

## CHAPTER III

### RESEARCH METHODOLOGY

#### 3.1 Research Design

Design of this research is quasi experimental research which used non equivalent control group design. Quasi experimental research is the development of true experimental design. It is has control group, but cannot function fully to control external variables to affect the implementation of the treatment (Mubarok, 2015:90).

This research used nonequivalent control group design. This design is almost same as the pretest-posttest control group design of true experimental design. In this design, the experimental group and the control group are not chosen at random. Then, both of experimental group and control group are compared (Mubarok, 2015:91). It can be described in the following formula:

**Figure 3.1 Research Design**



(Mubarok, 2015:91)

In the design, O<sub>1</sub> and O<sub>3</sub> were the treatment or experimental group which was given a treatment. Meanwhile, O<sub>2</sub> and O<sub>4</sub> were the control group which was not given a treatment. O<sub>1</sub> and O<sub>2</sub> were pre-test that provided by writer before doing the treatment. X was the treatment or the

implementation of Pair Work Technique. Then, O<sub>3</sub> and O<sub>4</sub> were post-test after group given treatment.

### 3.2 Variable of the Research

There are two kinds of variable that used in this research. The first one is independent variable. Independent variable is variable that is not influenced by the other variables. Or in other word, variable independent is variable that caused the change of the dependent variable or caused the appearance of dependent variable. Then, the dependent variable is variable that influenced by independent variable. Or we can say that dependent variable is the effect of independent variable (Sugiyono, 2015:61).

In this research, the independent variable was pair work technique and the dependent variable was students' speaking skill on descriptive text, because pair work technique here influenced the students' speaking skill on descriptive text.

### 3.3 Setting of the Research

This research was held in MA Walisongo Pecangaan Jepara which was located on Kauman Street no.1 Pecangaan Kulon, Pecangaan Jepara. It was done on even semester in the academic year of 2018/2019. The detail of the schedule for conducting the research is in the following table.

**Table 3.1 The Schedule of the Research**

No	Activities	Date of January							Place
		5 <sup>th</sup>	9 <sup>th</sup>	12 <sup>th</sup>	16 <sup>th</sup>	19 <sup>th</sup>	23 <sup>th</sup>	26 <sup>th</sup>	
1	Sending								MA

	letter for school							Walisongo
2	Pre test							X MIA 1 and X MIA 2
3	Treatment 1							X MIA 1 and X MIA 2
4	Treatment 2							X MIA 1 and X MIA 2
5	Treatment 3							X MIA 1 and X MIA 2
6	Treatment 4							X MIA 1 and X MIA 2
7	Post test							X MIA 1 and X MIA 2

### 3.4 Subject of the Research

#### 3.4.1 Population

Population is a unit of the object or subject that has certain qualities and characteristics which are studied by the researchers then be deduced (Mubarok, 2015:31). In this research the population was all of the tenth grade students in MA Walisongo Pecangaan in the academic year of 2018/2019. The total of the students were 73 which were divided to 25 males and 48 females.

**Table 3.2 Total Number of Students**

Class	Number of Students
X MIA 1	24
X MIA 2	22
X IS 1	27
<b>Total</b>	<b>73</b>

#### 3.4.2 Sample

Sukardi (2015:54) states that sample is a half part of total population that is chosen become data sources. The sample is the total members of group that are found in field not population target. This research used only 2 classes out of 3 which were X MIA1 and X MIA2 with total of students was 46, and it was divided to 14 males and 32 females.

The writer used purposive sampling as the technique of choosing it. Purposive sampling is a technique of determining sample by using certain consideration (Sugiyono, 2015:124). The writer used the technique as consideration to use only MIA class as the sample. It was because in the tenth grade there were 3 classes, 2 MIA classes and 1 IS class. So, it would be balance if the writer chooses MIA class as the sample. Then, X MIA1 became the experimental group. Meanwhile X MIA2 became the control group.

### **3.5 Instrument of Data Collection**

This research used test as the instrument of data collection. A test is a method of measuring a person's ability knowledge, or performance in a given domain. It is an instrument, a set of technique, procedures, or item that require performance on the part of the test-taker (Mubarok, 2015:59).

