CHAPTER III

RESEARCH METHOD

This chapter discuss about research design, population and sample, research variable, research instrument, validity and reliability testing, normality and homogenity testing, data collecting method, and data analysis.

A. Research Design

This research uses quantitative approach with quasi experimental design. Quasi-Experimental research is one of experimental research design which suggests casual relationship in result finding. This type is one of quantitative researchthat is different from other type of research. The researcher controls or manipulates one or more independent variables then, measure how the treatment effects each group (Lodico et al., 2006:204).

Furthermore, confirming why using quasi experimental design because the researcher could not randomly put the subject, and the classes that used by the researcher was already formed. As Ary *et al* (2010:26) stated, if the researcher could not randomly assign subjects because it had already assembled groups such as classes, it was called as quasi-experimental design.

In this research, the researcher uses design 9 of experimental research design; Nonrandomized Control Group, pretest-posttest design (Aryet al., 2010:316). Experimental Nonrandomized Control Group, pretest-posttest designis conducted with two groups; experimental group and control group,

which both group is given pretest and posttest. Lodico et al. (2006:183) state the control group is a separate group that receives no treatment or a different treatment, while the experimental group is the group which will receive a treatment. The design as follows:

Table 3.1 Nonrandomized Control Group, Pretest-Posttest Design (Ary et al., 2010: 316)

Group	Pretest	Treatment	Posttest
A	Y_1	X	Y_2
B	Y_1	-	Y_2

A : Experimental group

B : Control group

Y_1 : Pretest in experimental group before treatment (VII A)

Y_1 : Pretest in control group (VII B)

Y_2 : Posttest in experimental group after treatment (VII A)

Y_2 : Posttest in control group (VII B)

X : Treatment in experimental group (VII A)

Treatment Implementation

Treatmentgives after administering pre-test and before administering post-test. During the treatment, the researcher wants to apply GIST strategy on teaching reading. Treatment conducted by the researcher estimate for two meeting if it doesn't enough it will repeat in three meetings. The treatment conducted on 27th March 2019 in the class of VII A class at MTs Aswaja Tunggangri

The first treatment conducted in first meeting. At this first meeting, the researcher does the treatment by using GIST strategy in teaching

reading. Before beginning the GIST strategy, the researcher as the teacher explain the definition, communicative purpose, generic structures, language features, and the example of descriptive text at seventh grade of MTs Aswaja Tunggangri. Then the researchers introduce and explain the GIST strategy that this strategy to comprehend a reading text. Then, the researcher gives the example of how to use GIST strategy in the class.

The next are using GIST strategy to comprehend reading text. Firstly, the researcher writes down the title/ theme/ topic in the board. Then, the researcher asked the students' to make a prediction what the material to be in that meeting (brain storming material about: people, animal or historical building). Before the students' begins to read, the researcher will be make sure that all the words in the title/ theme/ topic were known by the students'. Then, the researcher asked the students' to open the English module book page 28 about Describing People and then asked them to read the text silently. After the students' had done, there were a discussion of what just been read and prediction of the next part of the text. Before the students' make a list of the information from the text, the researcher would be make sure that the main idea of the text were known by the students'. To know the important word or sentences of the text that students must write in the summary paper or note, the teacher will explain before. The teacher instructs the student to find the main idea in every paragraph. To find the main idea in paragraph the students have to know the difference between the

main idea and supporting sentences. The teachers explain to student that the main idea usually in two place top or bottom in the paragraph.

After that, the researcher asked the students' to close their books and list as much information as they can remember about the dialogue in the piece of paper. After they had done to write down the task, the researcher asked for a volunteer or pointed the student to write down the results on the board. Then, the researcher asked the class to tell all of the information they remembered from the dialogue based on the note on the board. When the students make a mistake in presenting an idea, the researcher restated the idea back to them in correct clarification.

The next, the researcher asked the students' to reread the dialogue silently to verify that all information in the board is accurate and related to the dialogue or not. Then, the researcher asked the students' to answer the questions on the English module book that related with the dialogue to check their understanding.

