

CHAPTER III RESEARCH METHODS

This chapter discusses research method that is used in this research. It covers research design, setting of the research, subject of the research, source of data, research procedure. Afterwards, it is followed by research instrument as the tools for measuring the research question. Then, it is completed by data collection techniques, data analysis technique and research stages to provide better understanding in this research.

A. Research Design

This study is quasi experimental design¹. Quasi-experimental design is considered because they allowed researcher to reach reasonable conclusions although not fully control. This meant that the researcher has the limit to control the population because of the teacher of English course has been suggested two classes to conduct this research. Quasi-experimental design is also involved an independent variable manipulation but the subject or the control group and the experimental group cannot be taken randomly. It is involved comparing the outcome of one group receiving a treatment that is focus on evaluation to one or more groups of students who is received either nothing or an alternative real treatment, or to a group receiving a placebo-type treatment.² So, The control group in quasi-experimental design does not fully control the external variables that affect the implementation of the experiment.

The researcher is compared two groups. There are experimental group and control group. The two groups is given pre- test and post- test. The following chart has been represented the design:

¹ Arief Furchan, *Pengantar Penelitian Dalam Pendidikan* (Yogyakarta: Pustaka Pelajar, 2005), 380.

² Bruce Thyer, *Quasi-Experimental Research Design* (Oxford University Press, 2012), 9.

Table 3.1: Research Design

Group	Pre-Test	Treatment	Post-Test
E	T ₁	X	T ₂
C	T ₁	-	T ₂

Note:

E : Experimental Group

C : Control Group

T₁ : Pre-Test

T₂ : Post-Test

X : Teaching writing through CIRC Technique

B. Variable of Study

A variable in research is referred to a person, place, thing or phenomenon that the researcher trying to measure.³ There are two variables. Those are:

1. Independent variable means the variable that is stable and unaffected by the other variables that the researcher trying to measure. The independent variable in this study is “using CIRC Technique” at Eighth grade of MTs. Al-Fatih Surabaya.
2. Dependent variable means the variable that depends on other factors that are measured. These variables are expected to change as a result of an experimental manipulation of the independent variable. The dependent variable of this study is

³ *Organizing Your Social Science Research Paper: Independent Variable and Dependent Variable.* University of Southern California. Retrieved from <http://libguides.usc.edu/writingguide/variables> accessed on January 31st 2017.

“students reading achievement” in descriptive text at at Eighth grade of MTs. Al-Fatich Surabaya.

C. Setting of the Research

The setting of this study was in eighth grade student of MTs. Al-Fatich Surabaya. In eighth grade, there are 2 classes, 8B and 8D. The number of the students from both classes are 60 students, 8B and 8D has 30 students. The researcher has been chosen those classes by the suggestion of English course teacher. The researcher chose 8D to be the experimental group which is taught Cooperative Learning and groping work in daily learning. The researcher is chosen 8B as the control group which is taught using the conventional teaching strategy and not grouping work in daily learning.

MTs. Al-Fatich Surabaya is located on street Tambak Osowilangon No. 98 Surabaya. In addition, the time setting is consisted of time allocation for pretest, treatment that is given to examine the treatment effect and post-test. This study will be held in five times meeting. Each meeting has 2x40 duration time. Day and time of the treatment are appropriated with the schedule of English subject in 8B and 8Dclass.

D. Subject of the Research

1. Population

The population of this study is MTs. Al-Fatich Surabaya in the new academic year of 2017/2018. The eighth grade consist of 60 students for class 8B and 8D with the consideration even though they have been learned about descriptive text in the new program.

2. Sample

The researcher is taken the purposive sample from the students.⁴ In purposive sample, each sample element is selected for purpose, usually because of the unique position of the sample elements. Purposive sampling focuses on person's environment or social setting. For example, the students are same gender.

The researcher chose 8B and 8D because of they have almost get same average score of both two classes got 75 score of English subject when they were in seventh grade than other classes, of course the researcher has been gotten this information by English teacher. Two classes are divided into two groups (control group and experimental group) to examine the treatment effects, 8D is an experimental group and 8B is a controlled group. Researcher hopes that the sample can representative sample for all new academic year students at eight grade of MTs. Al-Fatih Surabaya in the use of CIRC Technique to know the effect of CIRC Technique to students reading achievement.

