CHAPTER III

RESEARCH METHOD

Research Method is a set of knowledge about sistematic and logic steps of searching data related to certained problems to process, to analyze and to summarize and to search fission measure. Research methodology consist of:

A. Research Design

Basically, a study is held to find out the answer from remanded question to observed object. Therefore, it is important for researcher to determine a proper strategy to answer and reach purpose worked out before. The most popular approaches are qualitative approach and quantitative approach. According to James Dean Brown and Theodore S.Rodgers, both states that qualitative research approach is typically the label for non-numerical research and quantitative research approach is a numerical research or there is conversion data in the research. In other side, based on Grotjahn's analysis that experimental or non-experimental is data collection method, qualitative or quantitative is type of data that resulted, statistical or interpretive is type of analysis conducted on the data² This study analyzed the effectiveness of GIST strategy in increasing student reading comprehension in exploring descriptive

¹Bahtiar Wahdi, *Metode Penelitian Ilmu Dakwah* (Jakarta: Logos, 2001), 16.

²James Dean Brown -Theodore.S Rodgers, *Doing Second Language Research* (New York: Oxford University Press, 2003), 15.

text. In this case, the researcher used quantitative method that concern on experimental approach. The research design used in this study is quasi-experimental design.

The reasons are firstly researcher wants to dig implementation GIST stategy in reading skill has or has not effect for increasing student reading comprehension inexploring descriptive text. Secondly, searching there is any changes or not to the experimental group after implementation of GIST strategy is a kind of experimental research. This matches with Jasa Ungguh Muliawan who states that experimental research intents to prove the truth of hyphothesis or argument in concrete plain. Beside, Quasi-experimental is all populations or subject taken in this study to be chosen as a contol group and an experimental group. The clear explanation of quasi-experimental design stated by Donald Ary and friends, Donald regards quasi-experimental design⁴ is similar to randomized experimental designs. He explains in quasiexperimental design, it involve manipulation of an independent variable but the difference is the subjects are not randomly assigned to treatment groups, because quasi-experimental design does not provide full control. He also adds that quasi-experimental designs are considered worthwhile because it permits

³Jasa Ungguh Muliawan, *PTK (Classroom Action Research)* (Yoryakarta: Gavamedia, 2010), 72.

⁴Donald Ary, et.al., *Introduction to Research in Education, Part Five: Research Method: Eighth Edition.* (Canada: Wadsworth, Cengage Learning, 2010), 316.

researchers to reach reasonable conclusions even though full control is not possible.

Researcher chose two classes which equal in reading skill abilty through equal test, then researcher gave treatment to experimental group in periodic measurement. In exact words, the researcher held test for two groups (control group and experimental group) to examine the treatment effects. Because this study collect data of student reading skill scores, the data of the test is numeric. The researcher analyzed the data of test with SPSS statistics, this statistic started with finding and comparing the mean of each scores, proving the true hypothesis, and drawing conclusions to answer the research questions.

Tabel 3.1 Research Design

Group	Pre-test	Independent	Post-test
		Variable	
Е	Y ₁	X	Y_2
С	- Y ₁	-	Y_2

Note:

E : experimental group

C: control group

 Y_1 : pre-test

Y₂: post-test

X : exploring descriptive text through GIST Strategy implementation

B. Variable of Research

- Independent variable of this study is "the implementation of GIST Strategy" in exploring descriptive text in second grade of SMPN 4 Surabaya.
- 2. Dependent variable of this study is "student reading comprehension" in exploring descriptive text in second grade of SMPN 4 Surabaya.

C. Setting of Research

The setting of this study is in second grade 2015/2016 of SMPN 4 Surabaya in round semester on April and May. In second grade of SMPN 4, there are seven classes; 8A, 8B, 8C, 8D, 8E, 8F, 8G. Researcher took four classes 8D, 8E, 8F, 8G as the sample, three classes that not taken are 8A, 8B, 8C because in these classes contains some of inclusy students. Among 8D, 8E, 8F, 8G, researcher held a test to take two classes that equal in reading skill ability. The two equal classes became a control group and an experimental group. A control group is the group that does not receive the experimental treatment. It receives a different treatment or no treatment at all. Whereas, an experimental group is the group that is given the independent variable treatment.

