

CHAPTER III

RESEARCH METHOD

This chapter presented the research method. It focuses on the method used in conducting this study which cover research design, population and sample of the study, variable of the study, research instrument, data and source of data, validity and reliability, data collection method, technique of dataanalysis and hypothesis testing.

A. Research Design

This research used quasi experimental design. This design intent on reveal the casual relationship by using experimental group and control group and does not select those groups randomly.

This study used quasi experimental design in the form of nonrandomized control group, pretest-posttest design. This design does not permit random assignment of subject to the experimental and control group (Ary, 2010:316). The researcher determines to select two intacts group. The first group is given treatment, called experimental group and the other group is not be given a treatment, called control group. Then, both of two groups would be given pretest to know the beginning condition that is there any differences between experimental group and control group. Further, the researcher conducted experimental treatment activities with the experimental group only, and then administers a posttest to asses the differences between the two groups (Creswell, 2012:310). The research design could be explained at table 3.1, as follows:

Table 3.1 Non randomized group, pre-test and post-test

Group	Pre-test	Independent variable	Post-test
E	Y_1	X	Y_2
C	Y_1	-	Y_2

Ary (2010:316)

Notes :

E = experimental group

C = control group

 Y_1 = pre-test for experimental group Y_1 = pre-test for control group

X = treatment on the experiment group

 Y_2 = post-test for experimental group Y_2 = post-test for control group**B. Population, Sampling, and Sample****1. Population**

According to Ary (2010:148) “population is defined as all members of any well-defined class of people, events, of object.” Creswell (2012: 142) stated that “population is a group of individuals who have same characteristic.” Based on the description above, the researcher got conclusion that population is the large group which the researcher wanted to generalize the data of the research. It meant that the research must be conducted in a certain area. This research was conducted at SMK ISLAM 1 Durenan Trenggalek. This research was intended or the tenth grade students of SMK ISLAM 1 Durenan Trenggalek. In this study, the

population of the study includes all the tenth grade students of the SMK ISLAM 1 Durenan Trenggalek there is as the population and for observation the samples are 292 students consisted of 9 classes SMK ISLAM 1 Durenan Trenggalek.

Table 3.2 Total Classes and Total Students

No.	Name Classes	Total Students
1.	X TKJ 1	42
2.	X TKJ 2	40
3.	X MM 1	40
4.	X MM 2	40
5.	X OTKP 1	24
6.	X OTKP 2	25
7.	X AK	31
8.	X PMS	25
9.	X ACP	25
JUMLAH		292

2. Sampling

In selecting the sample of the study, the researcher used purposive sampling technique, sample are satisfactory to specific needs. According to Ary (2010:648) “purposive sampling is a non probability sampling technique in which subjects judge to be representative of the population are included in the sample. Before the researcher conducted research in SMK ISLAM 1 Durenan, the class which researcher would be used to do quasi experimental research suggested by the teacher (Rikhanatul Hamidah) who taught English in class X MM 2 and OTKP 1. The teacher suggested to used class of X MM 2 and OTKP 1 with the consideration that as an excellent class are also better input. This can be assumed that they can study longer than students of regular class. Moreover, the students of

excellent class are also better in term understanding English material. Therefore, the researcher wanted to know whether Think Aloud Strategy effectiveness increase students reading skill of text, namely descriptive text.

3. Sample

According to Arikunto (2006:109), a sample is part of population of representative of it. As stated by Ary (2002:163) a sample is a person of a population. It meant that a good sample must be representative of the entire as possible, so that the generalization of the sample as true as population. According to the explanation above, the conclusion is that sample is one of the representative of the population with certain technique. In this research the writer took two classes from the population as the sample; they were experimental and control group.

In occasion, the researcher used two classes as sample, that is class MM 2 consisted of 40 students and OTKP 1 consisted 24 class. So, the total number of sample was 64 students at SMK ISLAM 1 Durenan Trenggalek. 24 students are students who join who experimental group and 40 students as a control group.

C. Research Variable

According to Kerlinger (1986), a variable is an attribute that is regarded as reflecting or expressing some concept or construct. Variable of the study was divided into two kinds.

They were independent variable and dependent variable.

1. Independent Variable (X)

Independent variable is a variable which is observed the side effect. Independent variable can appear and exist by itself without any other supported. It influence and gives special effect independent variable. In this study, independent variable is think aloud strategy.