E. Procedure

The researcher is asked for permission to the head of MTs. Al-Fatih Surabaya to conduct a research study at the school. After getting the permit from the headmaster of the school to conduct the research, the researcher discusses the purpose of the research, the research schedule, and the choice of the class.

To find if there is a statistically significant difference between the achievements of the experimental group (teach with CIRC Technique) and control group (teach with conventional methods) in terms of reading skills, both the experimental and control groups are applied reading comprehension test from researcher as pre-test.

⁴ Rafael J. Engel – Russell K. Schutt, *Fundamental of Social Work Research* (US: Sage Publication, 2010), 96.

Implementation is undertaken by the researcher in experimental and control groups by applying appropriate technique for 5 meeting.⁵

1. Pre Test Development

After creating pre-test, the researcher is conducted a validity test to make sure that the tests are meaningful, useful and proper with purpose of the test. There are 20 questions in Pre-Test (see Appendix 4). The 5 points of the question guide students to answer the questions. This test is through the process of the expert judgment before it is used. The test of pre-test is used the material that is taken from Passport to The World for eighth grade Junior High School published by Platinum, which is based on Curriculum 2013 because the school was using Curriculum 2013.

2. Pre Test Administration

Before is conducted the research, firstly researcher is made research plan. Secondly the researcher is made pre-test. The pre-test is also already validity by Taxonomy Barrett. After getting two classes, it is divided into two groups, one class as an experimental group is taught cooperative learning in teaching reading and one class as control group is taught using conventional. Then, the researcher gives pre-test to control group and experimental group. The purpose of this test is to know students descriptive reading scores. The result of *pre-test* between control group and experimental group is used to identify the students descriptive reading scores before the treatment.

In Pre Test Administration, the teacher gives them an explanation about descriptive text. Then, the teacher gives them example of describing something. In this Pre-Test there are two classes that used to describe same topic. The topic is about

⁵Durukan E., “*Effects of cooperative integrated reading and composition (CIRC) technique on reading-writing skills*”, (Turkey: Educational Research and Reviews, 2011) Vol. 6(1), 102-109.

describing people, animal, city. In this pre-test, the teacher gives the explanation first, served various kind of descriptive text, then give the instruction to the students to describe about people, animal, city. The topics is used same between experimental class and control class. After giving the instruction, then the teacher take the paper of the describing people, animal, city as the pre-test. Then, researcher is taken the data of pre-test from this activity.

3. Treatment

After giving the pre-test for both control group and experimental group, experiment implementation is held by giving treatment through CIRC Technique. CIRC Technique is given to 8D class or experimental group and 8B class or the control group was taught using conventional technique.

a. Procedures Experimental Group

1) Meeting 1

In the first meeting implementation at Experimental Class, preparatory works is carried out in the relation to the lesson plan and cooperative learning with CIRC Technique implementation. In the scope of the preparatory works, techniques such as questions-answers and brain-storming is adopted and group work activities (such as discussion, deciding on the name of the group, etc.) is carried out. Beside that researcher introduces about describe things as topic in the first meeting. The researcher serves the 3 pictures about Popular Person, Pet, and City as warming up and gives example of adjective related to pictures. Then, researcher is divided the students into some groups and is asked them to give their group name. Every group consists of 4-5 students. The researcher shows example of describing text in cartoon about “Prambanan Temple” and gives explaining a main idea, generic structure,

adjectives, and verb of simple present. They write main ideas, generic structure, adjectives, and verb of simple present on the another cartoon. Then, the researcher explains and corrects the answer together with the students.

Second, the researcher chooses popular person “Daniel Jacob Radcliffe”. The researcher distributes picture and reading descriptive text as work sheets in every group. The researcher gives the instruction to the students to find out what is adjectives that they can be found on the picture. After all of the students is already found that. Then, the teacher gives explanation to find out mind idea in each paragraph. Researcher is also giving the explanation about generic structure of descriptive text and simple present tense because some of the students are forgotten.

Next, the researcher wants them to find main idea, information of generic structure, adjective, and difficult word with their group based on the things that they were found at the descriptive text. After that, they have to some question from the text. Then, researcher gives solve of the problems in every group. In the end of meeting researcher gives the feedback.

2) Meeting 2

In the second week of implementation, the topic about animal. The researcher gives each groups small piece of papers about “My Pet”. This meeting students have to arrange of small piece of papers becoming good paragraph based on the generic structure. Then, they can be found difficult word and adjective on the text and answer the questions. To know more student’s reading comprehension, researcher gives them other practice to find characteristics of elephant in their task book. Then, researcher gives solve of

the problems in every group. In the end of meeting researcher gives the feedback.

