person (students, teachers, or other individuals) who posses certain characteristics and in some cases it can be defined as a group of classroom, schools, or even facilities (2012, p.92). This is in line with Creswell (2012) who defined population as a group of individuals with same characteristics that can be identified by researcher (p. 142). Considering that reason, the population of this study was the entire tenth grade in one senior high school in Bandung. They are enrolled in academic year 2015/2016.

The tenth grade students of senior high school in Bandung are taken as population since it is done to the fact that in curriculum 2013 recount text is taught in the tenth grade of senior high school.

In addition, this research took two classes as the sample. Sample is a subgroup of the target population and selected from the individuals who represent the whole population that the researcher plans to study for generalizing about the target population (Creswell, 2012, p. 142). Furthermore, Fraenkel et al. (2012) added that the smaller group of population called sample or the group on which information is obtained in the research study (p. 91). In quantitative research, it is assumed that if the sample is chosen carefully using the right procedure, it will be possible to generalize the results to the entire population (Dawson, 2002).

The sampling technique used in this study was cluster random sampling technique. They also elaborated that the selection of groups, or clusters, of subjects rather than individuals known as cluster random sampling. Cluster sampling was applied because there was difficulty in selecting the random sample of individuals due to the administrative of the school. In addition, they affirmed that the cluster random sampling can be used when it is difficult to select a random sample of individuals, besides, it is

often easier to implement in school and also frequently less time- consuming (2012, p. 96).

Regarding to those explanations, this study took two classes randomly as sample. Each class consists of 39 students and researcher took 30 students as the sample for avoiding the absence of the students. The first class is the experimental group and the second class is the control group.

3.3 Research Instrument

Some instruments were used in collecting the data. Fraenkel, J. R et al (2012 p. 111) claim that the device (such as pencil, paper test, questionnaire, or rating scale) which is used by the researcher to collect the data can be categorized as an instrument. The following instruments were based on the research questions. Therefore, the following instruments used in the research.

3.3.1 Writing practices

Writing practices were used to measure student's skill in writing recount text. It was used to answer the first research question, which is to find out the effectiveness of teacher written feedback in improving students' recount writing skill. Writing practices were employed to the experimental group and the control group.

At the beginning, students were given a diagnostic writing to collect the data about their writing ability in recount text before teacher indirect feedback was applied. In the diagnostic writing (first draft), students were asked to write a recount text based on their new year's eve experience as long as 75-100 words in 45 minutes. Then, in every meeting students in both groups were asked to make a recount text based on the theme that was determined by the teacher. They were also asked to make a revision. For the experimental group, their text got written indirect feedback from the teacher and they were asked to revise their text based on written indirect feedback that they received from the teacher. Meanwhile, the control group receive oral feedback from teacher, so they were asked to revise their work based on oral indirect feedback.

In the last meeting, students in both groups were submitted their last draft to measure students' writing of recount text after teacher written indirect feedback treatment was applied. Feedback that was used in this study was teacher written indirect feedback in form of minimal marking. There were three kinds of mark that were used in indicating students' errors in writing. First, the teacher used a color mark. There were a red color mark, a yellow color mark, and a blue color mark. A red color mark indicated grammar mistakes. A yellow color mark indicated inappropriate spelling. A blue color mark indicated errors in using preposition or article. Second, the teacher used an arrow mark. An arrow mark indicated errors in sentence structures. Third, the teacher used a cross mark. A cross mark indicated there are words or sentences that should be omitted.

Students' writings were analyzed by using numeric and rubric scoring guide adopted from Wechsler Objective Language Dimensions Written Expression subtest (WOLD, Psychological Corporation, 1996). It was designed to identify qualities of good writing and is judged on how many elements of good writing it contains. This assessment is available for narrative writing. Recount text is one of texts that is categorized as narrative writing. This rubric can be seen as follows:

Table 3. 1 Numeric and Rubric Scoring Guide
Wechsler Objective Language Dimensions Written Expression subtest
(WOLD, Psychological Corporation, 1996)

