

CHAPTER III

RESEARCH METHODOLOGY

This chapter includes formulation of the problems, research method, research hypothesis, clarification of key terms, data collection, research procedures, and data analysis.

3.1 Formulation of the Problems

This study was conducted to investigate several issues related to the use of picture series in teaching writing narrative texts.

To be more specific, here are the research questions of this study:

1. Does the use of picture series improve the students' ability in writing narrative texts?
2. What are the students' responses toward the use of picture series in teaching narrative texts?

There are two variables involved in this research. The use of picture series is as the independent variable and students' writing skill is as the dependent variable.

“Independent variable is the major variable which is selected, manipulated, and measured by the researcher. Moreover, dependent variable is the variable which the researcher observes and measures to determine the effect of the independent variable (Hatch and Farhady, 1982: 15)”

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3.2 Research Method

To answer the research questions, this research used quasi-experimental design. Hatch and Farhady (1982: 24) state that quasi-experimental method is practical compromise between true experimentation and the nature of human language behaviour which is being investigated. In line with this statement, another expert said that:

“Second language researchers are unable to randomly selected groups of participants and have to deal in their experiments with already existing intact groups. Such variation from the formal requirements for a true experiment causes such a study to be called Quasi-Experimental. (Brown & Rodgers, 2008: 212)”

Moreover, it was decided due to the reason that there was a limited time and the samples were not randomly selected, thus the researcher was required to assign students based on the two classes available with the two treatments (Brown & Rodgers, 2008:212).

In this study, two different treatments were conducted for two groups. The first group was the experimental class (8D) where picture series was employed as the treatments. The second group was the control class (8A) where the researcher did not give any treatments (using conventional teaching model). Both experimental and control classes were given the pre-test before treatments. The test was used to find out students' writing skill from both groups before the treatments. In experimental group, picture series was given as the treatments to the students in the teaching and learning process. While

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in the control group, the researcher only used the conventional technique where the teacher only used blackboard as the tool in teaching and learning process (Sumarno: 2011). After the treatments in the experimental group were given, both experimental and control groups were given post-test in order to find out whether the experimental group could achieve a higher score than control group after getting the treatments. The equation of design is as follow:

$$\begin{array}{l} G_1: T_1 X T_2 \\ \hline G_2: T_1 T_2 \end{array}$$

G₁ : the experiment group

G₂ : the control group

T₁ : the pre-test result about students' writing skill

T₂ : the post-test result about students' writing skill

X : the treatments (using pictures series)

Both approaches were used in this study. The quantitative approach was used to analyze the data from the result of the pre-test and post-test. On the other hand, qualitative approach was used to analyze, describe, and clarify the data from the questionnaire.

3.3 Research Hypothesis

According to Hatch and Farhady (1982: 85-86), a hypothesis is a tentative statement about the outcome of the research. Collidge (2000: 98) stated that the hypothesis of this study was appropriate to be stated as follow:

$$H_0: \mu_1 = \mu_2$$

$$H_A: \mu_1 \neq \mu_2$$

H₀ : null hypothesis

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H_A : alternative or research hypothesis
 μ_1 : control group
 μ_2 : experimental group

In this study, the null hypothesis (H_0) stated that the use of picture series in teaching writing narrative texts is not effective to improve students' writing skill of the second grade students in one of Junior High School in Bandung. Alternative or research hypothesis (H_A) is the opposite of null hypothesis. The alternative hypothesis stated that the use of picture series in teaching writing narrative texts is effective to improve students' writing skill of the second grade students in one of Junior High School in Bandung.

3.4 Clarification of the Key Terms

Some terms need to be clarified in order to comprehend the notions underlying in the title of the study. Some terms are clarified as follows:

1. Picture Series, according to Betty Morgan Bowen (1973), cited in Mosaics (2011), is a series of pictures of a single subject and its function is to tell a story or a sequence of events. Furthermore, a series of pictures in this research means pictures which show a sequence events which is used as the treatments in this research.
2. Narrative text, according to Gerot and Wignell (1994), deals with problematic events which lead to a crisis or turning point of some kind, which in turn finds a resolution. In the literary field, narrative could be distinguished between the fictional narratives

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and nonfictional narrative (Manfred, 2005 cited in Maulida 2010). Moreover, narrative texts conducting in this research are fictional narrative.

