

## CHAPTER III

### RESEARCH METHOD

This chapter discusses research design, population, sampling and sample, description of treatment, research variable, research instrument, data collection method, and data analysis technique.

#### **A. Research Design**

Research design is all process needed in conducting a research. In this study, the writer used an experimental research design with two groups with quantitative approach. The experimental research design is a research design intended to test the effectiveness of something. Then, according to Creswell (2012:295) experimental study is for the research which was helping the researcher to know the cause and effect between independent variables and dependent variables. Mujis (2004:1) stated that quantitative method is officially about collecting numerical data to explain particular phenomenon.

Thus, the research method is an important part of a research to find out the scientific truth. The experimental method is a systematic and scientific approach to research in which the researcher manipulates one or more variables, and controls and measures any change in other variables. In this study, the researcher manipulated one variable, and control/randomizes the rest of the

variables. It has a control group, the subjects have been non- randomly assigned between the groups, and the researcher only tests one effect at a time.

In this study, the researcher used a Quasi-Experimentalas the design of the research to see the effectiveness of Collaborative Strategic Reading (CSR) On students' reading comprehension mastery in narrative text of the first grade at Senior High School 1 Tulungagung. As stated by Mujis (2004:200), “quasi-experimental research is especially suited to looking at the effects of an educational invention, such as a school improvement program, a project to improve a specific element. The researcher determines to select two intact groups. The first group was given treatment by using Collaborative Strategic Reading (CSR), called experimental group and the second group was not given a treatment, called control group . The data were collected from pre-test and post-test in order to know the students' significant differences score on reading taught by using Collaborative Strategic Reading (CSR) and taught by using conventional method. The table below shows the design of the research.

**Table 3.1:**  
**Quasi-experimental research design**

<b>Group</b>	<b>Y1</b>	<b>X</b>	<b>Y2</b>
Experimental class (X MIPA1)	Pretest	Collaborative Strategic Reading (CSR)	Posttest
Control class (X MIPA 2)	Pretest	Conventional method	Posttest

Based on the Table 3.1 above, the procedures of using two groups pretest posttest design were:

1. Administering a pretest to both classes (X MIPA 1 and X MIPA 2) to measure the score of reading comprehension mastery in narrative text of the students at the first grade of senior high school 1 Tulungagung before being given a treatment.
2. Applying the experimental treatment in X MIPA 1 class to teach narrative text by using Collaborative Strategic Reading (CSR) and to teach X MIPA 2 by using a traditional method to the student at the first grade of Senior High School 1 Tulungagung.
3. Administering a posttest in both class to measure the score of reading comprehension mastery in narrative text of the students at the first grade of senior high school 1 Tulungagung after being given a treatment.

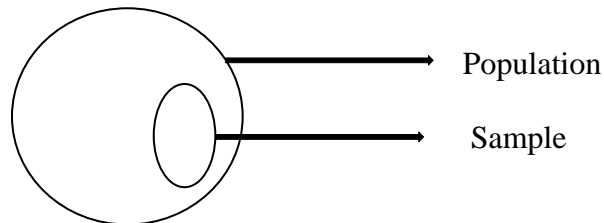
## **B. Population, Sampling, and Sample**

### **1. Population**

Population is generally a large collection of individuals or subjects that is the main focus of a scientific query. It concluded of all individuals that have similar characteristics. Gay (2006) stated that population is a certain group of things (people, objects, events, etc) chosen by the researcher whose study on the research that can be generalized to the group that has a population at least one characteristic that distinguishes it from the other group. Scott and Johnston (2009: 29) population is the universe of people to which the study could be

generalized, and a sample is the subset of people from the population who will participate in the current study.

The illustration of population and sample



The population of this research was students in the first grade of Senior High School 1 Tulungagung which had around 130 students. The school had four first grade classes. They were 10 MIPA 1, 10 MIPA 2, 10 MIPA 3, 10 MIPA 4, in academic years of 2018/2019 each class consists different number of students.

## 2. Sampling

Sampling is the small group is observed. According to Ary (2006: 167). Sampling is also as a way the researcher selects number of individuals as a sample which represents the population. In this research, the researcher used purposive sampling technique. Purposive sampling is one of types in non-probability sampling. According to Sudjana (2007:85) purposive sampling is the technique that is used if the writer has the certain consideration in determining the sample that is appropriate with the purpose of research.

### 3. Sample

According to Ary et al (2010:148) sample is the small group that is observed. Cresswell (2012 :142) state that “A sample is a subgroup of the target population”. Fraenkel and Wallen (2006:92) also give explanation that sample is the group on which information is obtained.