The type of the test was achievement test. According to Mubarok (2015:61) achievement test is related directly to classroom lessons, units, or even total curriculum, and it is limited to particular material addressed in a curriculum within a particular time frame and are offered after a course has on the objectives in questions. The test was in the form of oral test. It meant that the writer posed questions to the students in spoken form. Then the test was given in the pre-test and post-test.

### 3.6 Try-out of the Instrument

#### 3.6.1 Validity

A good test is a test which is valid. According to Sugianto (2017:23) validity is extent to which the test measures what it is wanted to measure. In other words, a valid test can really measure what it is supposed to measure (Sugianto, 2017:23). For example if the test is supposed to measure the speaking ability then the test has to be in the form of spoken test.

The validity of speaking score is grounded in the purpose that scores are intended to serve. For example, certifying a health professional's ability to serve patients in the official language or their country or giving learners feedback about their speaking skill. So, they can improve their skill (Luoma, 2004:185).

There are many kinds of validity. In this research the writer chose content validity. Hughes (2003) in H. D. Brown (2004:22) a test can be claimed has content validity if a test actually samples the subject matter about which conclusion are to be drawn, and if it requires the test takers to perform the behavior that is being measured. The content validity will be analyzed by using Lawshe's CVR. The equation is below:

$$CVR = \left( n_e - \frac{N}{2} \right) : \left( \frac{N}{2} \right)$$

Note:

CVR = content validity ratio

$n_e$  = number of panel member indicating essential

$N$  = total number of panel members

(Taherdoost, 2016:30)

### 3.6.2 Reliability

Beside valid a good test should be reliable. Reliability means that the score is consistent. In other words, a test can be defined as a good test if the result or score is consistent in how many times the test conducted. Consistence does not the scores are the same, but it can be stable changing of scores (Sugianto, 2017:24).

There are three types of reliability that is relevant for speaking assessment. They are intra rater reliability, inter rater reliability, and parallel form reliability. In this research writer used inter rater reliability. It means that different raters rate performances similarly (Luoma, 2004:179).

## 3.7 Method of Data Collection

The method of collecting data in this research was subjective text. It is a test which the score is depend on test-takers' response and subjectivity of the corrector (Widyoko, 2016:147). The subjective test was in the form of spoken test.

### 3.7.1 Pre-test

Creswell (2008) in Astuti (2017:39) states that pre-test provides measurement before researcher doing experiment. It means that pre-test is used to know the students' ability before given a treatment. Pre-test was given before the treatment. It was in the form of oral test. In this

pre-test, students were asked to describe place or tourism object orally. The result of this test will be analyzed by the rubric by Brown (2004:172-173). The rubric is attached in appendix.

### 3.7.2 Treatments

Treatment means the stages where the writer implemented the Pair Work technique to the experimental group, and implemented the conventional teaching technique to the experimental group. The treatment was done in 4 meetings for both experimental group and control group. The details can be seen below:

**Table 3.3 The Activities of Treatment**

<b>Treatment</b>	<b>Experimental Group</b>	<b>Control Group</b>
<b>1</b>	<p><b>Observing</b></p> <ul style="list-style-type: none"> <li>• Students observed and analyze example of descriptive text that was given by teacher.</li> </ul> <p><b>Questioning</b></p> <ul style="list-style-type: none"> <li>• Students asked some questions about parts that they did not know.</li> </ul> <p><b>Exploring</b></p> <ul style="list-style-type: none"> <li>• Students were given</li> </ul>	<p><b>Observing</b></p> <ul style="list-style-type: none"> <li>• Students were asked to read some examples of descriptive text.</li> </ul> <p><b>Questioning</b></p> <ul style="list-style-type: none"> <li>• Students were expected to ask some questions. Teacher also asked some questions to provoke them.</li> </ul>

	<p>cards. Each student got one card.</p> <ul style="list-style-type: none"> <li>• The students were given instructions about what they had to do with the cards.</li> <li>• Students looked for another student who have same card.</li> </ul>	<p><b>Exploring</b></p> <ul style="list-style-type: none"> <li>• Students were asked to read and identify the social function, generic structure, and language features in the example of descriptive text that was given by teacher.</li> </ul>
2	<p><b>Associating</b></p> <ul style="list-style-type: none"> <li>• Pair of students wrote a descriptive text about picture on the card that they got in the previous meeting.</li> <li>• While students were completing their task, the teacher observed them and helped them when they faced difficulties.</li> </ul>	<p><b>Associating</b></p> <ul style="list-style-type: none"> <li>• Each student wrote a descriptive text about tourism object Jepara that they knew.</li> <li>• While students were completing their task, the teacher did observation and helped students who found difficulties.</li> </ul>
3	<p><b>Communicating</b></p> <ul style="list-style-type: none"> <li>• The pairs of students</li> </ul>	<p><b>Communicating</b></p> <ul style="list-style-type: none"> <li>• Each student</li> </ul>