3. Effective, according to Wojtczak (2002), is a measure of extent to which specific intervention, procedure, regimen, or service, when deployed in the field in routine circumstances, does what it is intended to do for a specified population. Furthermore, effective in this study means that there is students' improvement in writing narrative texts regarding their mean score before and after got the treatments.

3.5 Data Collection

3.5.1 Population and Sample

The research was conducted at one of the junior high schools in Bandung involving two classes of the eighth grade, one class as the experimental group and the other one as the control group. There were 30 students in each class. They were chosen based on purposive sampling in order to have the subjects who are assumed to have not experience in learning narrative text with picture series media.

3.5.2 Research Instrument

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To obtain the data for answering the research questions, two kinds of instrument were used; (1) Pre-Test and Post-Test to answer the research question about the effectiveness of using pictures series to improve students' ability in writing narrative texts, (2) Questionnaire to find out students' responses towards the use of picture series as the media in teaching writing narrative texts. Both of the instruments will be elaborated in the next sections

3.5.2.1 Pre-Test and Post-Test

To find out about the effectiveness of using picture series to improve students' ability in writing narrative texts, researcher analyzed the result of the independent t-test. Independent T-test was used to analyze the difference between two groups' means of pre-test and post-test score. The pre-test was conducted in the first meeting while the post-test was conducted in the last meeting. Both of the tests were conducted for 70 minutes. The test items of the post-test were similar to the pre-test where students are asked to write a narrative text based on the title given. The pre-test aimed to measure the students' writing skill before the treatments while the post-test was aimed to measure the progress of the students' writing skill after they received the treatments.

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3.5.2.2 Questionnaire

To find out the students' responses toward the use of picture series as media in writing narrative texts, questionnaire was used. The questionnaire was in the form of scale question. It consists of several statements related to students' view about learning writing narrative texts, the advantages and disadvantages of using picture series in learning writing narrative texts, and students' impression about the use of picture series. It was administered to the experimental group after the post-test.

3.6 Research Procedure

The procedures of this study covered the following steps: preparing the lesson plan, preparing the teaching materials, administering pilot test, administering pre-test, implementing the treatment (using picture series) in the experimental group and using conventional technique in the control group, administering post-test, and administering questionnaire.

3.6.1. Preparing the Lesson Plans

There were two lesson plans to implement during the treatment sessions. Those lesson plans were designed for six meetings. The first and the last meeting were allocated for pre-test and post-test, while the

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rest four meetings were allocated for the treatment sessions. Additionally, the lesson plans could be seen at Appendix 1.

3.6.2. Preparing Teaching Materials

There were five narrative texts used in this study. They are Snow White, The Legend of Malin Kundang, The Legend of Sangkuriang, The Legend of Lake Toba, and Cinderella. Each text consists of 5 pictures. Those five narrative texts were given at the building knowledge of the field and modelling of the text stages in the first three meetings of giving the treatments while the fourth meeting was only use selected texts as joint construction of text stage. Moreover, the picture series was selected based on the appropriateness with the narrative text given.

3.6.3. Administering Pilot Test

The pilot test was to analyze whether students can understand the instructions of the writing test or not and to validate the time allotment given. The students were asked to write a narrative text in 60 minutes. After the test, the students were asked about the writing test. Then if they have difficulties in understanding the writing test instructions, the writing test would be revised.

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The pilot test was administered to a class that did not belong to both the experimental and control group. However, the class would be in the same level and population with the experimental and control group. The pilot test was conducted on November 10th 2011 and it was administered to class 8C.

3.6.4. Administering Pre-Test

The researcher conducted the pre-test after the data from the pilot test revealed and the instruments were feasible to use in the research. The pre-test was taken on November 14th 2011 for control group and November 15th 2011 for the experimental group. The pre-test was conducted in 70 minutes since the time allocates in the pilot test was not enough to make a complete narrative text.

3.6.5. Giving the Treatments

The treatments of this study were the use of picture series in teaching writing narrative texts. The schedule for the experimental and control group will be described in the following table.