⁵Ibid., 302.

⁶Thid

The location of SMPN 4 Surabaya is on street TanjungAnom 12 Surabaya. Phone number that can be called is (031) 5341431 and the website is on www.smpn4sby.sch.id. In addition, the time setting consists of allocation time for pretest, treatment that given to examine the treatment effect and post test. This research is held fourteen times meeting; one meeting for equal test in each four classes (class D, E, F, G), one meeting for pre-test in two groups, experimental group (E class) and control group (G class), three meetings for experiment implementation in experimental group, and three meetings for conventional learning in control group, then one meeting in both group to conduct post-test. Each meeting has duration 2x40 minutes. Day and time were available with the schedule of English lesson in each class.

D. Population and Sample

Population in this research is second grade students in SMPN 4 Surabaya. The overall population of second grade students in SMPN 4 amounts 287 students (seven classes), but in taking the sample researcher eliminated 3 classes included inclusy students amounts 123 students in class A, B, and C. Two of four classes other were chosen also through equal test. Equal-test is conducted to 164 students (four classes) class D, E, F, and G. Those four classes were eliminated two classes to get other two classes that have equal ability in reading skill, based on equal-test score result. Then the sample of this study amounts 82 students (each class amounts 41 students). One class is an

experimental group and the other is as control group. Researcher hopes the chosen sample can be representative sample for all second grade students in SMPN 4 Surabaya in observing student reading comprehension in exploring descriptive text

E. Research Procedure

1. Measurement before experiment

Conducting this study started from test to determine two classes which have equal ability in reading skill from four classes. After knowing those two classes, researcher divided into two groups; one class as experimental group -which got treatment in form of implementing GIST Strategy in improving student reading comprehension- and one class as control group -which accepting no treatment in reading skill learning-. The measurement held before experiment was *pre-test*. This test was conducted to control group and experimental group. The purpose of this test was to know student reading comprehension in exploring descriptive text before treatment and make the same of the beginning condition between control group and experimental group. The result of *pre-test* between control group and experimental group was tested with statistical pattern to know the differences of both group comprehension.

2. Experiment implementation

After ensuring that control group and experimental group have same comprehension, experiment implementation was held by giving treatment through GIST strategy. GIST strategy only was held to experimental group, control group accept no treatment at all. During experimental group get the treatment in GIST Strategy form, control group had a conventional learning.

a. Experimental group

The experimental group got the treatment in learning process of exploring descriptive text through GIST Strategy implementation. The steps of GIST strategy implementation in planning of descriptive text learning are:

- 1) Before beginning the classroomwork;
- a) first, teacher discussed with students what a GIST Strategy is and why it is a useful strategy.
- b) then modelling the GIST process using a descriptive text. Teacher might use an overhead projector to allow the whole class to read and discuss sample text together.
- c) having students read the article along with teacher, using the overhead projector, together fill in the "5Ws and H"-who, what, where, when, why, and how-on the *GIST Template*.
- d) then asking students to try writing their own GISTs.

e) next, sharing teacher's GIST with the class and asking students to share theirs.

If students need additional time to master the concept, researcher repeated GIST session discussing with a new descriptive text before moving on to classroom work session.