Writing Assessment Measure (WAM)	
Element and Criteria	**Circle Score**
Spelling	
• Evidence of correct spelling of complex words containing prefixes/suffixes or irregular words e.g. souvenir, distraction, and conscious.	**4**
• Attempting to spell some complex or polysyllabic words using visual or phonetic strategies e.g. 'safariye' for safari, 'adventerous' for adventurous.	**3**
• Spelling the majority of high frequency common words correctly e.g. inside, because, while.	**2**
• Spelling some common monosyllabic words correctly (e.g. mum, cat, bird). Uses phonic strategies to attempt to spell high frequency common words e.g. 'grat' for great, 'fhun' for fun.	**1**
Punctuation	
• Using a range of punctuation to clarify structure and create effect (e.g. speech marks, dashes, brackets, apostrophes, comas to demarcate sentences).	**4**
• Secure use of full stops and capital letters. Uses punctuation in addition to capital letters and full stops, the majority are used correctly (e.g. question marks, exclamation marks, comas in lists).	**3**
• Evidence of accurate use of capital letter and full stops, however few there are (e.g. sentence finishes with a full stop and next sentence begins with a capital letter).	**2**
• Showing awareness how full stops are used in writing.	**1**
Sentence Structure and Grammar	
• Secure control of complex sentences. Understands how clauses can be manipulated for effect. Able to use conditional and passive voice (e.g. having watched him eat a dog biscuit, she felt sick).	**4**
• Beginning to write extended sentences including subordinators (e.g. if, so, while, when, after). The basic grammatical structure of sentences usually correct (e.g. usually consistent and correct use of tenses and nouns and verbs agree).	**3**
• Beginning to use other conjunctions to create compound sentences (e.g. because, but, so, then) and may be using multiple clauses (still mixing up tenses).	**2**
• Writing simple sentences which include the conjunction 'and'.	**1**
Vocabulary	
• Demonstrating use of well-chosen vivid and powerful vocabulary to create effect (e.g. verbs, adjectives, adverbs).	**4**
• Varied use of adjectives, verbs, and specific nouns (e.g. delicious for nice/sauntered for went/poodle for dog).	**3**
• Some selection of interesting and varied verbs (e.g. jumped, compared, guess).	**2**
• Using simple vocabulary, appropriate to content. Writing is composed of simple nouns and verbs, e.g. look, went, go, play, see.	**1**
Organization and Overall Structure	
• Paragraphs are well-organized, based on themes and provide a cohesive text for the reader (e.g. paragraphs, subheadings, logically organized events).	**4**
• Using paragraphs to organize writing, showing an identifiable structure. May be short sections.	**3**
• Themes are expanded upon and linked together in a series of sentences.	**2**
• Communicating meaning but may 'flit' from idea to idea and any themes that are expanded are done so in one sentence.	**1**
Total Score	

3.3.1.1. Pilot Test

There were 27 students who were involved in this pilot test. They were asked to make a recount text for about 75-100 words based on the given instruction. The students' works were analyzed using The Analytic Scoring in Writing based on Wechsler Objective Language Dimensions (1996) as the scoring system of this test. Based on this scoring system, the students' work were analyzed based on five aspects of writing, it consists of spelling, punctuation, sentence structure and grammar, vocabulary, organization and overall structure. The range of the score of each aspect is similar. The highest score for each aspect is 4 and the lowest score is 1. The students' works were measured to find out the means of the students' score. Based on the computation, it shows that the means of the students' score in pilot test was 14.64 in the range of 20. It can be concluded that most of the students understood of the instrument given by the researcher in the pilot test. It means that the instrument that would be used in the research is applicable to use.

