CHAPTER III

RESEARCH METHOD

This chapter presents research design, population and sample of the study, research instrument data, validity and reliability testing, normality and homogeneity testing, data collecting method, and data analysis.

A. Research Design

Activity of problem-solving which relies on several specific questions addressed by data collection from tests a hypothesis or explains phenomena as the purpose is called research. To find out new information, the researcher should do the research carefully and accurately on investigation of an event, problem, and phenomenon about scientific. The researcher must follow some research procedures in conducting this research. It means that a research needs to plan some steps he or she takes appropriately. Consequently, the design of the research should be suitable for the research condition. If the researcher wants their research will be successful, they must follow the research design which they built.

There are two kinds of research approaches called quantitative and qualitative approach. In quantitative approach the data in the form of statistical and numerical, while the qualitative approach the data in the form of verbal data. This research used quantitative approach, especially in experimental research in gathering and analyzing the data necessary for answering the questions.

The research conducted pre-experimental as the research design because it provides little or no control of extraneous variables. In MTs Darussalam Kademangan the school principal might not permit a researcher to draw a random sample of students for a research but would permit use of certain classes. The researcher used one group pretest-posttest design, because the researcher used one group and used pre-test and post-test. This research design consists of pre-test, treatment and post-test. Ary (2010: 303) stated that "the one group pre-test post-test design usually involves three steps: (1) administering a pre-test measuring the dependent variable; (2) applying the experimental treatment X to the subjects; (3) administering a post-test, again measuring the dependent variable."

Here is the illustration of the research design in this study:

Table 3.1 The diagram of one group, pretest-posttest design:

Group (Class)	Pretest	Treatment	Posttest
VII A	Y_1	X	Y_2

VII A Y_1 : students' reading scores on pre-test

X   : Guided Reading strategy

VII A Y_2 : students' reading scores on post-test

In this research, the procedures of experimental research that used one group pretest-posttest design are described:

1. Administering a pre-test to measure reading comprehension of seventh grade student class VII A at MTs Darussalam Kademangan before being taught by using Guided Reading strategy.

2. Applying the treatment teaching reading by Guided Reading strategy to the student class VII A at MTs Darussalam Kademangan.

3. Administering a post-test to measure reading comprehension of seventh grade student class VII A at MTs Darussalam Kademangan after being taught by using Guided Reading strategy.

In this case, the researcher wanted to know the effectiveness of using Guided Reading strategy toward students' achievement in reading comprehension by conducting a specific treatment. The effectiveness would be known after knowing the significant differences scores on reading comprehension between the students' achievement before and after taught by using Guided Reading strategy.

B. Research Variable

Variable is one of key terms in any research. According to Ary (2010 : 37) "variable is a construct or a characteristic that can take different values or scores." Variable can be defined as characteristics of subjects of a research which tend to be different from one individual to another or from time to time. The examples of variables are students' age, students' achievement, female teachers' weight, and many others. Variable can be classified into two classifications they are independent variable and dependent variable.

1. Independent variable

According to Ary (2010 : 37) "independent variable are antecedent to dependent variables." Independent variable is the one affecting another variable. Method of teaching, education background, students' English proficiency, parenting system are the examples of independent variable. In

this research, the independent variable is using Guided Reading strategy on teaching reading.

2. Dependent variable

According to Creswell (2012 : 115) "dependent variable is an attribute or characteristic that is dependent on or influenced by the independent variable". It is the outcome, effect, criterion, or consequence variables. Students' achievement, students' behavior, students' perception are the examples of dependent variable. In this research, the dependent variable is the score of the students' reading comprehension.

C. Description of Treatment

Treatment was given after administering pre-test and before administering post-test. During the treatment, the researcher applied Guided Reading strategy on teaching reading. Treatment was conducted by the researcher for two meetings. The treatment was conducted on 17th April 2018 and 20th April 2018 in the class of VII A class at MTs Darussalam Kademangan.