After they finished the task, the researcher asked the students' to submit their paper to the teacher. After the activity is finished, the researcher closed the meeting by gave the reflection activity and gave a feedback from the material that taught.

Last, the teacher will repeat this treatment till the researcher thinks the students get the purpose of this study. The teacher will repeat in the next meeting when it needed until the students ready for post-test.

- : Group without treatment or using conventional strategy (VII B)

Based on the table above, the researcher took two classes. The first is A group as experimental group and the second is B group as control group. Before giving treatment, the researcher gives pretest to both of classes. Then the researcher teaches the students in experimental class by using GIST Strategy and in controlled class without using GIST Strategy. After three meeting, the researcher gives the posttest to the both classes. It means that the researcher want to know if there are any significance differences in teaching reading by using GIST Strategy and without using GIST Strategy.

B. Population and Sample

This section discusses the population of the study, sample, and sampling that are used by the researcher.

1. Population

The population is defined as all members of any well-defined class of people, events, or subject (Ary, 2002: 162-163). It means that the population is a group of subjects, it can be person or things, to whom or which the findings of the research are to be applied. The population of this study is the seventh grade of MTs Aswaja Tunggangri in academic year of 2018/2019 which consist of 72 students. Those are divided into three classroom. Class A, B, and C. It can be seen in the table 3.2 below:

Table 3.2 Population of Research

No	Class	Gender	
		Male	Female
1	VII A	11	14
2	VII B	15	7
3	VII C	15	10

	Total Students	72 students

2. Sample and Sampling

Selecting sample is very important step in conducting a research. According to Ary (2010:149) the small group that is observed is called a sample and the larger groupabout which the generalization is made is called a population. A sample is a portion ofa population. It means that a good sample must represent the entire populations as goodas possible, so that the generalization of the sample as true as population.

The researcher used purposive sampling technique to take sample. Purposive sampling is based on the judgement of the researcher as to who will provide the best information to success for the objectives study. According to Teddlie (2007:80), purposive sampling techniques that have also been referred to as nonprobability sampling techniques, involved selecting certain units or cases "based on a specific purpose rather than randomly.

In this study, the researcher takes two classes from 3 classes. The sample class is class VII A that consist of 25 students and VII B that consist of 22 students which VII A as experimental class and VII B as control class. The researcher used this purposive sampling due to suggestion from the English teacher that both classes have a same level of knowledge in learning English.

C. Research Variable

A variable is a characteristic or attribute of an individual or an organization that writers can measure or observe and varies among individuals or organizations studied (Creswell, 2012:112). There are two variables in this research, there are: independent variable and dependent variable.

1. Independent Variable

According to Lodico et al. (2006:205) the independent variable refers to how participants are treated. Independent variable is variable that has influence or the cause of change or make the existence of dependent variable. In education, the independent variable might be curriculum materials, instructional styles, or specialized trainings, to name a few. So the independent variable in this research is GIST Strategy.

2. Dependent Variable

Creswell (1994: 129) state that dependent variable is the response or the criterion variable presumed to be "caused" or influenced by independent variable. In this research, independent variable is the students' reading comprehension ability which is influenced or became effect of the GIST Strategy.

D. Research Instrument

According to Arikunto (2006: 126) Instrument is the device the researcher uses to collect data is called instrument. The instrument in this

study is test. The writer uses two kinds of test pre-test and post-test. The first is pre-test, which is given before students are taught by using GIST. The second is post-test, which is given after students are taught by using GIST. Before the writer conducts pre-test and post-test, researcher develops the instrument. Here are the several steps:

a. Review Syllabus and material

The first step in developing the instrument is reviewing literature which consists of syllabus and instructional material. The purpose of reviewing literature is to get data on the materials used for pre-test and post-test, so that the instrument of test would test what should be tested, hence the instrument meet the criteria of content validity.