3.3.2 Questionnaire

Questionnaire was administered to get the information about students' responses toward the effectiveness of teacher written indirect feedback. Questionnaires were distributed merely to the experimental group after the final writing was submitted. Questionnaire was consisted of eleven statements related to students' responses toward writing skill and the implementation of teacher written indirect feedback in writing, especially in writing a recount text. The questionnaire scale ranged from 1 (strongly disagree) to 4 (strongly agree) in terms of students' responses toward the use of teacher written indirect feedback in writing recount text. The detail explanation will be described below (and also can be seen in the appendix 3):

Table 3. 2 Framework Questionnaire

No.	Categories	Indicator	Basic Theory
1	Students' personal feeling, attitude, and goals	Students' personal feeling toward writing, recount text and the use of teacher indirect feedback	Richards & Renandya (2002) state that there is no doubt that writing is the most difficult skill for L2 learners to master.
		Students' attitude toward the use of teacher indirect feedback	Ferris & Hedgcock (2004) assert that students see value of teacher feedback in improving their writing.
		Students' learning goals toward the material	Brookhart (2008) Writing comments or giving indirect feedback was more effective for learning than giving grades.
2	The sensory nature of the stimulus	The implementation of teacher indirect feedback to improve students' writing ability	Eslami (2014) said that language acquisition theorists and ESL writing specialists alike argue that indirect feedback is preferable for most student writers, because it engages them in ‘‘guided learning and problem solving’’ .
3	The background or setting of the stimulus	Teacher indirect feedback's role in the learning and teaching process	Hosseiny (2014) states that the indirect corrective feedback on error helps the learners improve accuracy in their writing.
4	Students' learning experience	The advantages of using teacher indirect feedback in learning process	Keh (1990) claims that teacher indirect feedbcak leads to the intercation between teacher and students. Thus, the students are able to ask for clarification, and the teacher assist students in decision-making.

3.3.2.1. Validity of Responses toward Teacher Written Indirect Feedback in Writing Recount Text Questionnaire

According to Hughes (1989), a test is said to be valid if it measures accurately what it is intended to measure. Therefore, a questionnaire used in this research should measure what it is supposed to be measured. In order to check the validity of the questionnaire, according to Masrun (as cited in Anggia, 2003), a correlation technique is mostly used. Therefore, in this research, a pilot test was conducted in order to check the validity of questionnaire. Participants for this pilot test consisted of 27 students.

The data were calculated by using SPSS 21.0. The data from questionnaire were calculated to find the *r*-value. The *r*-value was obtained from comparing the *r*-result with *r*-table. The instrument was considered as a valid instrument if the *r*-result > *r*-table at 95% confidence level. In contrast, the item was considered as invalid if the *r*-result < *r*-table. If the item was considered as invalid, the item was being dropped or need to be revised. As already stated above, the instrument was considered as a valid instrument if the *r*-result > *r*-table at 95% confidence level. Due to the use of confidence level at 95%, as a result, the significant level is at 5% (100% - 95% = 5%). In order to calculate the *r*-table, it was also necessary to find the degree of freedom. The degree of freedom calculation formulated as (df = n – 2). Since the sample (n) of the pilot test was 27, so 27 - 2 = 25. After that, the value of r-result and r-table can be seen in the table below.

Table 3. 3 The Result of Validity Test on Students' Responses toward Teacher Written Indirect Feedback in Writing Recount Text Questionnaire

Number	r-result	r-table	Description
1.	0.45	0.38	Valid
2.	0.53	0.38	Valid
3.	0.16	0.38	Invalid
4.	0.40	0.38	Valid
5.	0.26	0.38	Invalid
6.	0.42	0.38	Valid
7.	0.20	0.38	Invalid
8.	0.57	0.38	Valid
9.	0.69	0.38	Valid
10.	0.60	0.38	Valid
11.	0.49	0.38	Valid
12.	0.72	0.38	Valid
13.	0.45	0.38	Valid
14.	0.49	0.38	Valid

Based on the results of the questionnaire, eleven items were considered as valid and three items were considered as invalid. The questions number 3, 5 and 7 were considered as invalid because the *r*-results are less than *r*-table (.38). Therefore, the invalid items were removed from the questionnaire. For further details, see Appendix 3.

3.3.2.2. Reliability of Responses toward Teacher Written Indirect Feedback in Writing Recount Text Questionnaire

Consistency of results is the basic concept of reliability of a test. Based on Fraenkel & Wallen (2009), reliability refers to the consistency of the scores obtain, it shows how consistent the score for each individual from one administration of an instrument to another and from one set of items to another. It also can be define that whenever a test is administered, the test user would like some assurance that the results could be replicated

if the same individuals tested in the similar situation (Fulcher & Davidson 2007). By testing the reliability of the instrument, it was expected that the instrument would provide the same results even though it was carried out in the different situation. Further, the method to check the reliability of the questionnaire is Cronbach's Alpha method. According to Sugiyono (2008), Cronbach's Alpha is used for the interval data or essay.