2. Dependent Variable (Y)

Dependent variable is the response of the criterion variable that is presumed to be influenced by the independent treatment conditions and any other. In this research the dependent variable is students' reading descriptive text skill study.

Independent variable is a factor that affects a dependent variable. Meanwhile, dependent variable is a variable that the researcher interested to change or to be affected. In this study, the independent variable is think aloud strategy and the dependent variable is students' reading descriptive text skill study.

D. Research Instrument

In any scientific research, instrument for collecting data was absolutely important. The accuracy of the result of research was mostly dependent on how accurate the use of instrument. Before research carried out, the instrument for the data collection should be well prepared. Related to the research problems, the researcher used reading test as an instrument.

As stated that a test is a set of stimuli present to an individual in order to elicit responses on the basis of which a numerical score can be designed.

Moreover, Heaton (1975: 89) states that the test used must be appropriate in term of our object, the dependable in the evidence provides, and applicable to our particular situation. In this case, the researcher gave the students reading test in using think aloud strategy. This study aimed at knowing the students achievement in reading skill, where the students was asked to tell by using think aloud strategy was used to make the students skill in reading descriptive text skill.

E. Data and Source of Data

In this study the data were taken from the students' scores of the eight grade students at SMK ISLAM 1 Durenan Trenggalek from reading test (pre-test and post-test). Those data were used to know the students' achievement in reading between the students taught by using think aloud strategy and those taught without using think aloud strategy. The data source in this study was the students of X MM 2 and X OTKP 1 classes of SMK ISLAM 1 Durenan Trenggalek.

F. Validity and Reliability Testing

Researcher is always dependent upon measurement. There are two important characteristics that every measuring instrument should go through a process of validity and reliability check.

1. Validity

Frankel and Wallen (2005:113) state that a valid instrument is measures what it is supposed to measure. Validity is the most important idea to consider when preparing or selection an instrument for use. These four types of validity, 1) Content Validity, 2) Criterion related validity, 3) Construct validity, 4) Face validity. In this research, to measure whether

the test has a good validity, the researcher analyzed the test from content validity and construct validity.

a. Content validity

Content validity is correspondence between curriculum subjective and objectives being assessed. The instrument in this research achieved content validity since the test was designed based on main competence and basic competence in Curriculum of 2013 since the school implements the Curriculum of 2013 in the time the researcher conducted this research.

Table 3.3 Content Validity of Reading Descriptive Test

Competence	(Dimention) Variable	Variable	Sub Variable	Indicators
- Analyze social function, text structure, and language feature several descriptive text oral and write with give and ask short informati	<ul style="list-style-type: none"> • Soci al Function 	Purpose	To give description about an object like a characteristic s of person, thing, animals, place or others in detail.	<p>The students will be able:</p> <ul style="list-style-type: none"> • To identify the commu nicative purpose of descripti ve text. <p>Number 6 and 14 post test.</p>

<p>on and simple related person, thing, and place with appropriate using and context.</p>	<ul style="list-style-type: none"> • Text Structure 	<p>Generic structure of descriptive text</p>	<ul style="list-style-type: none"> • Identification Introducing/identifying the subject/phenomenon to be described. • Description Describing in detail of the characteristics features of the subject. It may describe parts, qualities, characteristics, size, physical appearance, ability, habit, 	<ul style="list-style-type: none"> • To identify the specific information of descriptive text. Number 1, 3, 4, 8, 9, 12, 13, 17, 18 for pre test. Number 8, 9, 10, 11, 12, 13, 15, 16, 17, 19, 20 for post test. • To identify the rhetorical step in descriptive text. • To identify the topic
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			daily life, etc.	<p>or main idea of descriptive text. Number 7 and 11 for pre test. Number 1 for post test.</p> <ul style="list-style-type: none"> • To inferring the meaning of the text. Number 5 and 10 for pre test, post test. • To identify the conclusion from the text. Number 15 and 19
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	<ul style="list-style-type: none"> • Language feature 	Grammar and part of speech	<ul style="list-style-type: none"> • Use of simple present tense • Use noun • Use kind of adjective 	<ul style="list-style-type: none"> • To identify a good sentence by concerning to simple present tense. Number 6, 10 and 20 for pre test. Number 4 for post test. • To identify the language features of descriptive text. • To identify the noun on each sentence
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				of descripti ve text. Number 2 for pre test. <ul style="list-style-type: none"> • To finding synony ms or antony ms based on the text of descripti ve text. • To use adjectiv es to describe nouns.
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b. Construct validity

A test said to have construct validity if it can be demonstrated that it measures just the ability which is supposed to measure Cronbach, L.J. (1971). It is the process of determining the extent to which test performance can be interpreted in terms of one or more constructs. In this study, the research administered a

reading test and the technique of scoring the students' reading is based on the skimming and scanning.