Table 3.1
Time Schedule of Research

NO	CONTROL GROUP		EXPERIMENTAL GROUP	
	DATE	MATERIAL	DATE	MATERIAL

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1.	November, 14 th 2011	Pre-test	November, 15 th 2011	Pre-test
2.	November, 15 th 2011	Treatment 1 (BKOF) Knowing students' prior knowledge about kinds of narrative. Narrative Texts: - Snow White - Cinderella - Lake Toba - Sangkuriang - Malin Kundang	November, 17 th 2011	Treatment 1 (BKOF) Knowing students' prior knowledge about kinds of narrative. Narrative texts: - Snow White - Cinderella - Lake Toba - Sangkuriang - Malin Kundang (with picture series)
3.	November, 21 st 2011	Treatment 2 (MOT I) Explaining about generic structure of narrative text. Narrative Texts: - Snow White - Cinderella/ Lake Toba/ Sangkuriang/ Malin Kundang	November, 22 st 2011	Treatment 2 (MOT I) Explaining about generic structure of narrative text. Narrative Texts: - Snow White - Cinderella/ Lake Toba/ Sangkuriang/ Malin Kundang (with picture series)
4.	November, 22 nd 2011	Treatment 3 (MOT II) Explaining about language features of narrative text. Narrative Texts: - Snow White - Cinderella/ Lake Toba/ Sangkuriang/ Malin Kundang	November, 24 nd 2011	Treatment 3 (MOT II) Explaining about language features of narrative text. Narrative Texts: - Snow White - Cinderella/ Lake Toba/ Sangkuriang/ Malin Kundang (with picture series)
5.	November, 28 th 2011	Treatment 4 (JCOT) Reconstruct another students' work of a narrative text. Narrative text: Students' work	November, 29 th 2011	Treatment 4 (JCOT) Reconstruct another students' work of a narrative text. Narrative text: Students' work (with picture series)
6.	November,	Post-Test (ICOT)	December,	Post-Test (ICOT,

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	29 th 2011		1 st 2011	with picture series) and Questionnaire
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3.6.6. Administering Post-test

The post-test was conducted at the end of the treatments. This test was given to both experimental and control groups to find out whether the treatment was effective in improving students' writing skill. The test was administered on November, 29th 2011 for control group and December, 1st 2011 for experimental group

3.6.7. Administering Questionnaire

The questionnaire was administered after the experimental group finished their post-test. The questionnaire was only distributed to the experimental group which received the treatments by using picture series as media in teaching and learning writing narrative texts. It was aimed to find out students' responses towards the implementation of this media.

3.7 Data Analysis

After collecting data, the next step was data analysis. Data analysis included pre-test and post-test data analysis and questionnaire data analysis.

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3.7.1 Scoring Technique

In this study, the researcher used triangulation method in giving score of students' pre-test and post-test. There are three assessors to assess students' pre-test and post-test, they are; English teacher, English education students, and the researcher herself. Moreover, this study used rubric assessment to score students' pre-test and post-test according to Education Department of Western Australia's scoring rubric, cited in Emilia (2011: 159-162). The texts were classified as *Beginning*, *Developing*, *Consolidating* and *Extending*. Furthermore, the scoring rubric is as follow:

Table 3.2

Narrative Writing Scoring Rubric

Score Aspects	Beginning (point 0-3)	Developing (point 4-6)	Consolidating (point 7-9)	Extending (point 10-12)
A. Orientation	<p>The writer tells about the character incompletely and hopes the reader just knows about the story.</p> <p>The writer has a difficulty in describing the characters.</p>	<p>The writer writes the title.</p> <p>There is a little bit information about setting; time, place, characters.</p> <p>Using stereotype, e.g.: <i>the wicked witch, the brave prince.</i></p>	<p>The writer writes the title appropriately with the whole story.</p> <p>There is more detail about time, place, and characters to give contextual story/plots for the reader.</p> <p>There is assumption about the stereotypes of a character, e.g.: <i>'Witches are mean'</i></p>	<p>The writer used interesting titled, then the dualistic meaning are acceptable, e.g.: <i>The Last Race</i> (it could be the last battle or the last nation.)</p> <p>There are appropriate details that connect the setting with the main characters. Generalized the character.</p>
B.	The sets of	The sets of	The writer puts	The story were