The result of reliability test on responses toward teacher written indirect feedback in writing recount text questionnaire using Cronbach's Alpha method can be seen in the table below.

Table 3. 4 The Result of Reliability Test on Students' Responses toward Teacher Written Indirect Feedback in Writing Recount Text Questionnaire

Variable	Cronbach's Alpha	N of Items	Criteria
Students' score in writing recount text	,771	11	Acceptable

Based on the table above, the Cronbach's Alpha value for 11 valid items was .771. In order to describe level of reliability of instruments, (George & Mallery, 2003) has suggested the rule that is commonly used for describing internal consistency of the data. See table 3.4 below.

Table 3. 5 The Reliability of the Data Interpretation

Cronbach's alpha	Internal consistency
$\alpha \geq 0.9$	Excellent
$0.9 > \alpha \geq 0.8$	Good
$0.8 > \alpha \geq 0.7$	Acceptable
$0.7 > \alpha \geq 0.6$	Questionable
$0.6 > \alpha \geq 0.5$	Poor
$0.5 > \alpha$	Unacceptable

(George & Mallery, 2003)

3.4 Process of Data Collection

The process of data collection involves more than simply gathering information (Creswell, 2012), it includes five steps as follow.

- **Selecting Participants**

The first step is to select participant for the study. The selection involves specifying the population and sample.

- **Obtaining Permission**

The second step is to obtain permission from the participation to be involved in the study.

- **Selecting Types of Data**

The third step is to decide the type of data to collect. Typical quantitative data consists of measure of performance and attitudes, observations of behavior, and records and documents. The type of data collection of this research is measure performance and attitudes.

- **Identifying Instruments**

The forth step is to locate, modify, or develop instruments that provide to measures. The easiest procedure is to use an existing instrument or modify one.

- **Administering Data Collection**

The final step involves actually collecting the data. As with all phases in research, the data collection process needs to be conducted in a way that ethnical to individuals and to research sites.

3.5 Data Analysis

3.5.1 Scoring Sheet for Writing Analysis

Students' writings were analyzed by using numeric and rubric scoring guide adopted from Wechsler Objective Language Dimensions Written Expression subtest (WOLD, Psychological Corporation, 1996). The first aspect that was examined was the spelling. The second aspect was punctuation. The third aspect was sentence structure and

grammar. The fourth aspect was vocabulary. The last aspect was organization and overall structure. In detail, it can be seen in Appendix 2.

The guiding score describes that those who got 4 as having achieved the excellent score, those who got 3 as having achieved the good score, those who got the range of score 2 as having average score (this range of scores is minimum score that should be acquired by students in order to the instrument is valid to be used), and those who got the range of 1 did not fulfill the requirement of the standard score.

3.5.2 Data Analysis in the Pilot Test

The aim of the pilot test is to check the validity and reliability of the instrument. The pilot test was carried out thirty students at the same grade who were not included in both groups.

3.5.3 Data Analysis in the First Draft and the Last Draft

According to Coolidge (2000), there are three criteria before presenting the independent t-test. First, the participant must be different in each group. Second, the data should have a normal distribution. Third, the variance of two groups must be homogenous. Therefore, it is important to check whether the data are normally distributed and the variance in two groups is homogenous or not before calculating the independent t-test. If it is not, non-parametric statistic is used.

3.5.3.1. Normality Distribution Test

Normally distribution was calculated before t-test was conducted. It was aimed to determine the use of t-test whether parametric statistic or non-parametric statistic. The statistical calculation of normality test used Shapiro-Wilk in SPSS 21.0 for Windows. The steps are as follows:

1. Setting the hypothesis:
   a. H_0: the data is normally distributed
   b. H_a: the data is not normally distributed
2. Setting $\alpha = 0.05$

3. Analyzing the normality distribution by using Shapiro-Wilk test in SPSS 21.0 for Windows.
    a. The null hypothesis is accepted if Asymp. Sig ≥ 0.05 which means that the scores of the experimental and the control groups are normally distributed.
    b. The null hypothesis is rejected if Asymp. Sig < 0.05 which means that the scores of the experimental and control groups are normally distributed.

