

CHAPTER III

RESEARCH METHOD

A. Research Design

In this research, the writer used an experimental research. The design of this research is a quasi experimental research. John W. Creswell explains that experiment is testing an idea (practice) to determine whether it influences an outcome or dependent variable.¹ Sukardi states that the quasi experiment research is the research design that mostly used in education or the other research with the subject of research are human.²

This research consisted of two variables, they were: independent variable (variable X) that referred to the using Dramatic Tableaux strategy and dependent variable (variable Y) that referred to the reading comprehension. In conducting this research, the writer used two classes. The first class was used as experimental class which was taught by using Dramatic Tableaux strategy and the second class was used as control class which was taught without using Dramatic Tableaux strategy. This research focused on Nonequivalent Control Group design, both of groups were given pre-test and post-test, and only experimental group was given the treatment. The nonequivalent control group design can be shown below:³

¹Jhon. W. Creswell, *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research*. (New Jersey: Pearson Education, 2008), p. 299.

²Sukardi, *Metodologi Penelitian Pendidikan: Kompetensi dan Praktiknya* (Jakarta: Bumi Aksara, 2005), p.16

³Louis Cohen; et al., *Research Methods in Education* (New York: Routledge, 2007), p.283. Retrieved on January 2nd, 2013 from www.librarynu.com

O₁ X O₂ (Experimental)

O₃ O₄ (Control)

Where:

O₁ and O₃ = Pre-test

O₂ and O₄ = Post-test

X = Treatment by using Dramatic Tableaux strategy

B. The Location and Time of the Research

This research was conducted at MA Darul Hikmah Pekanbaru that is located on Manyar Sakti street Km.12, Simpang Baru Tampan . The research was conducted from August to September 2013.

C. The Subject and Object of the Research

The subject of this research was the second year students at MA Darul Hikmah Pekanbaru. The object of this research was using Dramatic Tableaux strategy and reading comprehension on narrative text.

D. The Population and Sample

The population of this research was the second year students of MA Darul Hikmah Pekanbaru. There were 6 classes which consisted of 2 classes for science department, 2 classes for social department, and 2 classes for

religion/Islamic department. The total population of the second year students at MA Darul Hikmah Pekanbaru is 131 students.

Table III.1
The Total Population of the Second Year Students at MA Darul Hikmah Pekanbaru 2013-2014

| No | Class | Population of Male Students | Population of Female Students | Total Population |
|--------------|------------|-----------------------------|-------------------------------|------------------|
| 1 | XI IPA 1 | - | 20 | 20 |
| 2 | XI IPA 2 | 7 | 13 | 20 |
| 3 | XI IPS 1 | - | 25 | 25 |
| 4 | XI IPS 2 | 7 | 14 | 21 |
| 5 | XI AGAMA 1 | - | 21 | 21 |
| 6 | XI AGAMA 2 | 24 | - | 24 |
| Total | | 38 | 93 | 131 |

The population above was large enough to be all taken as sample of the research. Based on the design of the research, the writer took two classes as the sample of this research. The sample was obtained through cluster sampling technique. The writer chose XI IPA 1 as experimental class and XI IPA 2 as control class.

Table III.2
The Specification of the Research Sample

| No | Class | Class Category | Sample of Male Students | Sample of Female Students | Total Sample |
|--------------|-----------|--------------------|-------------------------|---------------------------|--------------|
| 1 | XI IPA I | Experimental class | - | 20 | 20 |
| 2 | XI IPA II | Control class | 7 | 13 | 20 |
| Total | | | 7 | 33 | 40 |

E. The Technique of Collecting Data

In order to get the data that were needed to support this research, the writer used test to collect the data of students' reading comprehension. Test is the instrument to measure behavior or performance of someone to get response based on the instruction. A test of reading comprehension may consist of several short reading passages each followed by a limited number of comprehension questions.⁴ The test was divided into two series, pre-test was used to determine students' reading comprehension before getting the treatment and post-test was used to determine students' reading comprehension after getting the treatment.