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<p>Complication</p>	<p>event didn't give any guidance to the <i>complication</i>.</p> <p>Focused on one or two characters without any specific details or description.</p> <p>Just tell how a character do something generally without giving any explanation about how others character's react about it.</p> <p>There are no punctuation and adjectives to describe gesture or expression.</p>	<p>event give a guidance to the <i>complication</i></p> <p>Copying the <i>complication</i> from a famous story</p> <p>Introducing the characters without giving any clue where they come from or why they appear in the <i>complication</i>.</p>	<p>in events in the <i>orientation</i> in building the <i>complication</i></p> <p>Extend the story with adding more complications</p>	<p>cohesive and coherence with explaining and finishing every parts of complication into episode.</p> <p>Challenge the reader to fill in some details.</p> <p>Manipulating the reader by using conflict that selectively open some information</p> <p>Build the characters by giving them the role play appropriate with the level of importance in the plot.</p> <p>There are characters' feelings points of view.</p>
<p>C. Resolution</p>	<p>Simple ending, e.g.; 'I woke up'</p> <p>Difficult to write the ending.</p>	<p>The writer tries to write the <i>resolution</i> and the ending is mostly predictable.</p> <p>Using common topic like good triumphs over evil.</p>	<p>There are no implicit information in order to build or maintain the climax</p> <p>Tries to connect the elements to make a conclusion from the story</p> <p>There might be an evaluative or coda (reflective statement)</p> <p>Showed the connection</p>	<p>Connect the elements to make a conclusion from the story</p> <p>Showed the connection between the characters and the conflict and solved all the conflicts.</p> <p>Imaginary events are well-interpreted.</p>

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			between the characters and the conflict. Some conflicts are solved	
D. Linguistic Features	Using a little basic-connective such as <i>and, then</i> . There are changing in character's pronoun, e.g.: from <i>he</i> to <i>I</i> Using direct speech rarely Difficult to maintain tense's consistency	Using adjective and adverb There are dialogues but the reader still confuse to define the characters who say 'this' or 'that' Using direct speech, exclamation, and question sentences Using causal conjunction, e.g.: <i>so, because, if.</i>	Using simile, adjective clause, and adverbial clause to make the story clearer. Using complex conjunction such as <i>nevertheless, otherwise, etc.</i> There are variance of sentence's length and punctuation to change the tempo.	The writer controls the language and structural characteristic effectively and gets the emotional response from the reader by their word choices and their careful writing style. Attract the reader by using simile, imagery, or metaphor. Make the use of dialogue and the character effective by adding more explanation in order to give a context to the readers.
Total Score: (A+B+C+D+ 2) × 2				

(Adapted from Education Department of Western Australia, cited in Emilia, 2011: 159-162¹)

3.7.2 Pre-Test and Post-Test Data Analysis

Pre-test and post-test were given to the experimental and control groups in the same procedures but in different content. In the

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experimental group, the test was given with a picture series provided while in the control group there are not any picture series provided. A hypothesis started with the alpha level at 0.05. The data were collected through pre-test and post-test computed one by one using SPSS statistic 16.0 for windows.

The steps used in analyzing pre-test and post-test were: normal distribution, homogeneity variance, and independent t-test. The details of statistical procedures are as follows:

3.7.2.1 Normality of Distribution Test

Normal distribution was calculated before t-test. This test aimed to measure the normality of score distribution of pre-test and post-test. The statistical calculation of normality test used Kolmogorov-Smirnov by following four steps below:

1. Setting the hypothesis, H_0 = the scores between experimental and control group are normally distributed
2. Setting the level of significance (α) at 0.05
3. Analyzing the normality distribution using Kolmogorov-Smirnov test
4. Comparing the *A symp sig* (probability) with the level of significance for testing the hypothesis. If *A symp. Sig* > 0.05, the null hypothesis is not rejected which means the sample

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scores are normally distributed. Contrary, if $A \text{ symp. Sig} < 0.05$, the hypothesis is rejected which means the scores are not normal.