	<p>presented descriptive text they made in the last meeting in front of class, orally.</p> <ul style="list-style-type: none"> <li>• While pairs of students were presenting their text, the teacher took score from their performance. Teacher also gave correction of wrong pronunciation.</li> </ul>	<p>presented the descriptive text that they made in the previous meeting in front of class, orally.</p> <ul style="list-style-type: none"> <li>• While students were presenting their text, the teacher took score from their performance. Teacher also gave correction to the wrong pronunciation.</li> </ul>
4	<p><b>Associating</b></p> <ul style="list-style-type: none"> <li>• Pair of students exchanged card they got with another pair. Then, they tried to describe topic they got.</li> </ul> <p><b>Communicating</b></p> <ul style="list-style-type: none"> <li>• Some pairs were asked to present the</li> </ul>	<p><b>Associating</b></p> <ul style="list-style-type: none"> <li>• Each student exchanged topic with another friend, and then they tried to make descriptive text about it.</li> </ul> <p><b>Communicating</b></p> <ul style="list-style-type: none"> <li>• Some students were asked to present the</li> </ul>

	exchanged topic in front of class.	exchanged topic in front of class.
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### 3.7.3 Post-test

Creswell (2008) in Astuti (2017:40) defines post-test as measurement that is done to know participants' ability after getting treatment. Post-test was given after the treatment done, and it was in the form of oral test. So, post-test is to know whether there is diversification or not between students' who taught using pair work and without pair work. It will be analyzed by using Brown (2004:172-173) oral proficiency scoring. The detail of the rubric is on the appendix.

### 3.8 Method of Data Analysis

In measuring which is pair work technique is effective or not in improving students' speaking skill of descriptive text, the writer uses t-test. T-test is statistic technique that is used to test significant different between 2 means that is sourced by 2 distributors by using this following equation:

$$t_0 = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{s^2 \left( \frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

Note:

$t_0$  = t statistic

$\bar{x}_1$  = mean of experiment class

$\bar{x}_2$  = means of control class

S = variants

$n_1$  = total students of experiment class

$n_2$  = total students of control class

(Sa'idah, 2017:172)

### 3.9 Statistical Hypothesis

Statistical hypothesis is hypothesis which is formulated statistically, it is based on the researcher's observation (Sa'idah, 2017:91). Statistical hypothesis is presented in the form of number. The statistical hypothesis of the study is expressed as follows:

$H_0 : \mu_1 = \mu_2$  : It means that the alternative hypothesis ( $H_a$ ) is rejected and null hypothesis ( $H_0$ ) is accepted.

$H_a : \mu_1 \neq \mu_2$  : It means that the alternative hypothesis ( $H_a$ ) is accepted and the null hypothesis ( $H_0$ ) is rejected.

Note:

$\mu_1$  = Mean of experimental class

$\mu_2$  = Mean of control class

(Sa'idah, 2017:92)

The assumption of the hypothesis is:

1. If  $-t_{table} \leq t_{value} \leq t_{table}$  the null hypothesis ( $H_0$ ) is accepted and the alternative hypothesis ( $H_a$ ) is rejected (Sa'idah, 2017:95). It means that there is no significant different between students' speaking score (focus on descriptive text) who taught by using pair work technique and who taught without using pair work technique. In other word, pair work

technique is not effective to improve students' speaking skill on descriptive text.

2. If  $t_{\text{value}} > t_{\text{table}}$  the null hypothesis ( $H_0$ ) is rejected and the alternative hypothesis ( $H_a$ ) is accepted (Sa'idah, 2017:95). It means that there is significant different between students' speaking score (focus on descriptive text) who taught by using pair work technique and without using pair work technique. In other word, pair work technique is effective to improve students' speaking skill on descriptive text.