For the first treatment was conducted on 17th April 2018. In the first treatment the researcher did treatment by using Guided Reading strategy in teaching reading. Before beginning the Guided Reading strategy, the researcher as the teacher explained the definition, communicative purpose, generic structures, language features, and the example of descriptive text in the English module book of MTs Darussalam Kademangan. The researcher also explained the steps of Guided Reading strategy in teaching reading. Then, the researcher gave the example of how to use Guided Reading strategy in the class.

The next steps were using Guided Reading strategy in teaching reading. Firstly, the researcher wrote 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. Before the students' begins to read, the researcher would 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 dialogue silently. After the students' had done, there were a discussion of what just been read and prediction of the next part of the dialogue. Before the students' make a list of the information from the dialogue, the researcher would be make sure that the main idea of the dialogue were known by the students'.

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 submitted 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.

At the second treatment, it was conducted on 20th April 2018. In the second treatment the researcher did treatment by using Guided Reading strategy in teaching reading. Before the students' beginning to read the text, the researcher remembering the students' about the definition, communicative purpose, generic structures, language features, and the example of descriptive text from the last meeting. Then, the researcher taught by using Guided Reading strategy in teaching reading. Firstly, the researcher wrote 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.

Before the students' begins to read, the researcher would be make sure that all the words in the title/ theme/ topic are known by the students'. After that, the researcher asked the students' to open the English module book page 30 about "Describing Animals" and then the researcher pointed some students to read paragraph by paragraph from the text loudly. After the students' had done, there were a discussion of what just been read every paragraph and prediction of the next part of the text. Before the students' read the next paragraph of the text, the researcher would be make sure that the main idea of the dialogue were known by the students'.

After all the paragraphs were done to read and all the students' understood the text, the researcher asked the students' to close their books and list as much information as they can remember about the text 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 text 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 text silently to verify that all information in the board is accurate and related to the text 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 submitted 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.

D. The Population, Sample and Sampling of the Research

1. Population

   According to Ary (2010 : 148) "population is defined as all members of any well-defined class of people, events, or objects." Cresswell (2012: 142) stated that "population is a group of individuals who have same characteristic." Based on the description above, the researcher got conclusion that population is the large group which the researcher wants to generalize the data of the research.

The population of this research was students of seventh grade of MTs Darussalam Kademangan in academic year 2017/2018. The total population were 134 students which divided into four classes. They are VII A consist of 40 students, VII B consist of 40 students, VII C consist of 36 students, and VII D consist of 18 students. But, the researcher conducted in one class, that is class VII A.

2. Sample

According to Ary (2010 : 148) "sample is a portion of population." Cresswell (2012: 142) stated that "sample is a subgroup of the target population that the researcher plans to study for generalizing about the target population." Based on the description above, the conclusion is that sample is one of the representative of the population with certain technique. In this research the writer took two classes from the population as the sample; they were experimental and control group.

In this occasion, the researcher used one class as sample, that is class VII A. Class VII A consisted of 40 students, all of them are female students. So, the total number of sample was 40 students.

3. Sampling Technique

Sampling is the way to take sample from group of population. In this research, the researcher used purposive sampling to obtain the sample. The researcher would use purposive sampling when the school principal might not permit a researcher to draw a random sample of students for a research but would permit use of certain classes. According to Ary (2010 : 648)

"purposive sampling is a nonprobability sampling technique in which subjects judged to be representative of the population are include in the sample." The sample is based on some characteristics and the purpose of this research. The researcher used purposive sampling because the researcher found some characteristics of the samples. The students have homogeneity in their English ability than other class and the English teacher gave advice to the researcher to choose VII A to be a sample in this research.

E. Research Instrument

In order to get some data that were needed to support this research, the researcher applied the instrument by the test. Instrument is a tool to collect a data which is needed in a research. According to Ary (2010: 201) "test is a set of stimuli presented to an individual in order to elicit responses on the basis of which a numerical score can be assigned." In this research, the researcher used achievement test to measure the students' achievement in reading comprehension before and after they taught by using Guided Reading strategy in MTs Darussalam Kademangan because Ary (2010: 201) stated that achievement test is used to measure someone achievement after learn something. So, the researcher used reading test in this research.

