CHAPTER III

RESEARCH METHOD

A. Research Design

A quasi-experiment research was used in this research. The nature of quasi experimental study that enables the researcher to manipulate the condition in teaching and learning process, the researcher gave treatments to the group that was belong to the experimental group then analyzed the changes of the students' achievement compared to the other group that belong to the control group. In addition, the control group was the group which had been taught without using the treatment.

The purpose of using the quasi-experiment is to examine the effect of using THIEVES and CSR strategy on reading comprehension and to compare of those two strategies. Quasi-experiments included assignment but not random assignment of participant to group. The quasi-experiment is used because the experimenter cannot artificially create group for the experiment due to prohibition of the research setting. There was many natural social setting in which the researcher person can introduce something like experimental design into his scheduling of data collection procedures (e.g., the when and to whom of measurement), even though he lacks the full control over the scheduling of experimental stimuli (the when and to whom of exposure and the ability to randomize exposures) which made a true experiment possible. Collectively, such situations can be regarded as quasi-experimental design.

Table 1: Design of the research

Group	Pretest	Treatment	Post test
Experimental Group 1	O_1	X_1	O_2
Experimental Group 2	O_1	X_2	O_2
Control group	O_1	-	O_2

Note:

X_1 : Treatment 1 used CSR

X_2 : Treatment 2 used THIEVES

B. Research Setting

This quasi-experiment research conducted in MTs N 2 Jepara. In this experiment research, researcher cannot control all potential variables so, participants of the research can be randomly assigned to groups by researcher. So, researcher chose both control and experiment classes based on the recommendation from English teacher of MTs N 2 Jepara for available classes of the second-grade students that obtained in this research.

This research conducted in second semester at academic year 2018/2019. The grade 8 students of MTs N 2 Jepara in the academic year of 2018/2019 in second semester that had the same opportunity became the population of the research. Researcher consulted to English teacher for students' heterogeneity in ability, difficulties, and needs in the learning process. English teacher informed that the students of class VIII A, VIII B and VIII C have same ability, difficulties and needs in the learning process. Finally, those classes were chosen randomly to

determine which class that would be the experimental class and which class would be control class. The schedule of the research is in the following table.

Table 2. Research schedule

NO	DAY / DATE	CLASS		
		VIII A THIEVES	**VIII B CSR**	**VIII C CONTROL**
1	Monday, 18 March 2019	Meeting 1 Pre-test	-	Meeting 1 Pre-test
2	Tuesday, 19 March 2019	-	Meeting 1 Pre-test	Meeting 2 Control 1
3	Wednesday, 20 March 2019	Meeting 2 Treatment 1	Meeting 2 Treatment 1	-
4	Monday, 25 March 2019	Meeting 3 Treatment 2	-	Meeting 3 Control 2
5	Tuesday, 26 March 2019	-	Meeting 3 Treatment 2	Meeting 4 Control 3
6	Wednesday, 27 March 2019	Meeting 4 Treatment 3	Meeting 4 Treatment 3	-
7	Monday, 1 April 2019	Meeting 5 Post-test	-	Meeting 5 Post-test
8	Tuesday, 2 April 2019		Meeting 5 Post-test	

C. Population and Sample

The population of this research was eight grade students of MTs N 2 Jepara. This research used three groups of the eight grade students because in experimental research needs at least two groups to compare the result in the end of the study. In this research needs two classes become experimental group and a class became control group. Each class consisted of thirty-four until thirty-eight students. The following table presents the distribution of the population. To

determine the experimental class and the control class in this study used 'simple cluster random sampling technique' by determining the class randomly to avoid subjective judgments of the research sample.

Table 3. Population of the research

No	Classes	Number of students
1	VIII A	38
2	VIII B	36
3	VIII C	36
4	VIII D	35
5	VIII E	35
6	VIII F	36
Total		216

After discussion with English Teacher in MTsN 2 Jepara, from the population, three classes took as the samples; one as the control class and two others as the experimental class. The distribution of the sample is presented in Table. 3 below:

Table 4. The Distribution of the Samples

No	Class	Number of students
1	VIII A	38
2	VIII B	36
3	VIII C	36

In the teaching-learning process of reading class, the experimental group 1 (class VIII A) used THIEVES strategy and the experimental group 2 (class VIII B) used CSR strategy while the control group (class VIII C) used conventional or traditional strategy.