Based on the description above, the researcher defined that sample was a small group taken from population with a certain media that was researched by researcher.

For the study was quasi experimental, the sample was chosen by applying purposive sampling. Applying this method, two classes were chosen by using a certain criterion in which the chosen classes must be normal or in average. Based on the criterion the sample of this research as the students of 10 MIPA 2 as a control group and 10 MIPA 1 as a experimental group at Senior High School 1 tulungagung in which total of 10 MIPA 2 class was 30 students and 10 MIPA 1 was 30 students. So, the total sample was 60 students.

**Table 3.2: The Research Sample by Class**

No.	Class	The Number of Students
1	10 MIPA 1	30
2	10 MIPA 2	30

The sample above was divided into two groups. The first group was class 10 MIPA 2 as the control group and the second group was class 10 MIPA 1 as

the experimental group. The experimental group was taught by using Collaborative Strategic Reading (CSR) Strategy in reading comprehension in narrative text. The researcher made lesson plans and some activities for every meeting based on the school-based curriculum. The control group was given the same materials but they were not taught by using Collaborative Strategic Reading (CSR) Strategy in reading comprehension mastery in narrative text.

**Table 3.3: The Distribution of the Treatment**

<b>Group</b>	<b>Class</b>	<b>Treatment</b>	<b>Number of Students</b>
Experimental	10 MIPA 1	Collaborative Strategic Reading	30
Control	10 MIPA 2	Conventional	30

### **C. Research Variable**

Variable is anything that will be researched by the researcher. According to Frankel and Wallen (2006:40) variable is a concept a noun that stands for variation within a class of subject such as gender, color, motivation, chair, eye, achievement, or running speed. Based on the title of this research, there were two variables:

#### **1. Independent Variable**

Independent variable is the one affecting another variable. In this research teaching reading in narrative text using Collaborative Strategic Reading (CSR) was an independent variable because it affected the students' reading comprehension mastery.

## **2. Dependent Variable**

Dependent Variable is the one affected by another variable. In this research student's reading comprehension mastery in narrative text was a dependent variable because after getting the treatment the result change.

### **D. Research Instrument**

Every research is always need an instrument for collect the result of data. Sugiyono (2013) stated that research instrument is a tool for measuring and observing, in order to produce the result of quantitative data. He also said that research instrument uses to measure the value of research variable. Creswell (2008:5) sated that the researcher uses instrument to measure achievement, asses individual ability, observe behaviour, develop a psychology profile of an individual, or interview a person. Thus, research instruments are the ways of gathering the data, without them, data would be impossible to put in hand.

To obtain the data, the researcher aplied test as a research instrument. 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 (Ary, 2010:210). The test of narrative text was applied to the sample, namely pre-test and post-test. Pre-test was taken before given treatment. The purpose was to know or measure the students' reading comprehension mastery in narrative textbefore be given a treatment.

After getting the result of pretest form experimental group and control group, the researcher was given treatment to teach narrative textfor experimental

group by using Collaborative Strategic Reading (CSR). Meanwhile, the researcher did not given treatment or given conventional method teaching to teach narrative text for control group. After that, the researcher had given posttest to experimental group and control group. Posttest was used to know the students' reading comprehension mastery in narrative text after taught by using Collaborative Strategic Reading (CSR).

In this research, the narrative text test served as the research instrument. The narrative text test was held twice, in the pre-test and post-test. The test was multiple choice test that consisted of twenty items of narrative text. The students were ordered to give the best answer in the test. The post-test had the same format as the pre-test. Finally, the test was used to indicate the significant difference in the reading comprehension mastery in narrative text between the first grade students of senior high school who were taught by using CSR strategy and those who were not.

In addition, before the instrument was used to collect the data, the researcher was conducted try out. It was used to find out the validity and reliability of the instrument. Try out was administered in another class which was not involved during the research process. Tryout will be implemented to 20 students of X MIPA 3 at senior high school 1 Tulungagung .Researcher choose this subject based on characteristic of students ability that near same with the sample.



## **E. Validity and Reliability Testing**

### **1. Validity Testing**

The good instrument is valid. According to Ary et al (2010:225) defines validity as the extent to which an instrument measured what it claimed to measure. While, Fraenkel and Wallen (2006:150) state that validity is the most important idea to consider when preparing or selecting an instrument for use. In other words, validity can be defined as the instrument that measures what is supposed to be measured.

In this research, the researcher used face validity as the subjective measurement, construct validity as the criteria of a person who fully filled the success reading comprehension, and content validity as a non-empirical expert judgment of the extent to which the content of a test is comprehensive and representative of the content domain purported to be measured by the test. And as the result, the result of this measurement on the reading comprehension in narrative text test could present an out of high value.