The researcher gave test of reading comprehension test. The test was used to measure the students' achievement on reading comprehension. The reading test conducted by the reasearcher her-self and consulted to English teacher in MTs

Darussalam Kademangan and the advisor of her thesis. The material of the test is taken from English module book at MTs Darussalam Kademangan and English book which related to the descriptive text of seventh grade.

There were two kinds of reading test as the instrument in this research. The data of this research were obtained from the scores of the students' pretest and post-test. The pre-test was given before the students were taught by using Guided Reading strategy as a strategy and post-test was given after the students were taught by using Guided Reading strategy as a strategy. The researcher gave the test about descriptive text, the test consist of 30 multiple choice test based on the text. Every items has four choices, there were A, B, C, and D. The time location was about 60 minutes.

To score the students' reading test, the researcher used the formula to calculate the score of each student's work as follows:

$$Score = \frac{Number\ of\ correct\ items}{30} \times 100 =$$

1. Try Out

The reading test should be valid, stable and consistent before conducting pre-test and post-test. Before the researcher conducting pre-test and post-test, the researcher tried-out the items of reading test to measure the validity and reliability. So, the researcher will know the test is good instrument or not, valid or not, and reliable or not. Try-out was administrated in another class which was not

involved during the research process. The try-out of this instrument was conducted at class VII C of MTs Darussalam Kademangan on 10th April 2018. The participant consist of 10 students for trying out item questions for pre-test and 10 students for trying out item questions for post-test. The researcher gave the test about descriptive text, the test consist of 30 multiple choice test based on the text. Every items has four choices, there were A, B, C, and D. The time location was about 60 minutes.

The description of validity and reliability in this research as follows:

a. Validity

Every test, whether it is a short, informal classroom test or a public examination should be as valid as the test construction can make it. According to Ary (2010 : 225), "the validity of a test is the extent to which an instrument measured what it claimed to measure." There are three kinds of validity that consist of content validity, construct validity, and face validity.

To know the validity, the researcher used content validity, construct validity and face validity. It was described below:

1) Content validity

According to Lodico (2006: 93) "content validity is composed of two items of validity, they are sampling validity and item validity." Both of them involve having experts examine items that check the instrument. Content validity is a kind of validity that depends on careful analysis of the language being tested and of the particular test. A test is valid if its contents constituted a representative sample of the language skill, structures, etc being tested.

Content validity is attained when there is a close match between the content of the assessment measure can be said to have content validity.

The content validity based on the curriculum that has been applied. The content of the test is used descriptive text. In this test the researcher asked students to answer the questions consisting of 30 multiple choices. The researcher made this test based on the course objectives in the syllabus of seventh grade on 2nd semester at MTs Darussalam Kademangan. Therefore, this test is valid in term of content validity. The core competence and basic competence in K13 curriculum and also content validity of pre-test and post-test describes bellow:

Table 3.2 Core Competence and Basic Competence in K13 Curriculum

Core Competence	Basic Competence
4. Mengolah, menalar, dan menyaji dalam ranah konkret dan ranah abstrak terkait dengan pengembangan dari yang dipelajarinya di sekolah secara mandiri, dan mampu menggunakan metoda sesuai kaidah keilmuan	4. 7. 1 Menangkap makna secara kontekstual terkait fungsi sosial, struktur teks, dan unsur kebahasaan teks deskriptif lisan dan tulis, sangat pendek dan sederhana, terkait orang, binatang, dan benda. 4. 7. 2 Merespon makna dan langkah retorika secara akurat, lancar, dan berterima dalam esai sangat sederhana yang berkaitan dengan lingkungan terdekat dalam teks desktriptif.