- 2) Beginning the classroom work, teacher reviewed how GIST works and the explanation more about it.
- 3) Students identified and explored the descriptive text of the first paragraph and get the important information in the first paragraph
- 4) Students wrote with their own words the important information as the main point of first paragraph
- 5) Henceforth, students read the next paragraph, identifying the important information in that paragraph and writing it in their own words
- 6) This continued till the end of paragraph.
- 7) Teacher and students discussed the content of text. In this session, teacher could point some of students to share their own GIST, teacher controlleds and provided to right and check the answer,
- 8) Students wrote the learning experience today
- 9) Teacher evaluate the learning process

b. Control group

This control group did not get any treatment and the learning process was held in a conventional learning without GIST strategy implementation. The planned learning of control group are:

- 1) Teacher explained the lesson in form of conventional learning style
- 2) Teacher gave the descriptive text to students
- 3) Students did the task of exploring descriptive text
- 4) Students collected the work

Researcher in this control group, was as a teacher and controller. The documentations were expropriated by co-observer.

3. Measurement after experiment

After that, researcher continued to hold post-test to control group and experimental group. This test held to know the achievement of both group after getting the treatment. Then, from the test result became ascertainable the difference score before treatment (pre-test) and after treatment (post-test). From those scores, it became ascertainable wether there was a raising, constant, or even lowering. The result was as consideration to prove the effectiveness of GIST strategy.

F. Data and Source of Data

The term of data collection task began after defining a research problem and ensuring research design. The researcher should decide from two types of data collection method used in this study, either primary or secondary. C. R. Kothari a Former Principal, a College of Commerce in University of Rajasthan, Jaipur (India) defines that *primary data* are data collected individually and for the first time, and it happens to be original in character whereas, he defines that *secondary data*, are data which have already been collected by someone else and have already been passed through the statistical process. He adds that the researcher should decide which sort of data that used for the study and select one or the other method of data collection. Data in this study are:

1. Primary Data

The primary data of this study is the data forms of student reading comprehension either the class used GIST Strategy in reading learning or not in second grade of SMPN 4 Surabaya.

2. Secondary Data

The secondary data is the forms of supporting data gotten from some sources, they were attendance lists of students from two classes at second

.

⁷ C. R. Kothari, *Research Methodology: Methods & Techniques* (New Dhelhi: New Age International, 2004), 95. http://www.suza.ac.tzsarisdownload132376585119680689-Research-MethodologyMethods-and-Techniques-by-CR-Kothari.pdf%202.pdf retrieved on January, 06th 2016 07:50.

grade of SMPN 4, sylabus and schedule. Furthermore, the researcher took pictures as proof of student documentation occurred in classroom. Some theories were also taken by the researcher to support the data obtained. The sources of both primary and secondary data are from teachers, students, and the research presence at SMPN 4 Surabaya. The primary data were obtained by implementing GIST strategy in teaching reading also conducting classroom documentation in two classes which the first group were taught by using GIST strategy and the other group without GIST strategy. The secondary data were obtained by asking the copies of attendance list to the teachers in two classes and academic office in SMPN 4 Surabaya. Furthermore, the researcher was assisted by co observer to take pictures in classroom for documentation.

G. Data Collection Technique and Instrument

1. Research Instrument Development

According to experts, Suharsimi, instrument is a tool which chosen and used by researcher in agenda to collect it systematically and easily. ⁸ Moreover, Ibnu Hadjar states instrument is a measurer to get quantitative information about variant of variable characteristics objectively. ⁹ In essentials, instrument is a tool in collecting data in a research. Collected data described

⁸Arikunto, Suharsimi. Manajemen Penelitian. (Jakarta: Rineka Cipta, 2000), 134.

⁹Hadjar, Ibnu. *Dasar-dasar Metodologi Penelitian Kwantitatif dalam Pendidikan* (Jakarta:Raja Grafindo Persada,1996),60.

and used to test a hypothesis in a research. Because of validity and reliability of acquired data, instrument becomes very important in determining research quality. Instrument also has a purpose to utter facts to data. When instrument has a good quality means valid and reliable, acquired data was proper with the fact and conversely. To understand the instrument development, there are some matters about instrument development: types of instrument, steps of instrument's arrangement and development included instrument items, and validation process. Types of reseach instrument:

- a. Test
- b. Questionaire
- c. Interview

- a. Observation
- e. Rating scale
- f. Documentation

Generally the instrument's development are:

- a. Based on the inspected theory of variable and defining it.
- b. Identifying and developing dimension and indicator variable.
- c. Arranging instrument lattice work in specification tabel contains dimension, indicator, item number, item amount.
- d. Determining the intensity level.
- e. Writing process to instrument items in a question or statement form.
- f. The items have to pass the validation process.
- g. Revision or improvement according to expert judgements. 10

.

