

CHAPTER III

METHOD OF RESEARCH

In this chapter, the writer describes: (a) method of research; (b) variables of research; (c) operational definition; (d) population and sample; (e) technique for collecting the data; and (f) technique for analyzing data.

A. Research Method

The method of the research is quasi experimental design method. According to Fraenkel et al. (2012, p.275), quasi experimental design does not include the use of random assignment. It enables the researchers to rely instead on other technique to control (or at least reduce) threats to internal validity.

In this study, the writer used the pre-test post-test non equivalent groups design. This design, one of the most commonly used quasi experimental designs in educational research, is such naturally assembly groups as interact classes or sample which may be similar. Model of the pretest-posttest non-equivalent group design suggested by by Best and Kahn (1995: 151):

$$\begin{array}{|c|} \hline \begin{array}{ccc} O_1 & X & O_2 \\ \hline O_3 & C & O_4 \end{array} \\ \hline \end{array}$$

Where :

----- : Dash line indicated that the experimental and control group have not been equated by randomization

O₁ : Pre-test in experimental group

X : Treatment in experimental group taught using ART Strategy

- O₂ : Post-test in experimental group
- O₃ : Pre-test in control group
- C : Treatment in control group taught using strategy that usually used by the teacher at school
- O₄ : Post-test in control group

B. Research Variables

According to Creswell (2012, p.112), a variable is a characteristic or attribute of an individual or an organization that (a) researchers can measure or observe and (b) varies among individuals or organization studied. So, independent variable is variable that affects or is the cause of the change or the onset of the dependent variable. While dependent variable is the variable that is affected or which become due because of the independent variable.

There are two variables in this study; independent variable and dependent variable. Independent variable is Ask, Reflect, Text (ART) strategy. Meanwhile, the dependent variable is students' narrative writing achievement.

C. Operational Definitions

In order to avoid misunderstanding of the terms used in this study, it is necessary for the writer to present operational definitions of some key words in this research. They are; teaching, narrative paragraph writing, Ask, Reflect, Text (ART) strategy and students' writing achievement.

In this study, *Teaching* is guiding and facilitating learning, enabling the learner to learn, setting the conditions for learning. On the other hand, teaching is

showing or helping students to learn how to do something, giving instruction, guiding something, providing with knowledge causing to know or understanding.

In this study, *Narrative paragraph* is a paragraph that tells a story and describes the story as it is supposed to. Narrative paragraph is used in fiction and includes the setting, a goal, an obstacle, a climax and a resolution.

In this study, *ART (Ask, Reflect, Text) strategy* is a simple strategy, applied to help the students to use their individual writing process to make a narrative text. It also designed to help students in improving their writing ability.

In this study, *The students' writing achievement* is the result or the output of teaching writing process. It is not only influenced by the students' writing ability, but also the suitable strategy that teacher conducted.

D. Population and sample

1. Population

Population is all of investigated subject. If someone wants to investigate all of the elements in a research area, his research is population research (Arikunto, 2010, p.173). Meanwhile, according to Dowdy, Wearden, & Chilko (2004, p.25), a population is commonly understood to be a natural, geographical, or political collection of people, animals, plants, or objects. The population of this study was the eleventh grade students of SMA Nurul Iman Palembang.

There were four classes of the eleventh grade students of SMA Nurul Iman Palembang. XI IPS 1 was 37 students. Then, the XI IPA 1 had 33 students. XI IPA 2 class had 33 students. And then the last one, XI IPA PLUS class was 27

students. The total number of the population was 130 students as presented in Table 1.

Table 1
Population of the Study

No	Class	Total
1	XI IPA 1	33
2	XI IPA 2	33
3	XI IPS 1	37
4	XI IPA PLUS	27
Total of students		130

(Source: Administration SMA Nurul Iman Palembang Academic Year 2015/2016)

2. Sample

Sugiyono (2012, p.81) states that sample is part of the number and characteristic of the population. Sample is part of population which is investigated (Arikunto, 2013, p.174). Furthermore, Frankel and Wallen (1991, p. 91) said that sample is any group on which information is obtained. In this study, cluster sampling was used. This sampling is appropriate for this research since the population is large and widely dispersed. According to Cohen (2007, p.112) by cluster sampling, the researcher could select a specific number of schools and test all the students in those selected schools. He also asserts that cluster samples are widely used in small-scale research.