The test was given to both of experimental and control class. The type of the test was multiple choice. The students were required to answer the questions based on several reading passages provided. Then, the writer took the total score from the result of students' reading comprehension test. The students' score of reading on narrative text were classified in the table below:⁵

Table III.3
The Classification of Students' Score

| Score | Category |
|--------------|-----------------|
| 80-100 | Very good |
| 66-79 | Good |
| 56-65 | Enough |

⁴H. Douglas Brown, *Language Assessment: Principles and Classroom Practices* (San Fransisco: Longman, 2003), p.3

⁵Suharsimi Arikunto, *Dasar-dasar Evaluasi Pendidikan*.(Edisi Revisi). (Jakarta: Bumi Aksara, 2011), p.245

| | |
|-------|------|
| 40-55 | Less |
| 30-39 | Fail |

1. Validity

Before the tests were given to the sample of this research, both of the tests were tried out to 25 students of second year social major. The purpose of the try out was to obtain validity and reliability of the test. The test is said to be valid if it measures accurately what is intended to measure.⁶ It was determined by finding the difficulty level of each item. The formula of item difficulty is as follows:

$$P = \frac{B}{JS}$$

Where:

P : Index of difficulty

B : The number of correct answer

JS : The number of students

The difficulty level of items shows how easy the particular each item in a test is. The items that do not reach the standard level of difficulty are excluding from the test and they would be changed by the new items that are appropriate.

The standard level of difficulty used is < 0.30 and > 0.70 .⁷ It means that the items are accepted if the level of difficulty is between 0.30-0.70 and it is rejected if the level of difficulty is below 0.30 (difficult) and over 0.70 (easy).

⁶Arthur Hughes, *Testing for Language Teachers*, (2nd Edition). (Cambridge: Cambridge University Press, 2003), p.26

⁷Suharsimi Arikunto, *Dasar-dasar Evaluasi Pendidikan*. (Edisi Revisi). (Jakarta: Bumi Aksara, 2011), p.207

Then, the proportion is represented by “p”, whereas the proportion incorrect is represented by “q”. It can be seen from the following tables:

Table III. 4
The Students are Able to Identify Generic Structure

| Variable | Identify Generic Structure | | | | | N |
|-----------------|-----------------------------------|-------------|-------------|-------------|-------------|-----------|
| Item no. | 1 | 7 | 13 | 19 | 25 | 25 |
| Correct | 17 | 11 | 16 | 11 | 14 | |
| P | 0.68 | 0.44 | 0.64 | 0.44 | 0.56 | |
| Q | 0.32 | 0.56 | 0.36 | 0.56 | 0.44 | |

Based on the table above, the proportion of correct answer for item number 1 shows the proportion of correct 0.68, item number 7 shows the proportion of correct 0.44, item number 13 shows the proportion of correct 0.64, item number 19 shows the proportion of correct 0.44, and item number 25 shows the proportion of correct 0.56. Based on the standard level of difficulty “p” < 0.30 and “q” > 0.70, it is pointed out that item difficulties in average of each of items for identify generic structure are accepted.

Table III. 5
The Students are Able to Identify Language Features

| Variable | Identify Language Features | | | | | N |
|-----------------|-----------------------------------|------------|------------|-------------|-------------|-----------|
| Item no. | 2 | 8 | 14 | 20 | 26 | 25 |
| Correct | 11 | 15 | 15 | 14 | 13 | |
| P | 0.44 | 0.6 | 0.6 | 0.56 | 0.52 | |
| Q | 0.56 | 0.4 | 0.4 | 0.44 | 0.48 | |

Based on the table above, the proportion of correct answer for item number 2 shows the proportion of correct 0.44, item number 8 shows the

proportion of correct 0.6, item number 14 shows the proportion of correct 0.6, item number 20 shows the proportion of correct 0.56, and item number 26 shows the proportion of correct 0.52. Based on the standard level of difficulty “p” < 0.30 and “q” > 0.70, it is pointed out that item difficulties in average of each of items for identify language features are accepted.