¹⁰Muljono, Pudji, Penyusunan dan Pengembangan Instrument. Retrieved on April, 25th 2016 07.45 http://staff.ui.ac.id/system/files/users/dewi_g/material/instrumenpenelitian.pdf

The test used in pre-test and post-test was multiple choice which arranged based on Barret Taxonomy. There were five steps conducted in Barret Taxonomy:

- 1) Literal Comprehension; A recall skill about written fact pieces in the text.
- 2) Reorganization; A skill in analyzing, synthesizing, get and arrange the ideas which explored explicitly in the text.
- 3) Inferential Comprehension; A skill to share ideas in intuition and personal experiences for the basic to solve the problems.
- 4) Evluation; A skill to ensure and evaluate the quality, carefulness, or advantages in the text.
- 5) Appreciation; Reward to some elements of writer's purpose emotionally, sensitively in aesthetics, and giving reactions to the text moral value.

Whereas, for the treatment score with GIST Strategy implementation was scored with a "Rubric for Assessing Summary Writing". This because GIST Strategy is not only a strategy used in reading skill but this stategy also demands students to elect and eliminate various facts and keywords in one summary sentence, therefore the "Rubric for Assessing Summary Writing" used in this study to score. ¹¹

¹¹ Nancy Frey, et.al., "What's the Gist?" Summary Writing for Struggling Adolescent Writers," Voices from the Middle, Vol.11 No.2, Desember 2003, 48.

2. Instrument Lattice

Tabel 3.2 Taxonomy of Reading Skill Test¹²

Taksonomi Barrett is a reading taxonomy contains cognitive and affective dimension that developed by Thomas C. Barrett on 1968.

Text Title	Understanding Level	Indicator	Number question	Amount question
Niagara Falls	Literal	Student can find written information in the text	3, 6	2
(Equal-Test)	Reorganization	Student can find main idea	4	1
		Student can conclude contain of paragraph	9	1
		Student can find contain of paragraph	2	1
	Inferential	Student can understand implicit meaning in the text	1	1
		Student can understand the glossaries in the text	8, 10	2
	Evaluation	Student can determine a view appropriate with the text	5	1

¹²Supriyono. *Membimbing Siswa Membaca Cerdas dengan Taksonomi Barret*. 2010. Retrieved on April, 21st 2016 08.50 from http://ahmadfaisal2.blogspot.co.id/2009/06/membimbing-siswa-membaca-cerdas-dengan.html

Appreciation	Sharing the ideas	7	1

Text Title	Understanding Level	Indicator	Number question	Amount question
Bees (Equal-Test)	Literal	Student can find written information in the text	13, 15, 18	3
	Reorganization	Student can find main idea	12	1
		Student can conclude contain of paragraph	19	1
		Student can find contain of paragraph	14	1
	Inferential	Student can understand implicit meaning in the text	11	1
		Student can understand the glossaries in the text	17	1
	Evaluation	Student can determine a view appropriate with the text	16	1
	Appreciation	Sharing the ideas	20	1

Text Title	Understanding Level	Indicator	Number question	Amount question
Festival of Water	Literal	Student can find written information in the text	4, 10	2
(Pre-Test)	Reorganization	Student can find main idea	2	1
		Student can conclude contain of paragraph	7	1
		Student can find contain of paragraph	8	1
	Inferential	Student can understand implicit meaning in the text	1	1
		Student can understand the glossaries in the text	5	1
	Evaluation	Student can determine a view appropriate with the text	3	1
	Appreciation	Sharing the ideas	6, 9	2