The writer took two classes of the eleventh grade students of SMA Nurul Iman as a sample. They were XI IPA 1 and XI IPA 2. The students' number of XI IPA 1 class was 33 students and XI IPA 2 class was 33 students. So, the total number of sample was 66 students. Then, the sample was divided into two groups,

XI IPA 1 class as control group and XI IPA 2 class as experiment group. They presented in table 2.

Table 2
Sample of the Research

No	Class	Group	Total
1	XI IPA 1 Class	Control	33
2	XI IPA 2 Class	Experiment	33
Total of Students			66

(Source: SMA Nurul Iman Academic Year 2015/2016)

E. Technique for Collecting Data

In this study, the data were collected by using test. Test is a means of measuring the knowledge, skill, feeling, intelligence or aptitude an individual or group. According to Brown (2004, p.3) a test is method of measuring a person's ability, knowledge, and performance in a given domain. In this study, the test was in the form of pre-test and post-test.

a. Pre-test

Pre-test was given before the researcher did the treatments. According to Creswell (2012, p. 297), A pretest provides a measure on some attribute or characteristic that you assess for participants in an experiment before they receive a treatment. There were some purposes of giving pre-test to the students. The purpose of giving pretest to the students was to know the students' ability in learning writing before implementing Ask, Reflect, Text strategy. And the result of students' work were checked and scored by two raters.

b. Post-test

Posttest was given after conducting treatments to the experimental group. According to Creswell (2012, p. 297), A posttest is a measure on some attribute or characteristic that is assessed for participants in an experiment after a treatment. The treatment which given to the experimental group was Ask, Reflect, Text (ART) strategy. The type of posttest was the same as the pretest. The aim of giving posttest to the students was to measure students' ability in writing after implementing the ART strategy. The same as pretest, two raters checked and gave score to the students' works. The result of this test was compared with the result of pretest in order to know the effect of teaching writing using ART strategy to students' writing ability. From the posttest, the writer got the data that could be used to measure the students' progress taught by using ART strategy.

c. Score Interval for Writing

There are five categories in score interval for assessing writing. They are excellent, good, fair, poor, and very poor. The score is excellent if the students get 81-100. The students who get 66-80, the category is good. The category is fair if the students get 56-65. The students who get 47-55, the category is poor. If the students get score below 46, the category is very poor. The score interval for writing presented in table 3 :

Table 3
Score interval for writing

Score Interval	Category
81-100	Excellent
66-80	Good
56-65	Fair
47-55	Poor
Below 46	Very Poor

Source : SMA Nurul Iman Palembang in academic 2015

F. Validity and Reliability

1. Validity

The validity of the instruments used in research is very important, for the conclusions that researchers draw are based on the information they obtain using the instruments. Fraenkel et al. (2012, p.147) state that the term “validity” refers to the appropriateness, meaningfulness, and usefulness of any inferences of researchers draws based on the data obtained through thye use of an instrument. In addition, Fraenkel et al. (2012, p.158) state that validity obtain by expert judgement by using Content-related evidence. There were two experts evaluating the test whether it was appropriate or not. The raters were an English lecturers in UIN Raden Fatah Palembang. They were 5 evaluated items; instruction, topic, time allocation, content, and rubric. The results showed that rubric was very appropriate, topic, time allocation, and content were appropriate. In brief, the writing test was valid and appropriate to collect the data. In this study, the writer did the test validity of construct validity and content validity.