Table 3.3 Content validity

No.	Indicators	Test Item	
		Pre-test	**Post-test**
1.	Finding topic, main idea, purpose from the text	5, 10, 14, 21	1, 4, 11, 17, 20
2.	Finding specific information from the text	1, 3 , 6, 7, 9, 11, 12, 15, 18, 20, 22, 23, 24, 25, 26, 27, 28	2, 5, 7, 8, 9, 10, 12, 13, 14, 15, 16, 18, 22, 24, 25, 27, 28, 29
3.	Inferring the meaning of the text	4	19
4.	Finding synonyms and antonyms based on the text	8, 16, 29	6, 23, 26
5.	Finding the conclusion based on the text	2, 13, 17, 19, 30	3, 21, 30
Total		30	30

2) Construct validity

The construct validity is measurement of the test or any instrument that will be used to conduct the research. In this research, researcher used multiple choice to measure the students' achievement in reading comprehension. So, in the test, the researcher asked the students' to answer the multiple choice based on descriptive text to measure the students' achievement in reading comprehension and this fulfill the construct of reading test and therefore valid in term of construct validity.

3) Face validity

A test is said to have validity if it looks as if it measure what is supposed to measure. In this test the researcher give the test to measure reading comprehension especially in descriptive text, so the expert check the validity of the test. Here, the researcher used face validity in administering reading test based the form of multiple choice tests. The test has been validated by the researcher's advisor.

b. Reliability

A test must first be reliable as measuring instrument. Reliability is a necessary cartelistic of any good test. Reliability is a measuring instrument is the degree of consistency with which it measures whatever it is measuring. According to Creswell (2012:159), reliability means that scores from an instrument are stable and consistent. The scores should be nearly the same when researchers administer the instrument multiple times at different times. Also, scores need to be consistent. When an individual answers certain questions one way, the individual should consistently answer closely related questions in the same way.

There are some factor affecting the reliability of a test, they are:

a. The extent of the sample of material selected for testing,

b. The administration of the test, clearly this is an important factor in deciding reliability.

The criteria of reliability instrument can be divided into 5 classes, those are very reliable, reliable, quite reliable, rather reliable, and less reliable. The criteria of reliability can be showed as follow:

Table 3.4 Criteria of reliability

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

In this case, before the researcher conduct research in the class, the researcher made a test consist of 30 questions of multiple choice, then the researcher asked to the expert to give correction about this test, such as style, lay out the test, grammar, vocabulary, and content. After that, the researcher tried it out to 10 students to know how far the reliability of the instrument. The next, the researcher analyzed the reliability by using Cronbach's Alpha. The researcher used SPSS 16.0 Version for windows to account the data collected. In the result, the researcher knows whether this test is reliability or not. The reliability is base on as follows:

1. If α score > r_{table} in score signification 5% so, the test items are reliable.

2. If α score < r_{table} in score signification 5% so, the test items are not reliable.

The result of computing can be seen below:

Table 3.5 Pre-test reliability coefficient

Reliability Statistics

Cronbach's Alpha	N of Items
.634	30

Table 3.6 Post-test reliability coefficient

Reliability Statistics

Cronbach's Alpha	N of Items
.732	30

The table 3.5 and 3.6 showed that the Cronbach''s Alpha reliability. Pre-test reliability is 0.634, while the reliability of post-test is 0,732. It means both of pre-test and post-test instruments are reliable, because the score is between 0,60 – 0.799. Based on the criteria of reliability if the instrument cronbach's alpha score is between 0,60 – 0.799 , it called reliable. So, it can be used as research instrument.

2. Pre-test

The researcher did the pre-test when she entered the class for the first meeting. It is aimed to know basic competence before they get treatment. The score of this test will be analyzed to determine of the students' score between pre-test and post-test. The researcher gave the reading test about descriptive text, the test consists of 30 multiple choice test based on the text. Every items has four

choices, there were A, B, C, and D. The time location was about 60 minutes. Pre-test at class VII A was conducted before the treatment on 13rd April 2018. There were 40 students as respondents or subjects of this research.

3. Post-test

After the treatment, post-test was given to the students'. Post-test was done in order to know the students difference achievement before and after taught by using Guided Reading strategy. The reading post-test gave to students after treatment process. The researcher gave the reading test about descriptive text, the test consists of 30 multiple choices based on the text. Every items has four choices, there were A, B, C, and D. The time location was about 60 minutes. The pre-test and post-test had a similar, but of them any difference in the text. Post-test at class VII A was conducted after the treatment on 27th April 2018. There were 40 students as respondents or subjects of this research.