#### **a. Face Validity**

According to Ary et al (2010:225) who states that face validity refers to the extent to which examinees believe the instrument is measuring what it is supposed to measure. Henning (1987, p. 192) defines face validity as a subjective impression, usually on the part of examinees, of the extent to which the test and its format fulfill the intended purpose of measurement.

## **b. Construct Validity**

Construct validity is any theory, hypothesis, or model that attempts to explain, observed phenomena in our universe of perception (Brown, 2004:45). It is used to examine whether the test has a consistent representation with theories underlying the presented material or not. The instrument was constructed concerning aspects that would be measured according to the certain theory. Then, the instrument was consulted to expert.

In this research, the instruments which have been constructed based on the narrative theory. To test the construct validity was used the expert opinion. After an instrument was constructed about the aspects which be measured based on appropriate theory, then the instrument was consulted with the expert. The expert who was chosen by researcher in this research was advisor of this research a lecturer of IAIN Tulungagung, he was Mr. Susanto, SS, M.Pd. The expert would given their opinion about the instrument which researcher made. In addition, the researcher also consulted with the teacher of English lesson at Senior high school 1 Tulungagung. After got the judgement from expert, the instrument could be tried out to the first grade students' of Senior high school 1 Tulungagung which consisted of 20 students to find out the validity of the test.

### **c. Content validity**

The content validity of the test is showed with relevancy of the objective of the test and the content of the test items. According to Ary et al (2010:225) states that validity is to have teachers examine the test and judge whether the test is adequate sample of the content and objective to be measures. The test was said have content validity if its contents constitute a representative sample of language skills, structures, etc., being tested. It that the test based on competency of standard and basic competency of school based curriculum of first grade of the English subject.

Content validity is a kind of validity which depends on careful analysis of the language being tested and of the particular test subjective. According to Gay in his book, Educational Research Competencies for analysis and Application Fourth Edition, "Content validity is of prime importance for achievement test. A test score cannot accurately reflect a student's achievement if it does not measure what the student was supposed to learn (Gay, 1992:156). A test is said to have content validity if its contents constitutes a representative sample of the language skill, structure, etc. Being tested, the try out test was valid in terms of content validity because this test accord with Syllabus.

Thus, the researcher can conclude that the test were valid in content validity because thematerial are tested have been taught to the students. The researcher made this test based on the course objective in the syllabus

of Senior high school 1 Tulungagung. Therefore, this test was valid in term of content validity.

**Table 3.4: Content validity**

Main 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.
Basic competence	4.8. Menangkap makna teks naratif lisan dan tulis berbentuk cerita pendek, sederhana.
Indicator	4.8.1 Students are able to determine the time, place and the characters that involved in the story.  4.8.2 Students are able to determine the problem in the story.  4.8.3 Students are able to determine the problem resolved in the end of the story.
Technique	Written test
Instrument	- Pretest - Posttest

Based on the Table 3.4 above, the instrument of the test could be said have the content validity because the test has equal purpose with the core

competence and basic competence in syllabus of Curriculum of 2013, which was testing the students' reading comprehension mastery in narrative text with the correct structures.

## 2. Reliability Testing

Reliability is the consistency of measurement. By reliability, we know whether test is good or not. According to Ary et al (2010:237) states that reliability is concerned with the effect of errors of measurement on the consistency of scores. A test said reliable if the test is consistent and dependable. It means that whenever the test is administered, it would show the similar or even the same result in any situation of test. In this research, the researcher used SPSS 16.0 for windows to know the reliability of test instrument. The researcher gives try out to the students in other class in the same grade. The try out is used to know the reliability of the pre-test and post-test.

Actually. The ideal test should be both reliable and valid. In this research, the researcher also used SPSS 16.0 for window to know the reliability of test instruments.

The criteria of reliability instrument can be divided into 5 classes as follows (Ridwan: 2004), those are:

1. If the *alpha cronbach* score 0.00 – 0.20: less reliable
2. If the *alpha cronbach* score 0.21 – 0.40: rather reliable
3. If the *alpha cronbach* score 0.41 – 0.60: enough reliable

4. If the *alpha cronbach* score 0.61 – 0.80: reliable
5. If the *alpha cronbach* score 0.81 – 1.00: very reliable

The result of reliability testing by using SPSS 16.0 can be seen from the table:

**Table 3.5 The result of reability pretest**

		N	%
Cases	Valid	20	100.0
	Excluded <sup>a</sup>	0	.0
	Total	20	100.0

a. Listwise deletion based on all variables in the procedure.