D. Research Variables

In this research, the variable is divided into two both of them are independent and dependent variable. The independent variable in a position apart from the influence of the dependent variable, while the dependent variable is the variable that is affected by the independent variable. In this study was analyzing the impact of using both THIEVES and CSR strategy in reading comprehension skills. The independent variables are both THIEVES and CSR and the dependent variable is reading comprehension.

E. Research Instruments

This study used pre-test and post-test. The pre-test was developed to ensure the similarity between the control group and the experimental group because of the sample of the study was not randomly selected. The pretest provided a measure on some attribute or characteristics that the researcher assesses for the student participants in this quasi-experiment before they receive experimental treatment (Creswell, 2012). Then, to measure the students' reading comprehension achievements, the researcher developed reading tests as the post-

test. The post-test gave information for researcher on a measure of attribute or characteristic which is assessed for student participants after the experimental treatment (Creswell, 2012). Achievement tests aim at measuring students' achievement and looking at the effectiveness of the strategy. The pre-test and the post-test were in the form of multiple choices questions. The use of multiple-choice test items enabled the researcher to have a consistent process of scoring and grading. Pretest and posttest in this study used 40 multiple-choice test items.

F. Data Collection Technique

Each of three intact classrooms assigned in groups as their class position without any changing: two intact classrooms became class conditions with the treatment, one intact classroom became class control without any experimental treatment. In this quasi-experiment design, the researcher applied pre-test and post-test. Student participants in each classroom intact got pre-test in the first meeting. The researcher then assessed the result of the pre-test conducted. Then the result compared to each classroom intact. The student participants in two classrooms intact then got experimental treatment described in the following paragraphs.

THIEVES Strategy. After administering pretest to this group, the researcher then introduced activities of the experimental treatment on THIEVES strategy to the experimental group. The researcher then gave the experimental treatment on reading comprehension using THIEVES strategy. In the process of the experiment the researcher was always monitoring the process intimately. When the

experimental treatment has finished, the researcher then administered a posttest to this experimental group to measure the result of it.

CSR Strategy. After administering pre-test to this group, the researcher then introduced the experimental treatment to the experimental group. The researcher then gave the experimental treatment on reading comprehension skill using CSR strategy. In the process of the experiment the researcher was also always monitoring the process closely. When the experimental treatment has finished, the researcher then administered a post-test to this experimental group.

Control. Just like two experimental groups, the researcher also administered pretest to the control group. The group then would not be given introduction to those two strategies as the two other groups, because this control group would not be given experimental treatment. This group then would be taught reading comprehension as usual as what the teacher did. In the end, the control group would also be given posttest as two other groups.

After administering the experimental treatment, the researcher then organized to analyze the result of the pre-test and post-test, then the result compared to know which one is more effective and gave more impact to the student's reading comprehension.

G. Instruments Validity and Reliability

The instruments used in research must meet the requirements so that they can be said to be good instruments. Good instruments must be valid and reliable. The instrument used in this study fulfilled the basic requirements, namely the validity

and reliability of the instrument. The following is a description of the requirements for validity and reliability of research instruments.

1. Instrument validity

This research used *content validity*. Content validity is used to know that the content of the instrument tested was appropriate with the level and material of the student. Content validity give the explanation that the items in the instrument are match with the relevant materials or not. It means that the researcher tried to construct the instrument based on the materials or topic given in the second semester and according to MTs N 2 Jepara's curriculum that the test developed covers all the materials given to the 8 grade students of MTs N 2 Jepara in the academic year 2018/2019. After that, the researcher tried to made instrument based on the curriculum. The researcher also looked up for the handbook which is used there to complete the source of the instrument.

The research instrument was also validated by some experts namely expert judgment. Expert judgments in this study consist of two experts. The content validity in this study was carried out by the Gregory index because the instrument was validated by 2 experts namely Mr. Ashadi Ed.D. an English Education lecturer at UNY and Miss Ni'matu Tasriyah, S.Pd an English teacher at MTs N 2 Jepara. The results of the validators are then made a contingency table where the table to calculate the Gregory Index is strong or weak. Scores 1 and 2 are for the weak category, while 3 and 4 are for the strong category. The contingency table for calculating content validity with the Gregory Index is as follows.