F. Normality and Homogeneity Testing

Many experimenters the most commonly used statistical tests are those for comparing sample means or sample variances. It means that there are two statistical to comparing the test.

1. Normality

The purpose of normality test is to know the data distributed normally or not. Normality distribution test is a test to measure whether our data has a normal distribution, so it can use in a parametric statistic. Normality test means showed that the sample data come from normally

distributed population. The researcher used Kolmogorov-Smirnov test with SPSS 16.0. to know the normality. The hypotheses for normality testing are:

    a. H_0 : Data is normal distribution

    b. H_1 : Data is not in normal distribution.

H_0 is rejected if the significance value less than 0.05 (< 0.05) it means that the data are non-normal. While, H_0 is accepted if the significance value bigger than 0.05 (>0.05) it means that the data are normal.

2. Homogeneity

    Homogeneity testing is intended to make sure that the collected manipulation data in analysis is truly taken from a population which is too different each other. Especially in a correlative study which is predictive, the model which is used must be appropriate with the composition and its distribution.

    The hypotheses for homogeneity testing are:

    a. H_0 : Data is homogeny

    b. H_1 : Data is not homogeny

    The test is called homogeny if the significant value more than 0,05. H_0 is rejected if the significance value less than 0.05 (< 0.05) it means that the data are not homogeny. While, H_0 is accepted if the significance value bigger than 0.05 (>0.05) it means that the data are homogeny.

G. Data Collecting Method

Data collecting method is the method to obtain the data in the research. The technique used in this research was test. The aim of the data collecting in conducting scientific research is to get the data which needed in the research. The researcher used test achievement test. Data of this research was collected by administering test. Administering test used to find out students' achievement before and after taught by using Guided Reading strategy in measuring reading comprehension.

To find out the data, the researcher gave pre-test about descriptive text in the first meeting, the test consist of 30 multiple choice test about based on the text. Every items has four choices, there were A, B, C, and D. The time location was about 60 minutes. The pre-test was given to know the basic competence of the students' and their earlier knowledge before they get treatment. The pre-test held on 13rd April 2018 at class VII A. There were 40 students as respondents or subjects of this research.

After gaining the pre-test, the researcher gave the treatment by teaching using Guided Reading strategy for class VII A. It was conducted on 17th April 2018 and 20th April 2018. In the last, the researcher gained the post-test. The post-test gave to students after giving treatment process. The researcher gave the test about descriptive text, the test consist of 30 multiple choices about based on the text. Every items has four choices, there were A, B, C, and D. The time location was about 60 minutes. The test given to know the significant difference on

students' achievement in reading comprehension before and after taught by using Guided Reading strategy. The post-test held on 27th April 2018 at class VII A. There were 40 students as respondents or subjects of this research.

H. Data Analysis

Quantitative data analyzes is also called as statistical analysis. Data analysis is a continuation process from the process of data processing to know how the interpretation data, then data analysis of the result that has been on the level of result of data processing. It means that the result of the data served up in numerical form. The collected data was processed by comparing with the pre-test and post-test to know whether there any significant difference or not after giving the treatment. The quantitative data of this research in analyzed used statistical computation.

The pre-test was data of students score before taught by using Guided Reading strategy. The post-test was data of students' score after taught by using Guided Reading strategy. If the post-test on the students' reading achievement test is higher than pre-test, it means that teaching reading by using Guided Reading strategy is effective. To get the achievement of reading test, the researcher gave the students a reading test after they got treatment teaching reading by using Guided Reading strategy.

In this research, the researcher used paired sample t-test at SPSS 16.0 for windows because it was a parametric test. The paired sample t-test is a statistical procedure used to compare two means that are from the same individual, object,

or related units. The two means typically represent two different times or two different but related conditions or units. The purpose of the test is to determine whether there is statistical evidence that the mean difference between paired observations on a particular outcome is significantly different from zero. The researcher used paired sample t-test to know the significant difference effect before and after taught by using Guided Reading strategy on students' achievement in reading comprehension.