2. Reliability

A test considered to have reliability if it are consistent and dependable. According to Mousavi (2002) as quoted by Brown (2003:20) explained that "If the students were given the same test or matched students on two different occasions, the test should yield similar result. Word 'similar result' here mean that almost impossible for the students to get exactly the same scores when the test is repeated the following day. Reliability is a measure of accuracy, consistency, dependability of fairness of scores resulting from administration of particular examination.

In this test, the researcher used inter-rater where the researcher involved two raters in scoring the students' reading skill by using the same scoring rubric. Two raters in this research were the English teacher and the researcher herself. After that, the researcher analyzed the correlation of two scores by using *Pearson* correlation which called *Pearson Product Moment*. For analyzing the correlation, the researcher used SPSS 23.0 *for window* to know the reliability of test instruments. The result of reliability testing by using SPSS 23.0 *for windows could be seen* from the table:

Table 3.4 Correlation of pre-test

Correlations

		Rater_1	Rater_2
Rater_1	Pearson Correlation	1	.986**
	Sig. (2-tailed)		.002
	N	5	5
Rater_2	Pearson Correlation	.986**	1
	Sig. (2-tailed)	.002	
	N	5	5

** . Correlation is significant at the 0.01 level (2-tailed).

Based on table the result above, Pearson Correlation was 0.951 and numeral significance was 0.002. This result of Pearson Correlation (0.951) was closer to 1 and the numeral significant was lower than ($0.002 < 0.05$). It meant that the test was reliable.

Table 3.5 Correlation of post-test

Correlations

		Rater_1	Rater_2
Rater_1	Pearson Correlation	1	.987**
	Sig. (2-tailed)		.002
	N	5	5
Rater_2	Pearson Correlation	.987**	1
	Sig. (2-tailed)	.002	
	N	5	5

** . Correlation is significant at the 0.01 level (2-tailed).

Based on the table above, Pearson Correlation was 0.987 and numeral significance was 0.002. This result of Pearson Correlation (0.987) was closer to 1 and the numeral significant was lower than ($0.02 < 0.05$). It meant that the test was reliable.

G. Normality and Homogeneity Testing

Before analyzing the significant difference between the students taught using think aloud strategy and those taught without think aloud 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 could be seen as follows:

1. Normality Testing

Normality testing is use to determine whether the data gained has normal distribution or not. In this study, researcher used SPSS 23.0 *for windows* with *Shapiro-Wilk* to test the normality of the data gained. The normality of the data could be seen based on the value (α) = 0.050 rules as follows: the hypotheses for testing normality weal:

- a. H_0 : Data is in normal distribution
- b. H_a : Data is not in normal distribution

There is also certainly in taking decision of normality testing, as follows:

- a. If the value of significance > 0.050 , H_0 is accepted
- b. If the value of significance < 0.050 , H_0 is rejected

The result of normality testing could be seen on the table 3.6 below:

Table 3.6 Normality Testing of Experimental Class and Control Class

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Experiment	.121	24	.200*	.930	24	.095
Control	.145	24	.200*	.944	24	.198

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Based on the output from SPSS above it was known that the significance value from pre-test of experimental class was 0.095 and the significance value from pre-test of control class was 0.198. The significant value on pre-test of experimental class was bigger than 0.05 ($0.095 > 0.05$). The significant value on pre-test of experimental class was bigger than 0.05 ($0.198 > 0.05$). Both significant value of experiment class and control class were bigger than 0.05. It meant that H_0 was accepted and H_a was rejected. So, it can be interpreted that both of data (pre-test of experiment class and control class) were in normal distribution.