Cronbach's Alpha	N of Items
.490	21

**Table 3.6 The result of reliability posttest**

		N	%
Cases	Valid	20	100.0
	Excluded <sup>a</sup>	0	.0
	Total	20	100.0

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

Cronbach's Alpha	N of Items
.572	21

To know the items is reliable or not it can be seen from Alpha Cronbach's column. If the Alpha Cronbach's under 0,60 means is not reliable. But if the Alpha Cronbach's upper 0,60 means that is reliable. The Alpha Cronbach's score of pre-test is = 0,490 it means that isreliable. Then, the Alpha Cronbach's score of post-test is = 0,572 it means that is reliable.

#### **F. Normality and Homogeneity Testing**

Before analyzing the significant difference between the students taught using CSR strategy and those taught without using CSR strategy, the data should be normal distribution and homogenous. To measure the data computation were normal distribution and homogenous, the researcher conducted normality testing and homogeneity testing. The result as follow:

##### 1. Normality Testing

Normality tests are used to determine whether a data set is well-modeled by a normal distribution or not, or to compute how likely an underlying random variable is to be normally distributed. To know the normality, the researcher used *kolmogorv-smirnovetest* with

SPSS.16.0.Kolmogorv-smirnovetest *D test* is a test for normality for large samples.

## 2. Homogeneity Testing

Homogeneity testing is intended to make sure that the collected manipulation data in analysis truly taken from population which is too different each other. To know the homogeneity, the researcher used Testt of Homogeneity of Variances with SPSS.16.

## G. Data Collecting Method

The data collecting method is the method to obtain the data in the research. The aims of the data collecting in conducting scientific research was to get data that needed by the research. The schedule of the test and treatment could be seen in Table 3.7 below:

**Table 3.7 The Schedule of the Research**

No	Group	Meeting	Date	Activity	Time
1.	Experimental (10 MIPA 1)	I	Monday, March 4 <sup>th</sup> 2019	Pretest and treatment 1 by CSR Strategy	3-4
2.	Control (10 MIPA 2)		Tuesday, March 5 <sup>th</sup> 2019	Pretest and treatment 1 conventional	1-2
3.	Experimental (10 MIPA 1)	II	Monday, March 11 <sup>th</sup> 2019	Treatment 2 by CSR Strategy	3
4.	Control (10 MIPA 2)		Tuesday, March 12 <sup>th</sup> 2019	Treatment 2 conventional	1



5.	Experimental (10 MIPA 1)	III	Monday, March 18 <sup>th</sup> 2019	Treatment 3 by CSR Strategy	3
6.	Control (10 MIPA 2)		Tuesday, March 12 <sup>th</sup> 2019	Treatment 3 conventional	1
7.	Experimental (10 MIPA 1)	IV	Monday, March 25 <sup>th</sup> 2019	Treatment 4 by CSR Strategy and posttest	3-4
8.	Control (10 MIPA 2)		Tuesday, March 26 <sup>th</sup> 2019	Treatment 4 Conventional and posttest	1-2

Meanwhile, the technique of collecting data was clarified as follow:

### 1. Pre-Test

Pre-test was given to the students before the researcher taught by using CSR strategy. Pre-test is needed to know how far the students reading comprehension mastery in narrative text of English subject without using CSR strategy. The form of pre-test is multiple choices which consist 20 items. The pre-test given to know the basic competence for students and to know their earlier knowledge before they get treatment. The students answered the task of pre-test is 25 minutes.

### 2. Post-Test

After the treatment, the post test was given to the students. The test item in the post-test was different with the pre-test, but both of them have same indicators and the text was almost same in level of difficulties. This test is to measure student's reading comprehension after treatment applied. The form post-test was also multiple choices which consist 20 items. It was given to

know the final score and the student difference achievement before and after they get treatment. Time allocation to answer the task is 25 minutes.

#### **H. Treatment**

The treatment was conducted after the administration of the pre-test. The treatment consists of 4 meetings. The purpose of treatment is to help students in understanding reading comprehension mastery in narrative text. The treatment was taught by using CSR strategy to the students.

#### **I. Data Analysis**

The collected data were analyzed to know the effectiveness of Collaborative Strategic Reading (CSR) on Students' Reading Comprehension Mastery in Narrative text of The First Grade at Senior High School 1 Tulungagung. The researcher divided the test result into two groups, they were the test result from the experimental group and the test result of the control group. Data obtained from the posttest from both of Experiment class and Control class would be analyzed statistically using *Independent-Sample T-Test* through SPSS 16.0for windows. The researcher used t-test to know the significant value was higher or smaller than 0.05. The technique of data analysis used by the researcher belonged to quantitative data analysis.