a. Construct Validity

The writer did construct validity of the test to judge or measure whether or not a test instrument well to measure the students' ability. In construct validity of this study, the writer submitted two raters or expert judgements. The format of the instrument test was measured by two raters before doing research. Fraenkel et al. (2012 p.150) assume that a common way is to have someone look at the content and format of the instrument and judge whether or not is appropriate. The "someone" of course, should be an individual who knows enough about what is to be measured to be a competent judge. Then, the writer took two raters to measure the format of the instrument test. They were Benny Wijaya, M. Pd, and Winny A. Riznanda, M. Pd. They are lecturers of UIN Raden Fatah Palembang. They measured including such things as instruction, topic, time allocation, content and rubric. After measuring the format of instrument test, the two raters accepted it to continue doing research to the eleventh grade students (see appendix E)

b. Content Validity

Content validity refers to judgements on the content and logical structure of an instrument as it is to be used in a particular study (Frankel et al., 2012, p.162). Rater was used to see the content validity by administering the test to the other students from different school with the sample. The instrument has tried out at SMA Muhammadiyah 1 Palembang. The purpose was to know the time allocation or how long the students finished to write their narrative story. However, the researcher got the time allocation was 40 minute. Specification test is on table 4 (see appendix F)

Table 4
Table of Test Specification

No	Objective	Materials	Indicators	Number of items	Types of test
1	The students are able to write functional text of narrative text by using Ask, Reflect, Text strategy	Malin Kundang	The students are able to write the story of Malin Kundang	1	Written test
		Tangkuban Perahu	The students are able to write narrative text of Tangkuban perahu	1	Written test
		Timun Emas	The students are able to write the story of Timun Emas	1	Written test

2. Reliability Test

According to Franken & Wallen (2012, p.154), reliability refers to the consistency of the scores obtained-how consistent they are for each individual from one administration of an instrument to another and from one set of items to another. The concept of reliability is related to the consistency of the measurement when the testing procedure is repeated on a population of individuals or group.

Arikunto (2013, p. 242) states that in method of collection data, that is dangerous is in the scale that the assesment have range of consistency is low. In addition, Arikunto (2013, p.243) states that if the rater (expert judgement) more than two, it should be conducted the agreement score. It means that, if the rater more than two, researcher can modify the formula as many as the rater used by the researcher. Therefore, in this study the researcher used observation realiability that used rater (expert judgement) to take handle of the instrument and the rubric were realiable or not. They were lecturer of UIN Raden Fatah Palembang that already finished their master degree. First, Mr. Beni Wijaya, M. Pd. Second, Ms. Winny A Riznanda, M. Pd. The agreement of Coefficient by H.J.X. Fernandes cited in Arikunto (2013, p.244) as followed the formula below :

$$KK = \frac{2.S}{N_1 + N_2}$$

KK = Agreement Coefficient

S = Agree, Amount of same object

N₁ = Amount of score by rater 1

N₂ = Amount of score by rater 2

From the calculation, it found that the realiability of the writing test items by using Agreement Coefficient was 0.79. It was higher than 0.70. Therefore, it could be stated that this instrument was considered realiable for study (see appendix G).

G. Technique for Analyzing Data

All of the data were analyzed by using SPSS 20. Before analyzing the data, to measure the most effective techniques and the interactions among the

techniques towards the students writing interest, the analysis of the students pre-test and post test in the experimental and control groups was described as follows:

1. Data Descriptions

In analyzing data description, there were two analyses ; distribution of frequency data and descriptive statistics.

a) Distribution of Frequency Data

In distributions of frequency data, the students' score interval, frequency, percentage were achieved. The distributions of frequency data were obtained from students' pretest score in control group, students' posttest score in control group, the students' pretest score in experimental group, and students' posttest score in experimental group.

b) Descriptive Statistics

In descriptive statistics, the students' pretest-posttest scores in control and experimental groups were analyzed through the analysis on the descriptive statistics. It was done to know the spreading scores of the students' pretest and posttest in the experimental and control groups including the scores of minimum, maximum, mean and standard deviation

2. Prerequisite Analysis

In analyzing the data, the result of prerequisite analysis was needed to know if the data were normal and homogenous.

a) Normality Test

Normality test was used to measure whether the obtained data was normal or not (Basrowi and Soeyono, 2007:85). The data were classified into normal when the p-output was higher than 0.05. In measuring normality test, I-Sample Kolmogronov smrinov was used.

b) Homogeneity Test

Homogeneity test was used to measure the obtained score whether it was homogeneous or not. According to Basrowi and Soeyono (2013, p.106), the score is categorized homogeneous when the p-output was higher than significant difference at 0.05 levels. In measuring homogeneity test, *levine formula* in SPSS 20 was used.