Text Title	Understanding Level	Indicator	Number question	Amount question
Jellyfish (Pre-Test)	Literal	Student can find written information in the text	16	1

Reorganization	Student can find main idea	12	1
	Student can conclude contain of paragraph	18	1
	Student can find contain of paragraph	15	1
Inferential	Student can understand implicit meaning in the text	11, 20	2
	Student can understand the glossaries in the text	19	1
Evaluation	Student can determine a view appropriate with the text	13, 14	2
Appreciation	Sharing the ideas	17	1

Text Title	Understanding Level	Indicator	Number question	Amount question
Kiwi (Post-Test)	Literal	Student can find written information in the text	5, 7	2
	Reorganization	Student can find main idea	4	1
		Student can conclude contain of paragraph	9	1

	Student can find contain of paragraph	8	1
Inferential	Student can understand implicit meaning in the text	1	1
	Student can understand the glossaries in the text	3, 6	2
Evaluation	Student can determine a view appropriate with the text	2	1
Appreciation	Sharing the ideas	10	1

Text Title	Understanding Level	Indicator	Number question	Amount question
The Houses of the	Literal	Student can find written information in the text	13, 14, 17	3
Toraja (Post-Test)	Reorganization	Student can find main idea	19	1
		Student can conclude contain of paragraph	15	1
		Student can find contain of paragraph	12	1
	Inferential	Student can understand implicit meaning in the text	11	1

	Student can understand the glossaries in the text	20	1
Evaluation	Student can determine a view appropriate with the text	16	1
Appreciation	Sharing the ideas	18	1

Tabel 3.3 Assessing Summary Writing For GIST Strategy

	4	3	2	1
Length	8-10 sentences	11 sentences	12 sentences	12+sentences
Accuracy	All statements	Most statements	Some statements	Most statements
	accurate and	accurate and	cite outside	cite outside
	verified by	verified by story	information or	information or
	story		opinion	opinions
Paraphrasing	No more than	One sentence	Two sentences	3+ sentences
	4 words in a	contains more	contains more	contain more than
	row taken	than 4 words in a	than 4 words in a	4 words in a row
	directly from	row taken directly	row taken directly	taken directly
	story	from story	from the story	from story
Focus	Summary	Summary	Summary	Main idea of story
	consists of	contains main	contains main	is not discussed
	main idea and	idea and some	idea and only	
	important	minor details	minor details	
	details only			

Conventions	No more than	2-3 punctuation,	4-5 punctuation,	6+ punctuation,
	one	grammar, or	grammar, or	grammar, or
	punctuation,	spelling eror	spelling eror	spelling eror
	grammar, or			
	spelling eror			

3. Question Item Writing and Validation

The research instrument used in this study is multiple choice test. The process of item question writing was based on the taxonomy barret. The usage of Barraet Taxonomy was tought capable of measuring student reading comprehension in exploring descriptive text. the amount of item question in this study is 40 items which validated to choose 20 item for pre-test and 20 items for post-test with A, B, C, D as answer option. The test assessment system was 2 score for the true answer based on the answer key and zero for the false one. Before, the test question was validated first by the expert judgement in reading skill. The test tested by asking the compatibility among research instrument and learning objective, material, also applied curriculum.

H. Data Analysis Technique

Data analysis is activity dividing and tabulating data based on its variable and type of responden, providing data of each variable, do consideration and calculation to examine presented hypothesis. Data in this study is obtained from research subject score to show how far the student reading comprehension improvement. The purpose of this study is to provide certain

data about the effectiveness of GIST Strategy implementation to student reading comprehension. In this study, the score was counted in two steps: counting equal-test result to determine two groups have same ability that as experimental and control group, then counting pre-test of both groups and post-test of both groups.

In counting equal-test result, the first step was collecting data from equal-test result of each classes, next step was tabulating the result score in a tabel. Then researcher showed average score (mean) from each classes.