In addition, based on Table 3.2 the researcher review syllabus to know the materials and basic competence which should be mastered by the students of the seventh grader of MTs Aswaja Tunggangri. Moreover, the syllabus also tells some information, such time allotment, classroom activities, basic competence, material, source study and etc. The result of reviewing literature is used to write draft of test. The reading test conducted by the researcher his-self and consulted to English Teacher in Mts Aswaja Tunggangri and the advisor of this thesis. The material of the test is taken from English Module Book at Mts Aswaja Tunggangri, English Book and other resource which related to the descriptive text of seventh grade.

b. Drafting

The next step is drafting. In process of drafting, researcher starts this step by determining kinds of reading test that would be used and suitable with the students in seventh grade.

c. Validity

To strengthen this instrument, the writer needs to test its validity including content validity. In design quantitative, validity is important point because the main component to collect data is test. If test do not have validity it's also researcher do not have valid data. To do validity, the writer is going to meet expert validity, to advisor and English Teacher. The expert validity can be seen *in Appendix 10.*

In this step, the researcher meets an expert of ELT mainly on reading learning to check the content, type of test, and level of difficulty of the draft of the research instrument the draft consist of 25 questions which is 25 questions of multiple choices. The experts that the researcher meets are experienced English Lecturer and English Teacher of MTs Aswaja Tunggangri. The draft of question can be seen *in Appendix 5 & 6.*

d. Instrument revision

The Experts that the researcher meet are English Lecture Advisor and English Teacher of MTs Aswaja Tunggangri. They will give advice about the instrument. There are some advices of experts. The first from the advisor, she said the instrument revision is on

matching the questions with indicators of syllabus. From the teacher the instrument revision is: please give a clearly instruction. The result of indicator can be seen *in Appendix 4.*

e. Try Out

Beside the researcher checks the validity of the test. The researcher also conducts a try-out. The purpose of try out is to know the reliability of instrument. The researcher does tryout of the test to the same students of another class. The researcher will choose VII-C to tryout the instruments. The result of try-out test can be seen *in Appendix 1.*

f. Final Drafting

The last step is final drafting. It is rewrite instrument after researcher checked the reliability of the test. The final drafting is used by the researcher as the instrument to conduct pre-test and post-test. The reability questions check can be seen *in Appendix 12.*

E. Validity and Reliability Testing

There were two important aspects in determining the quality of established quantitative measures. Those were validity and reliability. In this research, it was needed to measure the test used to measure students' reading comprehension.

1. Validity

Validity is the degree to which a test measure what it is supposed to measure. Ary, *et al* (2010: 224 – 225) states that validity

is the most important consideration in developing and evaluating measuring instruments. It is the extent to which inferences made from assessment result are appropriate, meaningful, and useful in terms of the purpose of the assessment.

These are four types of validity; 1) Content validity, 2) Criterion related validity, 3) Construct validity, 4) Face validity. In this researcher, to measure whether the test has a good validity, the researcher analyzed the test from content validity and construct validity.

a) Content Validity

Content validity is the degree to which a test measures an intended content area(Gay, 1992: 156). A test is said to have content validity if it consists sample of language skills and structures being tested. So, content validity is the agreement between curriculum objectives and objectives being assessed.

Content validity is the test that if has a good content is looked at from the content of test. It means a test has valid if the content oftest is a representative among lesson given. The researcher will combine both between the content of test and the material of test toknow the test is valid or not. The material of test is taken from syllabus and the test based on course objective on the syllabus.

Table 3.3 Main Competence and Basic Competence in Curriculum 2013

Core Competence	Basic Competence
3. Memahami dan menerapkan pengetahuan faktual, konseptual, dan prosedural berdasarkan rasa ingin tahunya tentang ilmu pengetahuan, teknologi, seni, budaya terkait fenomena dan kejadian tampak mata.	3.10. Menerapkan struktur teks dan unsur kebahasaan untuk melaksanakan fungsi sosial teks deskriptif dengan menyatakan dan menanyakan tentang deskripsi orang, binatang, dan bangunan bersejarah, secara pendek dan sederhana, sesuai dengan konteks penggunaan nya .
4. Mengolah, menyaji, menalar dalam ranah konkret dan ranah abstrak terkait dengan pengembangan dari yang dipelajari di sekolah secara mandiri, dan mampu menggunakan metode sesuai kaidah keilmuan.	4.11 Menangkap makna teks deskriptif sederhana secara tertulis, tentang orang, hewan dan bangunan bersejarah.

