

CHAPTER III

RESEARCH METHOD

This chapter describes the research methodology. It includes research design, research variables, population and sample, research procedure, research instrument, data collection, and data analysis.

A. Research Design

Experimental research was used in this research. Experimental research manipulates and controls the cause variable before observing the effect variable's change.⁶⁰ True experimental, quasi-experimental, and pre-experimental research are the three forms of experimental research.

In this research, the researcher uses a quasi-experimental research approach in which individuals are assign to groups. According to Creswell, a quasi-experimental design uses an intervention but not a random assignment of individuals into groups. The use of pre- and post-tests, as well as experimental and control groups, is a feature of quasi-experimental research, but not in a random assignment. This is because the researcher is unable to form groups for the experiment artificially.⁶¹

Additionally, there are certain procedures for conducting quasi-experimental research. The first is determining who will be able to participate in the study. The second step is choosing two classes of equivalent level from all current classes. The third step is assigning one class to the experimental group and

⁶⁰ Latif, Mohammad Adnan, *Research Method on Language Learning An Introduction* (Malang: Universitas Negeri Malang, 2019), 93.

⁶¹ Creswell J. W, *Educational Research :Planning, Conducting, and Evaluating Quantitative and Qualitative Research* (Boston: Pearson Education, 2012), 309.

the other class to the control group. The fourth step is assigning the experimental group the experimental treatment and the control group the control treatment. The fifth step is to evaluate the treatment results of the two groups. Finally, calculate the difference between the mean scores of the experimental group and the control group.⁶²

Table 3.1 Research Design

Groups	Pre-Test	Treatment	Post-Test
Experimental Group	Pre-test	Direct Reading Thinking Activity	Post-test
Control Group	Pre-test	Skimming	Post-test

B. Research Variables

This research consists of three variables, one is an independent variable and the others are the dependent variable and moderator variable. A variable is defined as an attribute of an object of study. Good experimental design starts with deciding which variables to measure. Independent Variable (Direct Reading Thinking Activity), Dependent Variable (Reading Comprehension skills), and Moderator Variable (Gender).

C. Population and Sample

The population is students of the tenth grade, there are 13 classes in the tenth grade of MAN 1 Kota Kediri in the academic year 2023/2024.

The sample is the students of X A and X B. The researcher chooses these classes because according to the English teacher, these two classes are equal. XA as the experimental group will be taught by Direct Reading Thinking Activity, and X B as a control group will be taught by using Skimming.

⁶² Howard White and Shagun Sabarwal, "Quasi-Experimental Design and Methods," *September 2014*,08.

D. Research Procedure

There are some experimental procedures in this research. The first step is giving pre-tests to the experimental and control groups. The experimental group will be taught by using Direct Reading Thinking Activity and the control group will be taught by using Skimming. The second is giving treatment, after giving treatment, the next step is giving a post-test. The teaching procedure can be seen in appendix 1

E. Research Instrument

An instrument is a tool to collect research data. The kinds of research instruments that are used must be in line with the research problem. The researchers used pre-test and post-test as the instruments in the form of multiple-choice questions. The test instrument is composed of 25 items by the researcher.

1. Pre-test

A pre-test is a test that is administered before the researcher gives it to collect the data on students' reading comprehension getting the treatment. According to Creswell, a pre-test is a measurement of some feature or characteristic that the researcher assesses for participants in an experiment before getting the treatment.⁶³ It comprises 25 multiple-choice questions in the following categories: A, B, C, D, and E. After that, the researcher gives the treatment.

⁶³ Creswell J. W, *Educational Research :Planning, Conducting, and Evaluating Quantitative and Qualitative Research*, 297.

2. Post-test

All participants of the experimental and control groups will be given a post-test. After treatment, participants in the experiment are given a posttest to assess some attribute or feature. The post-test material is based on the treatment material but with different questions. It comprises 25 multiple-choice questions in the following categories: A, B, C, D, and E. The blueprint of the pre-test and post-test is in the following table:

Table 3.2
Blueprint of pre-test and post-test

No	Aspect	Indicator	Item of test pre-test and post-test
	Comparing social functions, and linguistic structure some narrative texts oral and written give and ask for related information about historical events according to the context of its use.	Identifying types of text	1, 11, 16, 23, 31, 36
		Identifying the information or moral message of the text	2,6,14,22,30,34
		Identifying the main idea of the paragraph	18,3,25,28,33,39.
		Identifying or finding a piece of implied information in the text	5,10,24,32,35,37,48.
		Identifying understanding and finding the correct answer for the underlined word.	13, 20, 40
		Identifying the purpose of the text	12, 49
		Identifying correct answers for blank questions.	8,9,19,29,43,44,50
		Identifying the structure of the text.	4,15,17,26,47.
		Identifying the title of the text.	7,2,27,45,46

The precise measurement of the test is referred to as validity. Item validity was used in this study to determine the index validity of the test. To assess the instrument's validity, each item was examined using the Pearson product-moment formula. It was discovered that out of 50 test items, the test of

the instrument was done by one class of tenth-grade students of MAN 1 Kota Kediri. The result indicates that 3 test items were invalid and that there were 47 valid test items.