2. Homogeneity Testing

Homogeneity testing is used to determine whether the data gained as a homogeneous variance or not. To know the homogeneity, the researcher used Test of Homogeneity Variance formula by using SPSS Program 23.0 version. Homogeneity testing was done after doing the

distribution score of group involved. The computation of homogeneity testing uses *Test of Homogeneity of Variances* in SPSS 23.0 for windows by the value of significance (α) = 0.050. The homogeneity of data could be decided bas on the hypothesis of homogeneity as follow: Before doing homogeneity testing, the researcher decided hypothesis in this homogeneity as follows:

- a. H0: 1 variance (Experimental group and Control group) was homogenous.
- b. Ha: 1 variance (Experimental group and Control group) was not homogenous.

There also certainty in taking decision of homogeneity testing, as follows:

- a. If the value of significance > 0.050 , H0 is accepted.
- b. If the value of significance < 0.050 , H0 is rejected.

The result could be seen in table as follow:

Table. 3.7 Homogeneity Testing of Experimental Class and Control Class

Test of Homogeneity of Variances

Pretest

Levene Statistic	df1	df2	Sig.
.853	5	12	.539

Based on the output from SPSS above it was known that the significance value was 0.539, it meant that the significant is more than 0.05 (0.539 $>$ 0.05). It meant that H0 was accepted and Ha was rejected.

So, it could be interpreted that the homogeneity testing of variance in both group in this research showed that the data had homogenous variance, so it was qualified to be analyzed.

H. Procedures of the Research

Procedure of the research included data were divided into some kinds of tests. They were as follows:

1. Pre-test

At the first meeting, the researcher gave a pre-test to the students. A pre-test provided a measurement on some attribute or characteristic that students assess for participant in an experimental before they received treatment Creswell (2003). It was conducted to know how far the students score in reading. This test is given in order to know far the students ability in reading comprehension of descriptive text before they are taught by using think aloud strategy. The pre-test comprised 30 items, in the form of 20 items multiple choice short-answer and 10 items long-answer task. This test was done on Thursday, 14th February 2019. The researcher asked the students to answer the questions for about 60 minutes.

2. Treatment

In this study, the treatment conducted two meeting since the researcher had no authority to conduct more than it moreover the class did not belong to the researcher herself. The treatment was given after administering the pretest and before the posttest. The first meeting is conducted on February 14th 2019 and the

second meeting is conducted on February 21st 2019. The procedures of treatment could be seen as follows:

1. First, treatment was conducted on February 14th 2019

Before beginning applied Think Aloud Strategy in teaching reading, the researcher conveyed about the element descriptive such as the generic structure of descriptive and the use simple present tense. Then, the researcher introduced the technique of Think Aloud Strategy , especially in reading by reading text. Then, the researcher classified the students in same group consisted of 4 students. After that, the researcher gave exercise to the students. The students should read by using Think Aloud Strategy they have been based on the work sheet would given by the researcher. The topic was about “Descriptive text to give description about an object like a characteristics of persons and places”.

2. Second, treatment was conducted on February 21st 2019

The researcher explained about conjunction of time for descriptive text. Then, gave exercise to the students. The researcher reminded how to do the exercise based on explanation before. The students should read by using Think Aloud Strategy which was based on the work sheet given by the researcher. The topic was about “Descriptive text to give description about an object like a characteristics of animal and places”.

3. Post-test

According Creswell (2008), the post-test is a measure on some attribute of characteristic that is assessed for participants after a treatment. The researcher conducted post-test after conducting the teaching through think aloud strategy that was on Thursday, 21stFebruary 2019. The post-test comprised also 30 items, in form of 20 items multiple choice short-answer and essay 10 long-answer task. The researcher asked the students to answer the questions about 90 minutes. This test was conducted to know how far their ability in reading after giving treatment. It was done to know the final score and also to know the difference achievement before and after treatment.

I. Data Analysis

Data analysis is a technique to analyze data to know the result of a research. In analyzing data, the researcher used quantitative data by using statistical program SPSS 23.0 *for windows*. The quantitative data analysis was used to know the significant difference on the students' reading skill between the students taught by using Think Aloud Strategy and those taught without using Think Aloud Strategy.

Data obtained from the post-test from both group of Experiment class and Control class would be analyzed statistically using *Independent-Sample T-test* through SPSS 23.0 *for 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.