

CHAPTER III

THE RESEARCH METHODOLOGY

A. The Design of the Research

This research was an experimental research. Gay stated the experimental method is the only method of research that can truly test hypotheses concerning cause and effect relationships.¹ The design of this research had quasi experimental design, which used the nonequivalent control group design. Creswell stated quasi experimental design is experimental situations in which the researcher assigns, but not randomly, participants to groups because the experimenter cannot artificially create groups for the experiment.² The writer used intact groups, the first class was as the experimental group and the second class was as the control group. They were treated differently, however, the teacher, the length of the time, and material was the same. Experimental class and control class were using pre-test and post-test, but, treatment was conducted to experimental group only. The types of this research can be designed as follows:³

Table III.1
The Research Design

Select Control Group	Pretest	No Treatment	Posttest
Select Experimental Group	Pretest	Experimental Treatment	Posttest

¹Gay, L. R. and Peter Airasian, (2000), *Educational Research Competencies for Analysis and Application Sixth Edition*, New Jersey: Pearson Education. p. 164

²John W, Creswell. (2008), *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research (Third Edition)*, New Jersey: Pearson Education. P. 172

³*ibid.* p. 314

B. The Location and Time of the Research

The research was conducted at SMAN 1 Kampar. This research was done within the periode or schedule of the curriculum prescribed by schcool, starting from August 20th to September 13th 2013.

C. The Subject and Object of the Research

Based on the title of the research, the subject of this research was the second grade students at SMAN 1 Kampar. Then the object of this research was the effect of using slicing the pie strategy toward writing ability on narrative paragraph.

D. The Population and Sample of the Research

The population of this research was the second grade students at SMAN 1 Kampar. It had seven classes. The total number of second grade at SMAN 1 Kampar was 202 students.

The population above was too large enough to be taken all as sample of the research. Sample of this research was chosen by using cluster random sampling technique. According to Gay, cluster random sampling is a sampling technique where the researcher randomizes the group of sample.⁴ This technique does not randomize the participants to be selected as a group of sample. Sample In this location has already assigned in group by the school institution. Because the

⁴Gay, L. R. and Peter Airaisian. (2000), *Educational Research Competenciess for Analysis and Application: Six Edition*, New Jersey: Hall.inc. p. 234

sample of this research was chosen by using cluster random sampling technique, so the writer took two classes as the sample of this research. They were class XI IPA1 as experiment class and XI IPA 2 as control class. Therefore, the sample was 50 students.

E. The Research Procedures

1. Procedures of Collecting Data for Experimental Class

In experimental group, there are three procedures for collecting data:

a. Pre-test

Pre-test was given to the students before the students were taught by using slicing the pie strategy. It was used to measure the students' ability in writing narrative paragraph before they were taught by using slicing the pie strategy.

b. Treatment

In treatment, students were taught by using slicing the pie strategy. Teacher gave explanation to the students about what narrative paragraph is, and taught them how to write narrative paragraph by using slicing the pie strategy. For applying slicing the pie strategy, teacher asked students to write narrative paragraph by using slicing the pie strategy.

c. Post-test

Post-test was given to the students after applying slicing the pie strategy. The result of post-test was compared with pre-test to get the effect of this strategy and to know students' ability in writing narrative paragraph after being taught by using slicing the pie strategy.

2. Procedures of Collecting Data for Control Class

a. Pre-test

It was given by the teacher before the students were taught by using conventional strategy.

b. Teaching by using conventional strategy

Students was given explanation about narrative paragraph by the teacher and asked them to write narrative paragraph.

c. Post-test

Post –test was given to the students after being taught by using conventional strategy. It was used to know whether the students were able to write narrative paragraph or not.

Finally, the results of the pre-test and post-test of experimental class were compared. From the result, the writer knew, whether slicing the pie strategy could give effect on students' writing narrative paragraph or not.

F. The Technique of Collecting Data

In this research, the writer used test as instrument to collect data.. The test was written test. The form of paragraph was narrative paragraph. The writer gave pre test and post test to the students. The data of this research were the score of the students' writing ability in writing narrative paragraph that could be measured by using assessment used by the English teacher at SMAN 1 Kampar.

