

## CHAPTER III

### METHOD OF RESEARCH

This chapter explains about research design, population, sampling technique, sample, research instrument, validity and reliability testing, normality testing, data collecting method and data analysis.

#### A. Research Design

In this research, the researcher would like to use quantitative method by applying Quasi-Experimental design. According to Ary (2010; 316) stated that the design of Quasi-experimental design is similar to randomized experimental design in that they involve manipulation of an independent variable but differ in that subjects are not randomly assigned to treatment group.

**Table 3.1**  
**Quasi-Experimental Design**

Group	Pre-test	Independent	Post-test
E	Y <sub>1</sub>	X	Y <sub>2</sub>
C	Y <sub>1</sub>	-	Y <sub>2</sub>

In which,

E = experimental group

C = control group

Y<sub>1</sub> = reading comprehension before the manipulation of treatment

X = treatment using tea party technique

Y<sub>2</sub> = reading comprehension after the manipulation of treatment

In this design, the two groups were taught by using the same topic but with different strategy. The experimental group was taught by using tea party strategy, while the control group was taught by using lecturing strategy. Random assignment to treatment groups is not used in this design. The effectiveness will be known after knowing the significant differences between post-test in experimental group and post-test in control group. The researcher chose this design because schedules in this school cannot be disrupted nor classes reorganized to accommodate a research study. So, the researcher cannot take randomly assignment in both classes.

## **B. Population, Sampling Technique and Sample**

A population is defined as all members off any well-defined class of people, event, or object (Ary, 2010: 148). It means that population is all subjects of the research. The populations of this research are students of second grade at Mts Sultan Agung Jabalsari. The total numbers of eighth grade students at MTs Sultan Agung Jabalsari were 43 students and distributed into 2 class.

In this research the researcher used non-probability sampling type purposive sampling technique. In purposive sampling, also referred to as judgment sampling, sample elements judged to be typical or representative are chosen from the population (Ary et al, 2010:156). Based on the

information of English teacher in MTs Sultan Agung Jabalsari and preliminary observation when teaching training program (PPL), the researcher found that VIII A and VIII B had equal average of achievement in English in the previous examination (mid-test). The researcher took VIII A as an experimental group and VIII B as control group.

According to Ary (2010: 148) a sample is a portion of a population. It means that sample is smallest part from population. The researcher took two classes for this research. The VIII A becomes an experimental group and VIII B become a control group. In VIII A consists of 21 students, 7 male students and 14 female students and in VIII B consist of 22 students, 10 male students and 12 female students.

### **C. Research Variable**

According to Sugiyono (2007: 3) variable is everything which is in every form which is settled by the researcher to be learnt as the purpose to get the information about these, and then get the conclusion. In this research, the researcher uses two variables, they are:

#### **1. Independent Variable**

The independent variable is variable that influence dependent variable (Sugiyono :2007, 4). Independent variable usually symbolized by “X”. In this research, independent variable is the use of Tea Party strategy.

#### **2. Dependent Variable**

The dependent variable is the variable which the researcher observes and measures to determine the effect of the independent variable (Sugiyono:

2007, 4). Dependent variable usually symbolized by “Y”. Dependent Variable in this research is the score of the students’ reading comprehension.

#### **D. Research Instruments**

A test, in simple term, is method of measuring a person’s ability, knowledge of performance in a given domain (Brown, 2001: 384). Moreover, it will be used as an instrument to gather the data in this research. The test used to measure the students’ achievement in reading comprehension before and after being taught by using Tea Party strategy. The test consists of 20 items of multiple choice questions. It distributed for 2 classes. The first class is VIII A as an experimental group and consist of 21 students. The second class is VIII B as a control group and consist of 22 students. The time allocation are 80 minutes in each class. The topic of the test is recount text. There are 4 recount texts in the pre-test entitled “My First Experience to Ride Motorcycle, My Very Busy Day, Holiday in Semirang Waterfall and Being Late”, and there are 4 recount texts too in post-test entitled “My Day, A trip to the Zoo, Fever, My Busy Holiday”. Each item questions got 5 score. So, when the students answered 20 items truly, the score it would be one hundred.

#### **E. Validity and Reliability Testing**

In this research, the researcher used test as instrument to collect the data. The test should be measure the students’ comprehension in reading. Two very important concepts that researchers must understand when they

used instruments are *validity* and *reliability* (Ary, 2010:224). It means that validity and reliability are important roles in research instrument. In this part, the researcher will explain about the two-important thing above.

## **1. Validity**

Validity is defined as the extent to which scores on a test enable one to make meaningful and appropriate interpretations (Ary, 2010:224). It means that validity become standard that shows whether the instrument is valid or not. In this research, the researcher will use content validity, construct validity and face validity.