Table III. 6

The Students are Able to Identify Characters, Events, and Plot

| Variable | Identify Characters, events, and Plot | | | | | N |
|-----------------|--|-------------|-------------|-------------|------------|-----------|
| Item no. | 3 | 9 | 15 | 21 | 27 | 25 |
| Correct | 15 | 11 | 11 | 13 | 15 | |
| P | 0.6 | 0.44 | 0.44 | 0.52 | 0.6 | |
| Q | 0.4 | 0.56 | 0.56 | 0.48 | 0.4 | |
| | | | | | | |

Based on the table above, the proportion of correct answer for item number 3 shows the proportion of correct 0.6, item number 9 shows the proportion of correct 0.44, item number 15 shows the proportion of correct 0.44, item number 21 shows the proportion of correct 0.52, and item number 27 shows the proportion of correct 0.6. Based on the standard level of difficulty “p” < 0.30 and “q” > 0.70, it is pointed out that item difficulties in average of each of items for identify characters, events, and plot are accepted.

Table III. 7

Students are Able to Find out the Factual Information

| Variable | Find out the Factual Information | | | | | N |
|-----------------|---|-------------|------------|------------|-------------|-----------|
| Item no. | 4 | 10 | 16 | 22 | 28 | 25 |
| Correct | 16 | 16 | 15 | 10 | 17 | |
| P | 0.64 | 0.64 | 0.6 | 0.4 | 0.68 | |
| Q | 0.36 | 0.36 | 0.4 | 0.6 | 0.32 | |
| | | | | | | |

Based on the table above, the proportion of correct answer for item number 4 shows the proportion of correct 0.64, item number 10 shows the proportion of correct 0.64, item number 16 shows the proportion of correct 0.6, item number 22 shows the proportion of correct 0.4, and item number 28 shows the proportion of correct 0.68. Based on the standard level of difficulty “p” < 0.30 and “q” > 0.70, it is pointed out that item difficulties in average of each of items for finding out the factual information are accepted.

Table III. 8

Students are Able to Identify the Reference

| Variable | Identify the Reference | | | | | N |
|-----------------|-------------------------------|-------------|-------------|------------|-------------|-----------|
| Item no. | 5 | 11 | 17 | 23 | 29 | 25 |
| Correct | 15 | 17 | 12 | 10 | 16 | |
| P | 0.6 | 0.68 | 0.48 | 0.4 | 0.64 | |
| Q | 0.4 | 0.32 | 0.52 | 0.6 | 0.36 | |
| | | | | | | |

Based on the table above, the proportion of correct answer for item number 5 shows the proportion of correct 0.6, item number 11 shows the proportion of correct 0.68, item number 17 shows the proportion of correct 0.48, item number 23 shows the proportion of correct 0.4, and item number 29 shows

the proportion of correct 0.64. Based on the standard level of difficulty “p” < 0.30 and “q” > 0.70, it is pointed out that item difficulties in average of each of items for identifying the reference are accepted.

Table III. 9
Students are Able to Make Inference

| Variable | Making Inference | | | | | N |
|-----------------|-------------------------|-------------|------------|------------|-------------|-----------|
| Item no. | 6 | 12 | 18 | 24 | 30 | 25 |
| Correct | 14 | 11 | 15 | 15 | 17 | |
| P | 0.56 | 0.44 | 0.6 | 0.6 | 0.68 | |
| Q | 0.44 | 0.56 | 0.4 | 0.4 | 0.32 | |
| | | | | | | |

Based on the table above, the proportion of correct answer for item number 6 shows the proportion of correct 0.56, item number 12 shows the proportion of correct 0.44, item number 18 shows the proportion of correct 0.6, item number 24 shows the proportion of correct 0.6, and item number 30 shows the proportion of correct 0.68. Based on the standard level of difficulty “p” < 0.30 and “q” > 0.70, it is pointed out that item difficulties in average of each of items for making inference are accepted.