3.5.3.2. Non Parametric Statistic Test: Mann Whitney U test

Since the first draft scores of the control groups was not normally distributed so the next step was conducting non parametric statistic test (Coolidge, 2000). Mann-Whitney U test in SPSS 21.0 for Windows was used. The steps are as follows:

1. Setting the hypothesis:
    a. H_0: there is no significant difference between students' scores in the experimental group and the control group.
    b. H_a: there is a significant difference between students' scores in the experimental group and control group.
2. Setting $\alpha = 0.05$
3. Analyzing data by using Mann-Whitney U test in SPSS 21.0 for Windows.
    a. The null hypothesis is not rejected if the test result is higher than 0.05.
    b. The null hypothesis is rejected if the test result is lower than 0.05.

3.5.3.3. Homogeneity of Variance Test

The Homogeneity of Variance Test was conducted if the result of the data were normally distributed. The test was aimed to find out whether the variance of experimental and control groups were homogenous or not. The steps are as below:

1. Setting the hypothesis:
    a. H_0: the variance of the experimental group and the control group is homogenous.
    b. H_a: the variance of the experimental group and control group is not homogenous.
2. Setting $\alpha = 0.05$
3. Analyzing the homogeneity variance by using Levene test.
    a. The null hypothesis is accepted if Asymp. Sig ≥ 0.05

b. The null hypothesis is rejected if Asymp. Sig < 0.05

3.5.3.4. Independent Test

Independent T-test was conducted to investigate the significance difference between experimental and control groups. The steps are follows:

1. Setting the hypothesis for two tailed:
   a. H_0: there is no significant difference between students' scores in the experimental group and the control group.
   b. H_a: there is a significant difference between students' scores in the experimental group and control group.
2. Setting the hypothesis for one tailed:
   a. H_0: experimental group is not significantly better than control group.
   b. H_a: experimental group is significantly better than control group.
3. Setting $\alpha = 0.05$
4. Analyzing data by using t-test in SPSS 21.0 for Windows.
5. Comparing the significance between t-test and $\alpha = 0.05$.
   a. The null hypothesis is accepted if Asymp. Sig $\geq$ 0.05
   b. The null hypothesis is rejected if Asymp. Sig < 0.05

3.5.3.5. Normalized Gain

Normalized gain is aimed to measure the level of improvements in the means from the first draft score and the last draft score of each group after (Meltzer, 2002). According to (Meltzer, 2002), normalized gain (g) is categorized into three categories, namely low, medium, and high. If value of g is less than or equal to 0.3, it is categorized as low gain. If value of g is less than or equal to 0.7, it is categorized as medium gain. Furthermore, if value of g is greater than 0.7, it is categorized as high gain.

3.5.4 Data Analysis on Questionnaire

At the end of the research, the questionnaires were distributed to the experimental group. It aimed to clarify the information and elaborate the data concerning the research

question about the students' responses toward the implementation of teacher feedback in improving students' writing in writing recount text.

The data collected from the questionnaires were classified into two major aspects, they are students' responses toward writing subject and students' responses toward the use of teacher feedback in writing recount text. The data gained from the questionnaires were analyzed based in the frequency of students' answer. The result will be calculated and interpreted into percentage. The formula of percentage used is as follow:

$$P = \frac{F}{n} \times 100$$

P = percentage

F = frequency

n = the sum of the sample

100 = constant

(Sudjana & Ibrahim, 2007)

3.6 Concluding Remarks

This chapter has presented a brief discussion of methodology related aspects of the study, including sample of the study, research method, data collection, data analysis, and research procedure. The next chapter focuses on description of the research findings from the statistical computation in SPSS 21.0 for Windows and from questionnaires. It also presents discussions of research findings.