CHAPTER III
RESEARCH METHODOLOGY

3.1 Research Method

This study is quantitative research. In this research, there were two variables, they were independent variable and dependent variable. Independent variable was the variable that was controlled in a scientific experiment to test the effects on dependent variable. The independent variable was Directed Reading Thinking Activity (DRTA) method (X). The dependent variable was the variable being tested and measured in a scientific experiment. The dependent variable was reading comprehension in narrative text (Y). The design of this study was including in experimental research. This experimental used quasi experiment. Quasi experiment was an empirical study used to estimate the causal impact of an intervention on its target population without random assignment. Which was designed has two group, they are experiment class and control class.

The experiment class was the class which getting the treatments by applying DRTA and the control class was class which getting the conventional method. Then both experimental class and control class received the same tests that will be doing before treatment called pre-test and after the treatment called post-test.

Sugiyono (2012:76) the design of pre-test-post-test control group can be seen as follow

O_1	X	O_2
O_3		O_4

Picture 2.
Pre-test-Post-test Control

Notes :

X : Treatment was given to the experiment class

O_1 and O_2 : Experimental class

O_3 and O_4 : Control class

O_1 and O_3 : Pre-test (in experiment and control class)

O_2 and O_4 : Post-test (in experiment and control class)

3.2 Population, Sample, and Sampling Technique

3.2.1 Population

According to Sugiyono (2012:80) population was generalization of the area including subject and object that having certain quality and characteristics that was decided by the researcher. Population was not only human, but object or other things also can be said as population. Population was not just about the total but including the characteristic. The population in this research was all the students at the twelfth grade of SMA Kemala Bhayangkari academic year 2018/2019.

TABLE 2
THE POPULATION OF STUDENTS AT THE TWELFTH GRADE OF SMA KEMALA BHAYANGKARI ACADEMIC YEAR 2018/2019

Class	Gender		Number
	Male	Female	
XI MIPA1	15	17	32
XI MIPA2	10	23	33
XIMIPA3	9	22	31
XI IPS1	18	11	29
XI IPS2	15	13	28
Total	**67**	**86**	**153**

Source : Staff Administration of SMA Kemala Bhayangkari

Based on the table above, the population of this study was all of the twelfth grade of SMA Kemala Bhayangkari academic year 2018/2019 that consist of 153 students.

3.2.2 Sample

According to Arikunto (2010:175) in conducting a research, if the research only take part of the population it is called sample research. This statement was also similar with Sudjana (2005:5) sample was part of the population. A sample was the group on which information was obtained. To get believe able conclusion the researcher should collect the right data and the sample was correctly and should follow right steps.

Sample was part of amount and characteristic which have by population. The researcher took the students in two classes from four classes available as the sample of the research. The sample were XII IPA 2 and XII IPA 3 and the total sample was 64 students, as experiment class and control class.

TABLE 3
RESEARCH SAMPLE

Class	Gender		Number
	Male	Female	
XI MIPA1	10	23	33
XI MIPA2	9	22	31
Total	**19**	**45**	**64**

Source : Staff Administration of SMA Kemala Bhayangkari academic year 2018/2019

3.2.3 Sampling Technique

The sampling technique that was used in this research was purposive sampling, purposive sampling was sampling technique with certain considerations. Sudjana (2005:168) says that the purposive sampling also know as sampling considerations, occurs when sampling was done based on individual consideration or consideration of research. In this case, the sample was choose in

consideration that both of them were taught by the same teacher and their learning achievment was almost the same. In this research, the researcher take two classes to be control class and experiment class, that are XII MIPA 2 and XII MIPA 3.

3.3.1 Research Instrument

Research instrument was measuring tool that was used to collect or obtain the data. Research instrument was a tool for measuring observing or documenting quantitative data. In contain specific question and response possibilities that will establish or developed before the research, (Creswell 2012:14). The tests were used to get the score of students' reading comprehension was multiple choice.

3.3.1 Research Instrument of Reading Comprehension

a. Conceptual Definition of Reading Comprehension

Reading comprehension was the process by which the reader counstructs meaning by interacting with the text.

b. Operational Definition of Reading Comprehension

To get the data in reading comprehension, the researcher would conduct a test by using multiple choice test. The researcher would give multiple choice test that consist 40 items to measure the students reading comprehension. Before conduct the research, the researcher would do try out. Try out would be done by giving multiple choice question with 40 question. Try out would be conduct in SMA Prima Kotabumi in twelfth grade student consist of 30 students. SMA Prima and SMA Kemala Bhayangkari have equality in the accreditation, the curriculum and allocation time.

c. The Specification of Reading Comprehension Items

The specification of reading comprehension items was about main idea, textual meaning, communicative goals, and language features of narrative text.

Moreover, this test was about multiple choice which the number of the question is 40 items.