Table 3.4 Content Validity of Test

Competence Indicators	Test Items	
	Pre-test	Post-tost
1. Students are able to determine the main idea.	Multiple choices	Multiple choices
2. Students are able to determine the topic of the text		
3. Students are able to determine the purpose of the text		
4. Students are able to determine the specific information of the text		

b) Construct Validity

A test was said to have construct validity if it can be demonstrated that was measure just the ability which was supposed to measure. Gay (1992:157) said that construct validity was degree to which a test measured an intended hypothetical construct. Construct validity cannot be seen but the effect can be observed. It means that construct validity was used to explain students' behavior. In this research, the instrument has been constructed based on vocabulary mastery theory. After the instrument was constructed, the test was tried out and then the researcher used SPSS 16.0 of Pearson Correlation to count the validity test per items.

The process calculation of validity testing by using SPSS16.0 version for windows found that from the 25 questions of multiple choices which had been tried out, there were only 20 questions valid.

c) Face Validity

A test is said to have face validity if it looks as if it measures what it is supposed to measure (Idawati, 2014: 29). Meanwhile, according to Brown (2004: 26), a test called having face validity is a test look like, such as the look which can be seen and measured by senses.By those theories, it could be

grasped whether the face validity which was found in this study was, the materials which was used to the instruments were appropriate to students' level. The researcher analyzed the students' level by consulting to the expert. The experts here were the advisor, the English teacher, and the materials books of seventh grade level. Then, the items which were prepared were matched to junior high school level, not for neither upper nor lower level.

In this test, there are some aspects that are consideration from this test to make a good test based on the validity.

1) The instruction must be clear for the students

2) The topic must be familiar with the students

3) Time allocation must be given clearly.

2. Reliability

According to Ary et al. (2010:236-237), the reliability of ameasuring instrument is the degree of consistency with which it measures whatever it is measuring. Reliability was necessary characteristic of any good test for it to be valid at all. Reliability was an indicator of consistency, that was an indicator of how stable a test score or data is across applications or time. A measure should produce similar or the same results consistently if it measures the same "thing." A measure can be reliable without being valid. A measure cannot be valid without being reliable (Hale *et al*, 2014:45). It mean

the test could be valid if it was reliable as well.

The researcher conducts tryout first both pretest and posttest to the students in the same grade before give test and treatment the sample to find out the reliability test. Tryout conducted on 16th March 2019 in the VII C.

To know reliability of test the researcher measures the score used Cronbach's Alpha formula by using SPSS 16.0. The procedure is input the answer between correct or incorrect. One correct answer in given point 1, and one incorrect answer is given point 0. Then, the value of reliability test for tryout pretest is 0.858. Then, the value of reliability test for tryout posttest is 0.848. Table below is the result of the analysis score tryout pretest and posttest.

Table3.5 The Value of Reliability Pre Test

Reliability Statistics

Cronbach's Alpha	N of Items
.858	20

3.6 The Value of Reliability Post Test

Reliability Statistics

Cronbach's Alpha	N of Items
.848	20

It means that the pretest and posttest instrument have high reliability of test. To know both pretest and posttest have high

reliabilityof test, see the table of reliability test classification below:

Table 3.7 Cronbach's Alpha Interpretation

Cronbach`s Alpha	Interpretation
0,00 – 0,20	Less Reliable
0,21 – 0,40	Rather Reliable
0,41– 0,60	Quite Reliable
0,61 – 0,80	Reliable
0,81 – 1,00	Very Reliable

Based on the table above, the instrument test of both pretest and posttest is reliable.

F. Normality and Homogeneity Testing

1. Normality Testing

Normality test are used to determine whether a data set is well modeled by a normal distribution or not. The aim is to know the data distribution is normally. To measure the normality, the researcher used SPSS 16.0 One-Sample Kolmogorov-Smirnov Test. The ways to know the data is normal or not are as follows:

a) Ho: If the significance value > 0.05, the data has normal distribution.

b) Ha: If the significance value < 0.05, the data hasn't normal distribution.