### **a. Content Validity**

Content validity refers to whether or not the content of the manifest variables (e.g. items of a test or questions of a questionnaire) is right to measure the latent concept (self-esteem, achievement, attitudes...) that we are trying to measure (Muijs, 2004: 66). It means that the reading test should right to measure the students' reading comprehension achievement. In this research, pre-test and post-test were in the form of multiple choices. The students must answer the test related to recount text. To ensure content validity in a classroom test, a teacher should prepare a "blueprint" showing the content domain covered and the relative emphasis given to each aspect of the domain (Ary et al, 2010:227). In this research, the researcher prepared a blueprint which showing the construct related with the basic competence in syllabus.

**Table 3.2**  
**Syllabus Kelas VIII Semester 2**

<b>Kompetensi Dasar</b>	<b>Materi Pokok/Materi Pembelajaran</b>
3.11 Menerapkan struktur teks dan unsur kebahasaan untuk melaksanakan fungsi sosial menyatakan dan menanyakan tindakan/kejadian yang dilakukan/ terjadi di waktu lampau, sesuai dengan konteks penggunaannya.	Teks lisan dan tulis untuk menyatakan dan menanyakan tindakan/kejadian yang dilakukan/terjadi di waktu lampau.

From the basic competence, the researcher continues to develop the dimension, variable, sub variable until create some indicators. From the indicators, the researcher should create the item of questions. So, the research instrument related with the basic competence.

b. Face Validity

Mousavi in Brown (2004:26) stated that face validity refers to which a test *looks* right, and *appears* to measure the knowledge or abilities it claims to measure, based on the subjective judgement of the examinees who take it, the administrative personnel who decide on its use and other psychometrically unsophisticated observers. In this research, the researcher used face validity by consulting with the expert as a validator. The first expert validator is English teacher in MTs Sultan Agung Jabalsari, and the second expert validator is a Lecture in English Department. After that the test has some viewpoint that makes it reliable in the face validity such as; the instructions in

each section have to be understandable for the students, the question must not be ambiguous to make students able to answer it and the time allocation.

c. Construct Validity

Construct validity is a slightly more complex issue relating to the internal structure of an instrument and the concept it is measuring (Muijs, 2004: 68). It means that every item of questions should be able to measure the students' comprehension in reading. In this instrument, the researcher asked the students to answer the multiple choice based on recount text to measure the students' comprehension in reading. The test included some specification questions to measure students' comprehension in reading recount text such as grammatical features, vocabulary, social function, generic structure and some questions related to the topic. Supported by Brown (2004:206) stated that notice that this set of questions, based on a 250 words passage, covers the comprehension of these features: main idea, expressions/idioms/phrases in content, inference, grammatical features, detail, excluding facts not written, supporting idea, vocabulary.

Moreover, to find out the validity of instrument items, the researcher conducted Pearson Product Moment Correlation. Correlation technique is one of the techniques that are mostly used by

researchers to find out the validity of instruments items (Sugiyono 2010:133). The validity score is based on the following roles:

1. If the score  $r_{hitung} > \text{score } r_{table}$  in score signification 5%, so the test items are valid.
2. If the score  $r_{hitung} < \text{score } r_{table}$  in score signification 5%, so the test items are not valid.

To find  $r_{table}$ , the researcher should know the standard deviation of the instrument with formula:

$$Df = N-2$$

In which;

Df = standard deviation

N = the number of students participating in the test,

In this research, standard deviation of the test is 8, with  $N = 10$  and  $\alpha = 5\%$ . It means that  $r_{table}$  of this test is 0,632. (see appendix 3)

After the researcher know  $r_{table}$  of the instrument, the researcher finds out the  $r_{hitung}$  by using SPSS 16. The results of validity showed in Table 3.3.

**Table 3.3**  
**Validity of Instruments Item**

No Item	$r_{hitung}$	$r_{table}$ 5% (10)	Kriteria	No Item	$r_{hitung}$	$r_{table}$ 5% (10)	Kriteria
1	0,857	0,632	Valid	11	0,955	0,632	Valid
2	0,690	0,632	Valid	12	0,729	0,632	Valid
3	0,857	0,632	Valid	13	0,651	0,632	Valid

*Continued*



*Continuation*

4	0,955	0,632	Valid	14	0,646	0,632	Valid
5	0,729	0,632	Valid	15	0,804	0,632	Valid
6	0,857	0,632	Valid	16	0,646	0,632	Valid
7	0,857	0,632	Valid	17	0,857	0,632	Valid
8	0,857	0,632	Valid	18	0,801	0,632	Valid
9	0,668	0,632	Valid	19	0,750	0,632	Valid
10	0,729	0,632	Valid	20	0,723	0,632	Valid

The result shows that  $r_{hitung}$  from all items questions higher than  $r_{table}$ . It means that the items questions are valid. So, the test can be used as research instrument.

## 2. Reliability

Reliability testing is the next way to measure the test or instrument. The reliability of a measuring instrument is the degree of consistency with which it measures whatever it is measuring (Ary, 2010:236). It means that if the students are given the same test on two different occasions, the test should yield similar results. Whenever the test was administered, it would show the similar or even the same result. To measure the reliability of the test, researcher used SPSS 16 with Cronbach's Alpha. The reliability is based on the following roles:

1. If  $\alpha$  score  $>$   $r_{table}$  in score signification 5% so, the test items are reliable.
2. If  $\alpha$  score  $<$   $r_{table}$  in score signification 5% so, the test items are not reliable

The result of Cronbach's Alpha SPSS 16 showed in table 3.4.