3. Hyphothesis Testing

In measuring signficance difference on student's writing achievement taught using ART strategy, independent sample t-test was used. It measured the students' posttest score in control and experimental group. Significant difference was found whenever the result is lower than mean significant difference at 0.05 levels.

H. Research treatments and teaching Procedure

1. Research Treatments

Treatment refers to any action or process designed to find out that something is effective, workable, and valid. The writer did the experiment by applying the Ask, Reflect, Text (ART) to the sample, the eleventh grade students of SMA Nurul Iman Palembang, in the academic year 2015-2016.

Research treatments were designed for twelve meetings. There are two meetings for a pre-test and post-test and ten meetings for treatments. Every week, the students got two meetings. Each meeting was 90 minutes. Every meeting for treatments, the students were given a functional text (narrative text). The material used for experimental. It can be seen in table 5 (see appendix A, B, C, D and E)

Table 5
Teaching Schedule of Research Treatment

No	Day/Date	Experime	Control	Writing	Kinds of	Research	Time
		nt Group	Group				
		Time					
1	Wed, Feb 18 th 2015	08.30	10.30	Pretest		1	2 x 45
2	Wed, Feb 25 th 2015	08.30	-	Bawang Merah and Bawang Putih Story		2	2 x 45

3	Fri, Feb 27th 2015	09.30	-	Cinderella	Narrative Text	3	2 x 45
4	Wed, Mar 4th 2015	08.30	-	The Ants and The Grasshopper		4	2 x 45
5	Fri, Mar 6th 2015	09.30	-	Snow White and Seven Dwarfs		5	2 x 45
6	Wed, Mar 11th 2015	08.30	-	Kemaro Island		6	2 x 45
7	Fri, Mar 13th 2015	09.30	-	Mouse deer and Crocodiles		7	2 x 45
8	Wed, Mar 18th 2015	08.30	-	The Legend of Prambanan Temple		8	2 x 45

9	Fri, Mar 20th 2015	09.30	-	The Legend of Sura and Baya		9	2 x 45
10	Wed, Mar 25th 2015	08.30	-	The Legend of Toba Lake		10	2 x 45
11	Fri, Mar 27th 2015	09.30	-	The Legend of Banyuw angi		11	2 x 45
12	Wed, Apr 1nd 2015	08.30	10.30	Posttest		12	2 x 45

2. Teaching Procedure

Teaching Procedures for Experimental and Control Groups

NO	MEETING	TEACHING PROCEDURES			
		EXPERIMENT GROUP		CONTROL GROUP	
		LEARNING ACTIVITIES	TIME ALLOCATION	LERNING ACTIVITIES	TIME ALLOCATION
1	1st meeting	Pretest	90'	Pretest	90'
2	2nd meeting – 11th meeting	<p>1. Pre-activities</p> <ul style="list-style-type: none"> • Teacher greets students • Teacher checks attendance list • Teacher gives students the motivation and asking question related to the picture • Teacher introduces the topic to the students <p>2. Whilst activites</p> <ul style="list-style-type: none"> • The teacher explains about narrative text • The teacher explains the generic structures and language features of narrative text • Teacher explains the students about ART (Ask, Reflect, Text) • The students will choose the story topic of narrative text that they want to make 	<p>10'</p> <p>70'</p>		

		<ul style="list-style-type: none"> • The students will ask themselves by using WWW W=2 H=2 questions for what they would like to include as story content. • Students reflect their answer, they will illustrate their ideas with art media (e.g. markers, watercolor paints) • The students write the story based on the picture • The teacher gives the composition result to the students <p>3. Post activities</p> <ul style="list-style-type: none"> • Teacher asks students , if they still have difficulties about the material that was given • Teacher asks students if they still have difficulties in writing narrative text • Teacher concludes the material • Teacher ends the meeting 	10'		
3.	12th meeting	Posttest	90'	Posttest	90'