3.7.2.2 Variance Homogeneity Test

After knowing that the pre-test and post-test were normally distributed, the next step was analyzing its homogeneity. The variance homogeneity test used Levene test in SPSS Statistic 16.0 for windows program. The steps were as follows:

1. Setting the hypothesis, $H_0 =$ data between the two groups are homogeneous
2. Setting the level of significance (α) at 0.05
3. Measuring the homogeneity variance using Levene's test
4. Comparing the $A \text{ symp sig}$ (probability) and alpha level of significance. If $A \text{ symp sig} < 0.05$, the null hypothesis is rejected and it conclude that the two groups are not equal.

Otherwise, if $A \text{ symp sig} > 0.05$, the null hypothesis is accepted and it conclude that the variance data of the two groups are equal; the data are homogenous.

3.7.2.3 T-Test Computation

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T-test was used to analyze the difference between two groups' means of pre-test and post-test score. In this study, the independent sample test was calculated by the computation of SPSS Statistics 16.0. The steps of computing t-test described below:

1. Setting the hypothesis, H_0 = there is no significant difference between the students' writing scores in experimental and control groups.
2. Setting the level of significant (α) at 0.05
3. Calculating t-test score using SPSS Statistics 16.0
4. Comparing t-obtained and t-critical. If $t_{obt} > t_{crit}$ then there is a significant difference between experimental and control groups. It means that the null hypothesis is rejected. In contrary, if $t_{obt} < t_{crit}$ then there is no significant difference between the two groups. It means that the null hypothesis is not rejected.

3.7.2.4 Effect Size

The effect size computation was conducted to check the level of effect of the treatments that are given to the experimental group by using SPSS statistics 16.0 from independent t-test of post test. The effect size was used to determine how significant the

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impact of the treatments to the experimental group's scores. Effect size has positive correlation to its value. The larger effect size value is the larger impact of treatment will be (Coolidge, 2000: 150). The formula of effect size is:

$$r = \sqrt{\frac{t^2}{t^2 + df}}$$

Note:

r : effect size

t : t.obt or t.value from the calculation of independent t-test

df : $N_1 + N_2 - 2$

Moreover, the researcher used the following scale to interpret the magnitude of the effect size:

Table 3.3

Effect size	r value
Small	0.100
Medium	0.243
Large	0.371

(Coolidge, 2000: 151)

3.7.3 Questionnaire Data Analysis

The questionnaire was aimed to answer the research question about students' responses towards the use of picture series as media in writing narrative texts.

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The formula of percentage was used to analyze the answer of the questionnaire. The data will be interpreted based on the frequency of students' answer. The formula was described as follow:

$$P = \frac{F_o}{n} \times 100\%$$

Note:

P : percentage

F_o : frequency of observed

N : number of samples

However, before interpreting the data, the researcher should analyze the validity and the reliability of the questionnaire given as long as the questionnaire given was in form of scale. In addition, the results of any research project depend on the appropriateness of the instrument or test items used to measure the variables (Hatch and Farhady, 1982: 243).

3.7.3.1 Validity Test

According to Hatch and Farhady (1982: 250-251), validity is a degree matter of the results of the test. It indicates that validity is dependent on the use of the result. Moreover, the test in this case refers to the questionnaire given.

This study applied Pearson correlation coefficient to calculate the validity of each item using SPSS 16.0 program. If

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there are some items that did not have correlation in any level of α then the questionnaire item should be revised.

3.7.3.2 Reliability Test

Hatch and Farhady (1982: 243-244) stated that reliability is the extent to which a test produces consistent results when administered under similar condition. Moreover, this study applied the formula of alpha in computing all items in estimating the reliability of the questionnaire. The process was computed by SPSS 16.0 program deployed internal consistency method which was facilitated by Cronbach's Alpha formula. After the coefficient of reliability was obtained, then the data would be interpreted based on the following categorization:

Table 3.4

Category of Coefficient Correlation of Reliability

Coefficient Correlation	Interpretation
0.0 - 0.20	Low
0.20 - 0.40	Moderate
0.40 - 0.70	High
0.70 - 1.00	Very High

(Arikunto, 2006)