**Table 3.4**  
**Result of Cronbach's Alpha**

Cronbach's Alpha	N of Items
.966	20

The result show that the score of Cronbach's Alpha is 0,966. It means that Cronbach's Alpha higher than  $r_{table}$ . So, the test is reliable and it can be as research instrument.

#### **F. Data Collecting Method**

Data has very important role in a research, because without data, it is impossible to get result of the research. To obtain the data, the research has to use instruments of collecting data. In this study the researcher uses test as data collecting method and also the instruments. The researcher administered both pre-test and post-test based on the planning as follow:

##### 1. Pre-test

Pre-test was given before giving treatment in experimental research study or before teaching by using Tea Part strategy. The pre-test had done to get the reading comprehension score of the students before doing treatment. The pre-test was conducted on January 3<sup>rd</sup>, 2018 in class control followed by 22 students. The pre-test in experimental group was conducted on January 4<sup>th</sup>, 2018 followed by 21 students.

## 2. Post-test

Post-test was given after doing Tea Party strategy as a treatment. The post-test was conducted on January 13<sup>th</sup>, 2018 in class control followed by 22 students. The post-test in experimental group was conducted on January 15<sup>th</sup>, 2018 followed by 21 students. The questions of post-test are similar from pre-test and consists 20 items, in the form of multiples choice items. The test consists of four texts about recount texts entitled “My day, A trip to the zoo, Got a fever and My busy holiday”.

## G. Treatment

After giving a pre-test, the researcher gave treatments to the students. The first treatment was given on January 8<sup>th</sup>, 2018 and the second treatment on January 11<sup>th</sup>, 2018. The researcher applied the strategy or treatment using Tea Party strategy in lesson plan (see appendix 6). The treatment conducted in two times, because material about recount text has done explained by the English teacher in first semester. So, the researcher didn't need more meeting to cover the material.

## H. Normality and Homogeneity

### 1. Normality testing

The aims of normality testing is to know the data distributed normally. Some of statistic technique especially parametric statistic requires that the data has to follow normal distribution form (Sugiyono, 2007:95). The normality test which is used by the researcher is based on the kind of experiment which is done. If the test in form of interval data

and ratio data, the analysis used parametric statistics analysis method (Sugiyono, 2007:23). In this research, the data is interval because the research aim is to know the students' achievement. So, the researcher used parametric statistic and will be analyze the data using SPSS 16 especially Shapiro-Wilk. According to Garson (2012:21) stated that Shapiro-Wilk's is recommended for small and medium samples up to  $n = 2000$  and for large samples, the Kolmogorove-Smirnov test is recommended by SAS and others. In this research, total of the samples are 43 students, and it can be classified as small samples. The considerations of testing normality are:

- a. The data has normal distribution, if the significance  $> 0,05$
- b. The data doesn't have normal distribution, if the significance  $< 0,05$

The result of Normality testing showed in table 3.5.

**Table 3.5**  
**Result of Normality Testing**

	Shapiro-Wilk		
	Statistic	Df	Sig.
Kelas A	.936	21	.179
Kelas B	.924	21	.106

The result show that the sig of Shapiro-Wilk is 0,179. It means that the result is higher than 0,05 and it prove that the test was normal distribution.

## 2. Homogeneity testing

Homogeneity is a measurement which can be used to determine data variation (Arikunto, 2010:98). In this research, the researcher uses the Levene. The data will be analyzed by using SPSS 16 program to know whether the data homogen or not. According to Prasetyowati (2016:94) stated that the considerations of testing homogeneity are:

- a. If the result is higher than significant level 0,05, the test is homogeneous.
- b. If the result is lower than 0,05, the data is not homogeneous.

The result of Homogeneity Testing showed in table 3.6.

**Table 3.6**  
**Result of Homogeneity Testing**

Levene Statistic	df1	df2	Sig.
3.708	1	41	.061

The result showed that the score of Levene Statistic is 0,061. It means that the result is higher than 0,05 and it prove that the test was homogeneous.

### I. Data Analysis

In this research, the researcher used SPSS to analyze the data. According to Qomari (2009: 8) stated that SPSS (*Statistical Programs for*

*Social Sciencies*) helps some researchers to analyze the data in their research such as descriptive statistic, correlative and comparative. To know the significant different from experimental group and control group, the researcher should compare the mean both of classes. There are 5 techniques to compare means using SPSS 16, they are: Mean, One Sample t-test, Independent Sample t-test, Paired sample t-test and One-way ANOVA (Prasetyowati, 2016:77). In this research, the researcher used Independent Sample t-test, because the researcher will be compare means of two independent sample. This technique is used to find the significant difference of students' achievement both of classes. The first data is students' score taught by using tea party strategy and the second data is students' score taught by using lecturing strategy.