3) Meeting 3

In the third week of the implementation, the topic about city. The researcher gives them work sheet about “Surabaya City”. It has 5 questions that students answer it. Before that, they have to check difficult word on dictionary. The students can be discussed with their group about the text. Then, researcher gives solve of the problems in every group. In the end of meeting researcher gives the feedback.

4) Meeting 4

In the fourth week of implementation, the researcher gives review about “Elephant”, students are asked to remember the characteristics of elephant on with their group.

This meeting the researcher remaining topic the students with descriptive text about (Jefri Al-Bukhori) and city (Kenya). The researcher gives them worksheet handed out to students are read in the scope of reading comprehension skill development in individually. They try to answer questions in their own worksheet. The researcher checks their work sheet. In last meeting, students and researcher can be checked the answer together. This process is aimed to develop students’ “accurate reading” skill and “making meaningful sentence” skill.

5) Meeting 5

In the fifth week of implementation, the researcher enter performance has been exerted by groups in the previous activities on each group’s scoreboard and the most successful group is awarded in class in the fifth

week. In the overall implementation process. The researcher gave worksheet again in groups that they try to translate to Indonesian language about “Kediri City”. In the last lesson activity, researcher asks to one group present their worksheet and researcher checks them translate.

b. Procedures Control Class

1) Meeting 1

In the first meeting implementation at Control Class, preparatory works are carried out in the relation to the lesson plan. In the scope of the preparatory individually, techniques such as questions-answers and brain-storming is adopted. Beside that researcher introduces about the topic that used in the first meeting. The topics are used at the first meeting was about Popular Person, Pet, and City. In this class, the researcher serves the 3 pictures in the papers. The researcher gives explanation about the main topic that is used at the first meeting is about Popular Person, Pet, and City. The researcher distributes 3 pictures about Daniel Jacob Radcliffe, Persian Cat, Logo of Surabaya. Then, students fill in the blank to complete information related to the picture. After that, they finish their work, they must present by reading their text in front of the class. The researcher gives feedback to the student. In the end of the class, researcher gave the students an assignment to write descriptive text related with the topic in the class. Students can be submitted their assignment in the next meeting in a paper.

2) Meeting 2

In the second week of implementation, the researcher checks their assignment and they must present their assignment. The topic about animal. The researcher distributes worksheet about My Pet. This meeting students

have to answer about the text. After they finishes their work, they submitted their work. In the end of the class, the researcher gives the assignment to the students to find and writes descriptive text about animal in their book.

3) Meeting 3

In the third week of the implementation, the topic about city. The researcher gives them work sheet about Surabaya City. It has 5 questions that students answer it. Before that, they have to check difficult word on dictionary. After they finish their work, they can be submitted their work. In the end of the class, the researcher gives the assignment to the students to find and write descriptive text about city in their book.

4) Meeting 4

In the fourth week of implementation, the researcher gives description text about “Elephant”, researcher asks students to write down characteristics of elephant on their book. Then, the teacher gives explanation to find out mind idea in each paragraph. Researcher also gives the explanation about generic structure of descriptive text and simple present tense because some of the students are forgotten.

After that, researcher asks students to come forward to the class and write down the generic structure of the text and find adjective on other cartoon. This meeting the researcher remaining topic the students with descriptive text about person (Jefri Al-Bukhori) and city (Kenya). The researcher gives them worksheet handed out to students are read in the scope of reading comprehension skill development. They try to answer questions in their own worksheet.

5) Meeting 5

In the fifth week of implementation, the researcher enters performance exerted by giving awarded to student that got the best score in class in the fifth week. In the overall implementation process. The researcher gives worksheet again in groups that they try to translate to Indonesian language about Kediri City. In the last lesson activity, researcher gives feedback and asked to their worksheet.

4. Post Test Development

After creating post-test, the researcher is conducted a validity test to make sure that the tests are meaningful, useful and proper with conclusion of the test. There are 20 questions in Post-Test (see Appendix 4). The 5 points of the question is to guide students to answer the questions. This test is through the process of the expert judgment before it is used. The test of post-test uses the material that takes from Passport to The World for eighth grade Junior High School published by Platinum, which is based on Curriculum 2013 because the school was using Curriculum 2013.