The pattern used is ¹³:
$$\left(M = \frac{\Sigma x}{N}\right)$$

Note:

M = mean (average score)

 $\sum X =$ score result of all respondens

N = responden amount

This pattern has a purpose to get average score in each class which are calculated or accounted one by one in term of mean ,by adding up all scores and divided by the number of items above. The next track was through One Way ANOVA. One Way ANOVA or one way analysis variance was used to test the difference of average score between two or more independent data groups. ¹⁴ In this case, equal-test score result was not qualified, those were

¹³Aqib Zainal,et.al., *Penelitian Tindakan Kelas*. (Bandung: YRAMA WIDYA, 2011), 204.

¹⁴Priyatno, Duwi. 5 Jam Belajar Olah Data Dengan SPSS 17. (Yogyakarta: ANDI Offset, 2009), 82.

normality and homogeneity. Because those assumptions were not qualified, the test of statistics was replaced by Kruskall Wallis 15 and continued with test Mann whitney U^{16} to know which class was same or different.

Whereas in counting pre-test or post-test score result, the beginning step was same as track above but the next track was through Independent Sample T Test which to test two mean of two independent data groups. ¹⁷ In this case, once again the assumptions about normality and homogeneity were not qualified, the test of statistics was replaced by test Mann Whitney U to know whether there was the difference of pre-test and post-test average score or not between experimental and control group and in this sense researcher chose to count the score through SPSS. In additional, the result of test Mann Whitney U in post-test brought to check hypothesis for drawing conclusion.

If a significance value in post-test result < 0,05 means that the hyphothesis alternative is accepted (There is a difference average score between experimental and control group by annotation that average score of

¹⁵Laerd Statistics. https://statistics.laerd.com/spss-tutorials/kruskal-wallis-h-test-using-spss-statistics.php retrieved on June, 09th 2016 13:24 For further information: Kruskal-Wallis test is a rank-based nonparametric test that used to determine whether there is difference between two or more independent data. Besides it is to test ordinal scale data and without presupposing the data is normal distribution

https://explorable.com/mann-whitney-u-test retrieved on June, 09th 2016 13:35, for further explanation: Mann-Whitney U-test is also known as the Mann-Whitney-Wilcoxon (MWW) or Wilcoxon Rank-Sum Test. It is to test whether there is difference between two independent data. It is also for ordinal scale data and without presupposing the data is normal distribution.

¹⁷Ibid, 188.

experimental group is higher than control group), in other word, implementation of GIST Strategy is effective to increase student reading comprehension in exploring descriptive text.

On the contrary, If a significance value in post-test result > 0,05 means that the hyphothesis null is accepted. It can be concluded that if after getting the result that GIST Strategy implementation affects to increase students reading comprehension in exploring descriptive text.

Tabel 3.4 Teaching Journal Of SMPN 4 Surabaya

	4			
Numb.	DATE	CLASS	DAY	DESCRIPTION
1	27 April 201 <mark>6</mark>	VIII F	Wednesday	Equal-Test
2	28 April 2016	VIII G	Thursday	Equal-Test
3	28 April 2016	VIII D	Thursday	Equal-Test
4	02 May 2016	VIII E	Monday	Equal-Test
5	03 May 2016	VIII E	Tuesday	Pre-Test (X)
6	05 May 2016	VIII G	Thursday	Pre-Test (C)
7	09 May 2016	VIII E	Monday	Experiment 1
8	09 May 2016	VIII G	Monday	Task 1
9	10 May 2016	VIII E	Tuesday	Experiment 2
10	12 May 2016	VIII G	Thursday	Task 2

11	16 May 2016	VIII E	Monday	Experiement 3
12	16 May 2016	VIII G	Monday	Task 3
13	17 May 2016	VIII E	Tuesday	Post-Test
14	19 May 2016	VIII G	Thursday	Post-Test