2. Reliability

Reliability has to do with accuracy of measurement. This kind of accuracy was reflected in obtaining similar results when measurement was repeated on different occasions or with different instruments or by different persons. The

characteristic of reliability was sometimes termed consistency.⁸ It means that the test was reliable when an examiner's results were consistent on repeated measurement. According to Gay, reliability is the degree to which a test consistently measures whatever it is measuring.⁹

To obtain the reliability of the test, it must know the mean and standard deviation of test. Reliability in general refers to appropriateness of a given test of its component part as measure of what it is purposed to measure. It means the test will be valid to the extent that is measured what it is supposed to measure.

The reliability coefficients for good identified kinds of structure text and reading comprehension test were expected to exceed 0.0 and closed 1.00.

Arikunto states that the reliability of the test is considered as follows:¹⁰

1. 0.0 – 0.20 = reliability is low
2. 0.20 – 0.40 = reliability is sufficient
3. 0.40 – 0.70 = reliability is high
4. 0.70 – 1.0 = reliability is very high

To obtain the reliability of the test given, the writer used the formula as follows:¹¹

$$\text{KR 30: } r_i = \frac{k}{(k-1)} \frac{s_t^2 - \sum p_i q_i}{s_t^2}$$

⁸H. Douglas Brown, *Language Assessment: Principles and Classroom Practices* (San Fransisco: Longman, 2003), p.19.

⁹L. R. Gay and Peter Airasian, *Educational Research: Competencies for Analysis and Application* (Sixth Edition). (New Jersey: Pearson Prentice Hall. 2000) p.169

¹⁰Suharsimi Arikunto. Op.Cit., p.218.

¹¹Sugiyono, *Statistik untuk Penelitian* (Bandung: Alfabeta, 2007) ,p.359.

Where:

K : number of items in the instrument

Pi : proportion of subject who answered the item correctly

Qi : proportion of subject who answered the item wrong (1-pi)

piqi : the multiplication result between p and q

S_t^2 : total variance

Firstly the writer calculates the total variance:

$$S_t^2 = \frac{x^2}{n}$$

Where:

n : number of respondents

$$\begin{aligned}x^2 &= \sum xt^2 - \frac{(\sum xt)^2}{n} \\&= 4991 - \frac{(340)^2}{25} \\&= 4991 - \frac{115600}{25} \\&= 4991 - 4624 \\&= 367\end{aligned}$$

$$\begin{aligned}s_t^2 &= \frac{x^2}{n} \\&= \frac{367}{25} \\&= 14.68\end{aligned}$$

$$r_i = \frac{k}{(k-1)} \frac{s_t^2 - \sum p_i q_i}{s_t^2}$$

$$r_i = \frac{30}{(30-1)} \frac{14.68 - 7.1584}{14.68}$$

$$r_i = \frac{30}{29} \frac{7.5216}{14.68}$$

$$r_i = 1.0344 \times 0.51$$

$$r_i = 0.53$$

Based on the result above, it also can be stated that the reliability was high.

F. The Technique of Data Analysis

To find out whether there is a significant effect of using Dramatic Tableaux strategy toward reading comprehension, the data were analyzed statistically. In analyzing the data, the writer used the statistical calculation of independent sample T-test formula. The independent sample T-test was used to find out the significant effect of using Dramatic Tableaux strategy toward students' reading comprehension in narrative text. The data were analyzed by using SPSS 16.0 version.

The T-table was employed to see whether or not there was a significant difference between the mean score of both experimental and control group.

Statistically hypothesis:

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

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

Criteria of hypothesis:

H_0 is accepted if $t_0 < t\text{-table}$ or it can be said that there is no significant effect of using Dramatic Tableaux strategy toward students' reading comprehension.

H_a is accepted if $t_0 > t\text{-table}$ or there is a significant effect of using Dramatic Tableaux strategy toward students' reading comprehension.

