CHAPTER III

RESEARCH METHOD

This chapter presents the research method. It focuses on the method used in conducting this study. The decision covers Research Design, Population, Sample and Sampling, Variable of the Study, Data collecting method, Research Instrument, Validity and Reliability Testing, and Technique of Data Analysis.

A. Research Design

The design of this research is an experimental research. According to Ary (2002:276) an experimental is a scientific investigation in which the researcher manipulates one or more independent variables, control any other relevant variables, and observer the effect of the manipulation on the depend variables.

This experimental design used pre - experimental research design (one – group pretest – posttest design), which researcher only uses one class as the subject of study without control group or comparison group and in this research study consists of pre-test, treatment and posttest. The pretest and posttest are given to take the score of the students' comprehension before and after being taught PCS. The both of the score are computed by using t- test to find out if there is significant influence of students' reading comprehension by PCS.

The research designs can be illustrated by Donald et al (2006: 327-328) as follow

Table 3.1 The Design of One-Group Pretest Post Test

Pre-test	Independent Variable	Post-test
Y1	*X (The strategy)*	*Y2*

This research intends to investigate the effectiveness of pairs check strategy (PCS) toward students' reading comprehension at the seventh grade of Mts Aswaja Tunggangri in academic year 2017/2018. The use of the treatment is aimed at proving whether the increase score possibly got by the researcher. Thus, the effectiveness of that treatment will know the significant score when the student taught using PCS.

B. Population, Sample and Sampling

This section discusses the population of the study, the sample which was drawn from the population, the sampling technique applied and the variables of the study.

1. Population

According to Ary, et al (2010: 148) states that population is defined as all members of any well-defined class of people, events or objects. Arikunto (2006:130) said that population is the whole research subject.

Therefore, the population of this research is the seventh grade of MTs Aswaja Tunggangri in academic year of 2017/2018 which consists of two classes, and the total member of student is 33 students.

2. Sample, and Sampling

Sample is sub group of target population that the researcher plans to study for generalizing about the target population (Creswell, 2008: 152). According to Arikunto (2002: 109), sample is small group in population being observed. Actually sample is part of population that is taken to represent the population in research.

Sampling is the process of taking sample. The researcher uses purposive sampling to take sample from population and it represents the entire population. Ary (2002:169) states "Purposive sampling-also referred to as judgment sampling-sample elements judged to be typical, or representative, are chosen from the population."

In purposive sampling, the researcher uses expert judgment to take some representatives or typical cases from population. First, identify important variation sources of population. Then, choose the cases that are suitable with the variation sources. According to an English teacher, all students have similar characteristics; their mastery on English is average. Furthermore, PCS has never been used in teaching reading to the classes. Based on this condition, the researcher chooses class VII-A which consists of 20 students, 12 male and 8 female.

C. Variable of the Study

Suharsimi (2006:118) said that variable is object of research or that become point of research. Ary (2002:15) stated that a variable is construct or a characteristic that can take on different values or score.

There are two variables in this study. They are independent variable and dependent variable:

a. Independent variable (X)

Arikunto (2010: 162), independent variable is a variable that has function to cause the other variable that will be researched / observed. Independent variable is variable has the influence or the cause of change or make the existences of dependent variable. So, the independent variable in this research is the treatments (Pairs Check Strategy). In this research, PCS has the influence or the cause of change or make the existences of student's reading comprehension.

b. Dependent variable (Y)

Creswell (1994: 129) state that the dependent variable is the response or the criterion variable presumed to be "caused" or influenced by the independent treatment condition. In this research the dependent variable is the student's reading comprehension. Student's reading comprehension is variable which is influenced or became effect of the PCS.

D. 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 20 question; 10 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 pairs check 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:

Score = <u>number of correct items</u> x 100
          the number of students

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

E. Research Instrument

According to Arikunto (2006: 126) Instrument is the device the researcher uses to collect data is called instrument. The instrument in this research 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 PCS. The second is post-test, which is given after students are taught by using PCS. 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, the researcher review syllabus to know the materials and basic competence which should be mastered by the students of the seventh grade 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.

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 and Try Out

a. 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.