Table 5. Index Gregory Test

		Rater 1	
		Strong	Weak
Rater 2	Strong	A	B
	Weak	C	D

The calculation of the Gregory Index is as follows.

$$V = \frac{D}{A + B + C + D}$$

Information:
V = The content validity coefficient
A = Expert 1 and 2 stated weak
B = Expert 1 stated strong, Expert 2 stated weak
C = Expert 1 stated weak, Expert 2 stated strong
D = Expert 1 and 2 stated strong

The results of validity with the Gregory index are then interpreted, if the agreement index is less than 0.4 then it is said to have low validity, if between 0.4-0.8 the validity is said to be moderate (medio core) and if more than 0.8 is said to be high (Retnawati, 2016: 32-33). The results of the instrument validation in this study were proven through the instrument validation sheet and the letter had carried out validation conducted by 2 experts. The results at the validation stage in this study obtained a content validity coefficient of 0.95. Based on the validity coefficient, the instrument in this study has a high validity coefficient, in other words the instrument in the study is declared valid. The results of the validity of the instrument and the certificate that has validated can be seen in the appendix.

2. Instrument reliability

Reliability coefficients can be interpreted as the coefficient of stability or stability of measurement results (Retnawati, 2016: 84). Instrument reliability was examined through inter-rater techniques for assessment of reading recount texts in English and then analyzed by the reliability of *Cronbach Alpha* with SPSS version 22 to find out the correlation between expert 1 and expert 2, there are Mr. Ashadi Ed.D, an English Education lecturer at UNY and Miss Ni'matu Tasriyah, S.Pd the English teacher at MTs N 2 Jepara. If expert 1 and expert 2 have a strong relationship, it can be concluded that the two experts have a good understanding of the instruments used. The estimation of instrument reliability is presented in the table as follows:

Table 6. Result of reliability test

Reliability Statistics

Cronbach's Alpha	N of Items
,862	40

The table above is the result of reliability estimation with SPSS 22. Reliability in this study used the reliability of *Cronbach Alpha*. An instrument can be said to be reliable if the Cronbach Alpha coefficient is above 0.6, (Pramesti, 2014: 44). Based on these estimates, the reliability coefficient obtained in this study is 0.862. This means that the coefficients in this study can be said to be very reliable.

H. Data Analysis Technique

1. Descriptive analysis

In this descriptive analysis was analyzed the achievement of students in reading comprehension before and after being given treatment for the reading text which is recount text. Description of students' abilities in this study are the results of pre-test and post-test activities. There were some statistic formulas used in the computation: the mean, the minimum score, the maximum score and the standard deviation statistic. In the end, comparison among treatment class and control class presented.

2. Inferential analysis

a. Normality test

Data analyzed must be normally distributed data. Normality test to analyze pre-test and post-test data has a normal distribution or not. The normality of the teaching reading score in the form of pre-test and post-test data was analyzed using the *Kolmogorov Smirnov* and *Saphiro-Wilk* test with SPSS version 22. The conclusions were obtained from the significance value (sig). If the value of sig> 0.05, the data of the two classes are normally distributed, whereas if the value is sig <0.05 then the data of the two classes are not normally distributed.

b. Homogeneity test

Homogeneity test is used to find out that the samples were taken from populations that have significance for each other. The homogeneity test is used to analyze the similarity of variance between the three classes compared,

namely THIEVES Class, CSR Class and Control Class, this homogeneity test uses a one-way variance analysis technique using *Levene test* on SPSS 22. The analyzed variance is based on: if the value sig <0.05, then the three variants are not identical or homogeneous so H_0 is rejected, if the value of sig> 0.05 then the three variants are identical or homogeneous then H_0 is accepted.

3. Hypothesis test

After the data were in the normal distribution and the variances were homogenous, then the test of hypothesis was used analysis of Covariance *(Ancova).* This analysis used SPSS 22 program. H_0 is accepted and H_a is rejected if p> α or the rate of probability is greater than 0.05 (Sig> 0.05). Next, Ha is accepted and Ho is rejected if p <α or the rate of probability is lower than 0.05 (Sig <0.05). Then, researcher continued with statistical *Scheffe test* using SPSS 22. *Scheffe test* is a further test that is used to find out which strategy is most effective to improve students' reading comprehension through mean difference.