Here, The result of normality testing in experimental class can be seen below:

Table 3.8 Table of Normality Testing in Experimental Class

Experiment
One-Sample Kolmogorov-Smirnov Test

		Pretest	Posttest
N		25	25
Normal Parameters[a]	Mean	63.20	76.60
	Std. Deviation	12.656	9.760
Most Extreme Differences	Absolute	.144	.165
	Positive	.092	.115
	Negative	-.144	-.165
Kolmogorov-Smirnov Z		.722	.826
Asymp. Sig. (2-tailed)		.674	.502

a. Test distribution is Normal.
a

Based on the table above, it shows that the significance values of pre-test and post-test in experimental class are 0.674 and 0.502. The significance values of both pre-test and post-test are bigger than 0.05. It means that the data of experimental class has normal distribution. Then, the result of normality testing in control class can be seen below:

Table 3.9 Table of Normality Testing in Control Class

One-Sample Kolmogorov-Smirnov Test

		Pretest	Posttest
N		22	22
Normal Parameters[a]	Mean	58.18	64.32
	Std. Deviation	13.233	11.265
Most Extreme Differences	Absolute	.132	.160
	Positive	.095	.160
	Negative	-.132	-.147
Kolmogorov-Smirnov Z		.620	.748
Asymp. Sig. (2-tailed)		.836	.630

a. Test distribution is Normal.

Based on the table above, it shows that the significance values of pretest and post-test in control class are 0.836 and 0.630. The significance values of both pre-test and post-test are bigger than 0.05. It can be concluded that the data of experimental class has normal distribution.

2. Homogenity Testing

Homogeneity testing is used to determine data variation, whether the data has a homogeneous variance or not. The researcher used Homogeneity of Variances Test by using SPSS 16.0 with the significant value is 0.05.

a) If the significance value > 0.05, then the data distribution is homogeneous

b) If the significance value < 0.05, then the data distribution is not homogeneous

The result of Homogeneity Testing can be seen below:

Table 3.10 Table of Homogeneity Testing

Test of Homogeneity of Variances

Reading Comprehension

Levene Statistic	df1	df2	Sig.
.733	1	45	.396

Based on the table above showed that the significance value of posttest is 0.396. It can be concluded that significance value that is 0.396 is bigger than 0.050 and the data distribution is homogeneous.

G. Data Collecting Method

Data collection method is a systematical and standard procedure used to collect data (Tanzeh 2011:57). In this research, the data collecting method is administering test that consists of pre-test and post-test. The procedure of administering test was clarified as follows:

1. Pre-test

At the first meeting, the writer gave a pre-test to the students. There some questions. The questions are in the form of multiple choices and the other questions in the form of short answer. It is conducted to know the scores of the students reading before being taught the treatment.

2. Post-test

The post-test is given to the students after conducting the treatment of using GIST strategy toward students' reading comprehension. Similar to pre-test, the writer asks students to answer the twenty questions in the form of multiple choices and short answer.

To score the objective tests the writer treats them without any difference. Means, there was only one correct answer for each items. The scoring guide is as the formula follow:

Table 3.11 The formula of score result

$$Score = \frac{number\ of\ correct\ items}{The\ number\ of\ student} \times 100$$

This test uses to measure the students ability in reading comprehension before and after they taught by GIST in MTs Aswaja Tunggangri.

H. Data Analysis

Data analysis is used by researcher to analyze the collected data. The data is taken from students' score in pretest and posttest. The score gather from both experimental class and controlled class. The researcher want to know the significant effectiveness of using GIST Strategy to students' reading comprehensionby using statistic calculation of t-testformula with degree of 5% significance by using SPSS 16 for windows.

If the result of t-table was bigger than t-count at the level of significance 0.05, the null hypothesis could not be rejected, indicating that GIST Strategy was not effective toward students' reading comprehension.

By contrast, if t-count was bigger than t-table at the level of significant 0.05, the null hypothesis could be rejected indicating that GIST Strategy was effective on students' reading comprehension.