TABLE 4

SPECIFICATION OF READING INSTRUMENT

Variable	Aspects	Indicators	Question number
Reading Comprhension in Narrative Text	Main Idea	Students are able to identify main idea within narrative text	1,9,15,17,21,25,29, 36
	Spesific Information	Students are able to find out spesific information from the text	3,4,5,12,13,22,23,2 6,27
	Reference	Students are able to find out reference a word in a sentence based on the text	2,11,14,18,30,34,3 9
	Inference	Students are able to find out inference a word in a sentence based on the text	7,8,10,24,32,33,38, 40
	Vocabulary	Students are able to identify appropriately word based on the context	6,16,19,20,28,31,3 5,37
Total			**40 items**

(Brown, 2007:385)

3.3.2 Validity Instrument

To measure the validity of the instrument, the researcher use contract validity which was designed based on reading aspects which have each indicator. The validity was going to consult with the expert. Then the expert was asked to judge related to the instrument. The expert allow to give another instrument if get

3.3.4 Reliability Instrument

A good test must fulfill some criterions, one of them was reliability. Arikunto (2010:86) stated that reliability means that an instrument could be believed to be as tool to collect data because the instrument has been good and although the data was taken many times the result will be similar or consistent. To know the coefficient of reliability between the odd and even numbers, the researcher used statistical formula, namely *Kuder dan Richardson* (K-R 20) (Arikunto, 2010:100) the formula was: $r_{II} = \left[\frac{n}{n-1}\right] \left[\left(\frac{S^2 - \sum pq}{S^2}\right)\right]$

Note:

r_{II} : coefficient reliability

n : the total valid items

S^2 : total Variance

P : right proposition

q : wrong proposition

$\sum pq$: sum of p*q

The criterion of reliability of the test was a result of r II calculation compared to r_{table} score with the significant scale 5%. If $r_{count} > r_{table,}$ so that the test instrument were reliable.

3.4 Data CollectingTechnique

Data collecting technique was the researcher`s way to collect the data. In the collecting data, the researcher must give score accurately and consistently by using the same procedure and criteria. In this research, the researcher used multiple choice test to collect the data. To conducting the data, the researcher used

pre-test and post-test to both of experiment group and control group to measure there was positive influence after the treatment or not, especially in experiment group.

3.4.1 Pre-test and Post-test

Firstly, the researcher give pre-test to measure how for students reading comprehension before the treatment DRTA technique is given to the experiment class. In addition, the pre-test was followed by both of the students from experimental and control class.

Secondly, the post-test was given to measure how for the students reading comprehension after the treatment using DRTA technique was given to the experiment class. In post-test, the researcher used the same instrument as in pre-test instrument. Similar to the pre-test, the students of experiment class and control class also followed this test. This used to find the influence of DRTA method toward students reading comprehension of students by comparing their score of pre-test and post-test.

3.4 Data Analysis

Data analysis was used to know the final result between the experiment class and control class. The data which used in this research was the data from pre-test and post-test. The data analyzed by using parametric analysis if the result of normality and homogeneity show that the data are normal and come from homogeny sample. The steps were :

3.5.1 Normality Test

Normality test used to test whether the data of the test have normal distribution. According to Sudjana (2005:466), liliefor formula was appropriate to measure the normality of the data. The steps were:

a. Determining standard number by using formula:

$$Zi=\frac{X - \bar{X}}{S}$$

Description:

Zi = standard number

Xi = score obtained

X = average

S = standard deviation

b. Determining opportunity to each standard number by using formula :

$$F(Zi)= P(Z \leq Zi)$$

c. Determining the proportion by using formula :

$$\frac{S(Zi)= \text{number } Z_1Z_2Z_3\ldots Z_n \text{ That} \leq Zi}{n}$$

d. Calculating the highest price of L, which was called as L_0, then compare L_0 with L_{table}. The normal criteria was that if $L_0<L_{table}$ so, the group has the normal distribution.

The hypothesis to be proved are as follows:

H_0 = The distribution of the data was normal

H_a = The distribution of the data was not normal

Meanwhile, the testing criteria for H_0 to be accepted was if $L_0 <L_{table}$, so the data was normally distributed or has normal distribution.

3.5.2 Homogeneity Test

After the data was found to be normal in distribution, the calculation was continued by homogeneity test. To test homogeneity of the two groups of similarities test used homogeneous. Term of homogeneous trials were both normally distributed data, according to the formula (Sugiyono, 2012:199) used F test with the following formula :

$$F = \frac{\text{Largest Variance}}{\text{Smallest Variance}}$$

After that, result of F test was compared with F table by the criteria if $F_{calcucated} < F_{table}$ so, variant of data was homogenous.

3.5.3 Hypothesis Test

The analyzed data of this research data used t-test. According to Sugiyono (2012:122) the formula of t-test was:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{s_1{}^2}{n_1} + \frac{s_2{}^2}{n_1} - 2r\left(\frac{s_1}{\sqrt{n_1}}\right)\left(\frac{s_2}{\sqrt{n_2}}\right)}}$$

Notes:

t = t-test

$\bar{x}_1$ = avarage of experiement class

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

s_1^2 = variant of the experiment class

s_2^2 = variant of the control class

n_1 = total number of students in experiment class

n_2 = total number of students in control class

The testing criteria is as follows:

If $-t_{observed} \leq t_{table}$, H_0 is rejected

If $-t_{observed} > t_{table,}$ H_a is accepted

The hypothesis that will be proved were :

H_o: There is no significant influence of using Directed Reading Thinking Activity (DRTA) strategy toward reading comprehension in narrative text of the twelfth grade at SMA Kemala Bhayangkari Academic Year 2018/2019.

H_a: There is significant influence of using Directed Reading Thinking Activity (DRTA) strategy toward reading comprehension in narrative text of the twelfth grade at SMA Kemala Bhayangkari Academic Year 2017/2018. Academic Year 2018/2019.