G. The Reliability and the Validity of the Test

For testing student's writing ability, the writer used test to know reliability and validity. Validity is most important characteristic of a test that measures instrument. Clearly validation is a crucial feature of any test. To know the validity of the test, the writer used content validity. Content validity used by the writer in this test, was students were asked to write about the topics related to their materials. Thus, validity is specific to the interpretation being made and being tested to the group.

The test used for testing the student's writing ability had to have reliability and validity. Gay states that reliability is the degree to which a test consistently measures whatever it is measuring.⁵ In this research, the writer used two raters to score the student's writing ability on narrative paragraph. Brown says that inter rater reliability occurs when two or more scores yield inconsistent scores of the same test, possibly for lack of attention to score criteria, inexperience, inattention or even preconceived biases.⁶ Thus, reliability is expressed numerically, usually as a reliability coefficient obtained by using correlation.

⁵Gay, L. R. and Peter Airaisian. (2000), *Educational Research Competenciess for Analysis and Application: Six Edition*, New Jersey: Hall.inc. P. 169

⁶Brown, H. Douglas. (2003), *Language Assessment: Principles and Classroom Practices*, New York: Pearson Education Inc. p. 19

Table III.2
The Score of Student's Writing Ability of Rater 1 and Rater 2

Students	Rater 1	Rater 2
1	61	59
2	60	59
3	58	55
4	61	56
5	60	58
6	63	55
7	61	52
8	58	50
9	62	56
10	62	58
11	56	58
12	65	59
13	54	50
14	58	54
15	55	58
16	66	61
17	61	63
18	60	54
19	59	56
20	59	53
21	62	58
22	57	53
23	62	54
24	61	54
25	61	60

Based on table above, it can be seen that the scores both rater 1 and rater 2. The score of rater 1 can be correlated to rater 2. To know the reliability of the test, the writer used product moment formula through SPSS 16.0 version.

Table III.3
Correlations Score of Rater 1 and Rater 2
Correlations

	Group	Score
Group Pearson Correlation	1	.455*
Sig. (2-tailed)		.022
N	25	25
Score Pearson Correlation	.455*	1
Sig. (2-tailed)	.022	
N	25	25

*. Correlation is significant at the 0.05 level (2-tailed).

From the output above, it can be seen that r calculation was 0,455, to correlate to r table. Firstly obtained the degree of freedom (df). The df was 48, because $df= 48$ was not found, so the writer took $df=50$ to be correlated either at level 5% or 1 %. At level of 5% r table 0.273, while at level of 1% r table 0.354.

r calculation (r_o)	r table (r_t)
0.455	0.273 (5%) 0.354 (1%)

From table above, the writer concluded that (r_o) is higher than (r_t) either at 5% and 1%. Thus, there is a significant correlation between score of rater 1 and rater 2. In other words, the writing test is reliable, because the reliability of writing test is moderate relationship.

H. The Technique of Data Analysis

In analyzing the data of this research, the writer used T-test formula. Gay says that, T-test is used to determine whether two means are significantly different at a selected probability level.⁷ First, the writer analyzed the data by using independent sample T-test to know whether the result of the research is statistically significant or not. The T-obtained value is consulted with the value T-table at freedom $9df = (N_1 + N_2) - 2$. The data analyzed by using SPSS 16,0 version.

Statistically the hypotheses are:

$H_a: t_o > t\text{-table}$

$H_o: t_o < t\text{-table}$

H_a is accepted if $H_a: t_o > t\text{-table}$ or there is a significant effect of using slicing the pie strategy toward students' writing ability on narrative paragraph.

H_o is accepted if $H_o: t_o < t\text{-table}$ or there is no significant effect of using slicing the pie strategy toward students' writing ability on narrative paragraph.

⁷Gay, L. R. and Peter Airaisian. (2000), *Educational Research Competenciess for Analysis and Application: Six Edition*, New Jersey: Hall.inc. P, 169.