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 20 questions which is 10 questions of multiple choices and 10 short answer. The experts that the writer meets are experienced English Lecturer and English Teacher of MTs Aswaja Tunggangri.

b. Instrument Revision

There isn't some feedback that given after researcher meet the expert of validity.

c. 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 chooses class VII-B.

d. 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.

e. **Validity and Reliability Testing**

As mentioned above, the writer's instrument is test. The good instrument should be valid and reliable; the more explanation about it will be discussed as follows:

1 Validity

The most simplistic definition of validity is that is the degree to which a test measures what is supposed to measure (Gay, 1992: 155). To measure whether the test has good validity, the researcher analyzed the test from content validity.

Content validity is the degree to which a test measures an intended content area (Gay, 1992: 156). To guarantee the validity of the instrument, the researcher applies the content validity in which it refers to the degree to which the test

represents the parts of category tested (Suharto, 2003:69). The reading comprehension test uses in this study employs the content validity. In this study, the reading comprehension test is developed in reference to the materials which are based on the Core Competence and Basic Competence of the School Based Curriculum of the seventh grade of MTs Aswaja Tunggangri. The detail is illustrated in the following table.

Table 3.2 The Core Competence and Basic Competence of the School Based Curriculum of the seventh grade.

Core Competence	Basic Competence	Competence Indicator
KI 4 :Trying, processing, and serving in a concrete realm (using, parsing, composing, modifying, and creating) and abstract realm (writing, reading, computing, drawing and composing) with those studied in schools and other sources in the same angle view/ theory.	4.7.1 Capturing contextually meaning related to social function, text structure, and linguistic element of descriptive oral and written text, very short and simple, related to people, animals, and objects	1. Students are able to determine the main idea. 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

2 Reliability

Reliability refers to the nation that an instrument can be trusted enough to be used as data collection tool for instrument which has been already good (Arikunto,

2010: 221). To measure that reliability of test item, the researcher firstly gains Try-out. It is to know whether the instrument suitable or not. In this research, the researcher uses SPSS 18.0 for windows to know the reliability of test instruments. According to Riduwan (2014: 118), the criteria of reliability instrument can be divided into 5 classes as follows:

a. If the alpha Cronbach scores 0.00-0.20: less reliable

b. If the alpha Cronbach scores 0.211-0.40: rather reliable

c. If the alpha Cronbach scores 0.41-0.60: enough reliable

d. If the alpha Cronbach scores 0.61-0.80: reliable

e. If the alpha Cronbach scores 0.81-1.00: very reliable

To know the reliability of the test, we should know: (a) the mean score, (b) the standard deviation of the test, and (c) Cronbach's Alpha. From the answer of students' response in try-out test the researcher then analyze using reliability test based on Cronbach's Alpha.

Table 3.3 Reliability Testing for Tryout 1

Reliability Statistics

Cronbach's Alpha	N of Items
,792	20

Table 3.4 Reliability Testing for Tryout 2

Reliability Statistics

Cronbach's Alpha	N of Items
,650	20

From the computation in SPSS, the reliability value of Tryout 1 was 0.792 Based on the Cronbach scale in table 3.3. It lies on the Cronbach value between 0.61-0.80 so it can be said that the instrument was reliable. And the reliability Tryout 2 was 0.650 based on the Cronbach scale in table 3.4. It lies on the Cronbach value between 0.61-0.80 so, it can be said that the instrument was reliable.

f. **Technique of Data Analysis**

The researcher uses a quantitative analysis technique using statistical method. The researcher uses the application SPSS Statistics 18 for windows to analyzed Paired-Sample T-test. There are some steps in analyzing data in SPSS 18. Firstly, the researcher input the data in SPSS Statistics to know the frequency of pretest and post test score. After that, by using this application the researcher know the mean, median, mode and standard deviation. Then, from the compare of data the researcher know the pair sample statistics and finally the researcher find pair sample correlation from two kinds of test. The researcher can analysis about the result of significant one tails.

After the researcher knows the result of significant one tails from SPSS Statistics, the researcher can give the conclusion about the effectiveness or not about using PCS toward Students' Reading Comprehension in descriptive text. This technique is used to find the significant different on the students reading descriptive text using PCS. If the significant one tails is bigger than the level of significant (0,05), the alternative hypothesis (ha) is accepted. It means that, there is different score of students' achievement before and after taught using PCS. On the other hand, if the significant one tails is smaller than the level of significant (0,05) the null hypothesis is rejected. Indicating that, there is no different score of students' achievement before and after taught using PCS.