Table 3.3
Validity of Each Item

No	rtable	rhitung	Notes	No	rtable	rhitung	Notes
1	0.329	0.554	VALID	26	0.329	0.441	VALID
2	0.329	0.508	VALID	27	0.329	0.564	VALID
3	0.329	0.509	VALID	28	0.329	0.508	VALID
4	0.329	0.647	VALID	29	0.329	0.565	VALID
5	0.329	0.535	VALID	30	0.329	0.602	VALID
6	0.329	0.055	INVALID	31	0.329	0.384	VALID
7	0.329	0.564	VALID	32	0.329	0.508	VALID
8	0.329	0.384	VALID	33	0.329	0.565	VALID
9	0.329	0.579	VALID	34	0.329	0.602	VALID
10	0.329	0.579	VALID	35	0.329	0.602	VALID
11	0.329	0.533	VALID	36	0.329	0.647	VALID
12	0.329	0.579	VALID	37	0.329	0.565	VALID
13	0.329	0.395	VALID	38	0.329	0.602	VALID
14	0.329	0.415	VALID	39	0.329	0.647	VALID
15	0.329	-0.198	INVALID	40	0.329	0.565	VALID
16	0.329	0.570	VALID	41	0.329	0.565	VALID
17	0.329	0.533	VALID	42	0.329	0.507	VALID
18	0.329	0.384	VALID	43	0.329	0.565	VALID
19	0.329	0.579	VALID	44	0.329	0.565	VALID
20	0.329	0.579	VALID	45	0.329	0.508	VALID
21	0.329	0.579	VALID	46	0.329	0.507	VALID
22	0.329	0.564	VALID	47	0.329	0.647	VALID
23	0.329	0.507	VALID	48	0.329	0.507	VALID
24	0.329	0.055	INVALID	49	0.329	0.450	VALID
25	0.329	0.384	VALID	50	0.329	0.564	VALID

Table 3.4
Reliability Test for Reading

Cronbach's Alpha	N Of Items
0.932	50

Based output in Table 1.3, the result of the reliability test for the question by using Cronbach's Alpha in SPSS 26.0. The score was 0.932. So, it can be concluded that the instruments of this research are reliable.

F. Data Collection

The procedures of data collecting are conducted as follows:

Table 3.5
Procedures of data collection

No	Procedures of data collection
1.	The researcher chooses tenth-grade students of MAN 1 Kediri as the population
2.	The researcher takes X A and X B as the sample of the experiment
3.	The researcher administers a pre-test before applying the Direct Reading Thinking Activity. the researcher gives a pre-test to assess students' ability to read narrative texts with multiple-choice questions.
4.	The researcher conducts the treatment using Direct Reading Thinking Activity for the experimental group and Skimming for the control group
5.	The researcher administers a post-test, Post-test is used to measure students' achievement after the treatment is given
6.	After conducting the points above, the researcher analyzes the result of the tests. An analysis is done to get the significant data result.

G. Data Analysis

The data is analyzed using quantitative forms by the researcher. Quantitative data is processed to obtain a numerical representation, to describe a series of numbers, and to portray numbers in the form of averages, frequencies, and percentages.

Meanwhile, the quantitative data for this study is gathered using a quantitative technique known as the post-test of the experimental and control groups. To analyze the data, the researcher used ANCOVA on SPSS. Following the completion of the test, the researcher compared both tests to determine whether or not there is a significant effect of Direct Reading Thinking Activity in teaching reading.

The researcher continues to analyze the data after collecting it, namely the pre-test and post-test scores from the experimental and control groups. The researcher utilizes SPSS to analyze the data. The researcher compares the two tests to see if the Direct Reading Thinking Activity has a significant effect on

students' reading skills.

The researcher continues to analyze the data after collecting it, namely the pre-test and post-test scores from the experimental and control groups. The researcher utilizes SPSS 26.0 to analyze the data. The researcher compares the two tests to see if DRTA has a significant effect on students' reading skills.

After obtaining the data from the pre-test and post-test in the experimental and control group, the data analysis used by the researcher is descriptive analysis, after the normality test, the homogeneity test, and the last independent sample t-test is explained as follows:

1. Descriptive Analysis

This is conducted to obtain an overview and exposure of the research data which includes the amount of data, maximum value, minimum value, and average value.

2. Prerequisite Test

The Analysis of Covariate is a popular statistical method to measure and understand data structure in a higher dimension. In doing ANCOVA calculation, several assumptions should be determined, such as the normality of multivariate, the homogeneity of covariance matrices, and the homogeneity of variances.

a. The Normality Test

The multivariate analysis requires a normal distribution population. To deal with the normality, the Shapiro-Wilk test was used. If the value of significance (p) $>.05$, the distribution of the data is normal.

b. The Homogeneity of Regression

To fulfill the pre-acquisition test dealing with ANCOVA analysis, there must be no interaction between the covariate and independent variable proven by the P value obtained is higher than 0.05 ($p > \alpha$). The covariance matrices are homogenous if the significance value is higher than .05.

c. The Homogeneity of Variances

A homogeneity test is a test done to know that two or more groups of sample data come from populations with the same variance (homogeneous). Levene's test is used to compute the homogeneity of variances between control and experimental groups. If the result of the homogeneity test of variance is more than 0.05, both pre-test and post-test have the same variance homogeneity or equal.

d. Linear Relationship Between Covariate and Dependent Variable

The purpose of the test of covariate linearity is to evaluate the relationship between the covariate and dependent variable. It can be estimated by the significant value ($p < \alpha$ (.05).

3. Hypothesis Testing

ANCOVA is a statistic used to measure the effect of independent variables called categorical on several dependent variables that display quantitative data. This analysis is also known as the Analysis of Covariate. In this research, to test the hypothesis, the ANCOVA analysis was done with SPSS 25.0. Here are the criteria for Hypothesis testing.