5. Post Test Administration

Before is conducted the research, firstly researcher made research plan. Secondly the researcher made post-test. The post-test also already validity by Taxonomy Barrett. After getting two classes, it is divided into two groups, one class as an experimental group is taught by using CIRC Technique in teaching reading and one class as control group is taught by using conventional. Then, the researcher gives post-test to control group and experimental group. The purpose of this test is to know students score for their reading achievement scores. The result of *post-test* between control group and experimental group is used to identify the students descriptive reading score after the

treatment. In this posttest is same topic such as in pretest for Experimental Class and Control Class.

F. Data Instrument

Instrument is a tool which change a physical variable of measurement to a form of recording that is suitable. In order to measure the data, to have consistent meaning, it is general to employ a standard system of units by which measurement to be compared.⁶

The test is created by researcher and the test took from student's book itself. The total of the test was 20 questions for multiple choice. The type of this test was subjective one (making English composition, especially reading descriptive texts). The result of the test became main data to analyze before and after treatment. For experimental group, the research gave CIRC Technique as treatment but the control group did not give treatment as conventional technique. In case, the researcher held the post-test to find out the validity:

1. The Validity of Test

According to Gronlund, cited by Brown, validity is a goal of assessment which is meaningful, useful and proper with the conclusion of the test. In this part, the researcher was use two validities; those were: a) content validity is a test where the test-taker perform the behavior which is measured by using the samples as a subject in inferences, b) construct validity is a large scale in validating standardized test of proficiency.⁷ In this research, validity test was done by Taxonomy Barrett which is a reading taxonomy contains cognitive and affective dimension that developed by Thomas C. Barrett on 1968 (see appendix 4).

⁶ R. J Hasman, *Characteristic of Instrument* (Massachusetts Institute of Technology: CRC Press, 2000), 1.

⁷ H. Douglas Brown, *Language Assessment; Principles and Classroom*. (California: Longman, 2003), 22.

2. Instrument Pre-Test and Post-Test

a. Pre-test.

The pre-test was given before the treatment. It will be done to find out the student's original descriptive reading skill score.

b. Post-test.

The post-test was given after the treatment. Pre-test was given to measure students' descriptive reading scores before doing the treatment. Additionally, the post-test was given to measure student's reading achievement scores after doing the treatment.

G. Data Collection Technique

The technique of collecting the data was by conducting the test before (pre-test) and after (post-test) the treatment. The time for collecting data was seven times. The activity that used was Pre Test at the first meeting, then the researcher applies treatment in every class both of Experimental Class and Control Class. There were five times treatments that used in this research. Then, the last activity was Post Test.

The test was given before and after the treatment to measure the using of CIRC Technique in students' descriptive reading scores. During the treatment, the researcher was done a class observation of experimental class. The aim of this observation was to observe the implementation of CIRC technique. The class observation was divided into two parts. The first observation was finished on class teaching and learning process. The second observation was finished by the activity from the cooperative learning of CIRC Technique.

H. Analyzing Data

After collecting data from the treatment of experimental and control groups. In this study, data was obtained from research subject score to show whether teaching reading using CIRC Technique was effective than teaching reading skill using conventional technique. The researcher tried to find out the differences score between experimental and control groups. The researcher analyzed the data by using statistical calculation with *SPSS 20.0* to find out whether the average or mean score on pre-test and post-test. The result of data will analyze the significance difference between the result of the pre-test and post-test. Figure 3.1 data analysis steps.

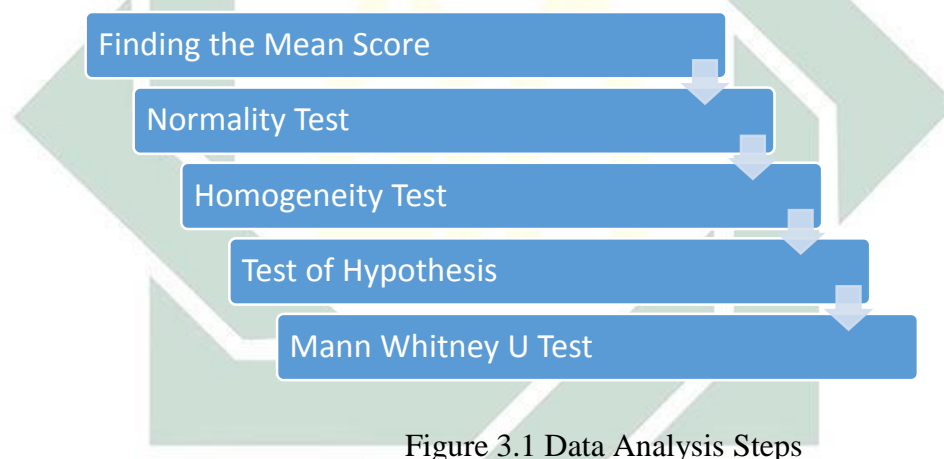


Figure 3.1 Data Analysis Steps

There were 5 types analyze data:

1. Finding the Mean Score

To analyses the data, the researcher compared the score of both experimental and controlled group. It was useful to prove statistically whether there was any difference between the students' scores of the control group and the scores of the experimental group. In counting pre-test and post-test score result, the beginning step

was arranging the score into a table for both control group and experimental group and counting each average score or *mean* from each classes.⁸

2. Normality Test

Data that had been taken by the researcher was tested first to determine the characteristic of the data. A type of data testing that was carried for this research was normality test. This test used to find out whether the data had a normal distribution or not.

If the data had normal distribution, it meant that the data been representative of the population and the data can be calculated using parametric statistic which usually using *Independent Sample T-test*. If the data had no normal distribution, the data can be calculated using non-parametric statistics which usually using *Mann Whitney U* test.

In this study, researcher used SPSS 20.0 to calculate the normality test of the data. The researcher used *Shapiro-Wilk* test because the amount sample was less or equal with 60 samples. *Shapiro-Wilk* test assessed whether the data were normally distributed or not. If the significance value is less than $\alpha = 0.05$, the data was not normally distributed, otherwise if the significance value is more than $\alpha = 0.05$, then the data is normally distributed.⁹

3. Homogeneity Test

The test used to test whether the distribution of the data is homogeneous of not by comparing the two variances. The homogeneity was intended to test the equality of variance of dependent variable of this study. In this study, the researcher used *Levene's Test*, which is simply one-way analysis of variance on the absolute deviation of each

⁸ M. Subana, *Statistik Pendidikan (Statistic in Education)*. (Bandung: Pustaka Setia, 2000), 131.

⁹ Robert H. Carver - Jane Gradewohl Nash, *Doing Data Analysis with SPSS Version 18*. (Boston: Brooks/Cole Cengage Learning, 2012), 140.

score from the mean for the group.¹⁰ If the significance value on the *Levene's Test* is more than $\alpha = 0.05$, then the variance of the variables are homogeneous. Robert H.

4. Hypothesis Test

After found out the result of normality test and homogeneity test, the researcher calculated the data to test the hypothesis. When the data has normal distribution and homogeneous, the data calculates using *Independent Sample T-test*, but when the data has nor normal distribution although it is homogeneous, the *Independent Sample T-test* cannot be continued.

For alternative calculation, the researcher was using it with *Mann Whitney U* test to find out the significance different of the data that has been collected for the research. *Mann Whitney U* test is a non-parametric statistical technique. It can be used in place of a t-test for independent samples in cases where the values within the sample do not follow the normal or t-distribution but also when the distribution of values is unknown. The *Mann-Whitney U* is also used to test the null hypothesis, subject to both samples coming from the same basic set or having the same median value.¹¹ In doing the analysis of those tests above, such as finding the mean score, normality test, homogeneity test and hypothesis test, the researcher used SPSS 20.0 for Windows. But also, the hypotesis test needs to table to prove that the data is signifant if the score can pass 80 point.

¹⁰ Duncan Cramer, *Advanced Quantitative Data Analysis*. (Philadelphia: Open University Press, 2003), 149.

¹¹ Zivorad M Milenovic, "Application of Mann-Whitney U in Research of Professional Training of Primary School Teacher". *Metodicki obzori: Original Scientific Article* vol. 6(1), 2010, 73

Table 3.4.1 Significant Score

Score	Predicate
91-100	A+
86-90	A
81-85	A-
76-80	B+

5. Data Interpretation

There are several steps before the researcher interpretation the data after the researcher got the data they are, Finding Mean Score, Normality Test, Homogeneity Test. Those steps are the way to interpret the data. The data interpretation that researcher used was Mann Whitney U Test. Mann Whitney U Test used because of the researcher already through the several steps that mention on it. The Mann Whitney U Test was used because after the researcher check the data from those steps, the match criteria to interpret the data was Mann Whitney U Test. Then the researcher interprets the data using the analysis of Mann Whitney U Test.