

CHAPTER III

METODOLOGY OF THE RESEARCH

A. Research Design

This research was an experimental research that consisted of two variables. They were: variable (X) that refers to the use of running dictation strategy, and (Y) refers to reading comprehension on descriptive text. According to Creswell, "experiment is you test an idea (or practice or procedure) to determine whether it influences an outcome or dependent variable"¹. This research used quasi-experimental research. David Nunan state that quasi-experiment has both pre- and posttest and experimental and control groups, but not random assignment of subject². The researcher used intact groups, the first class was as the experimental groups and the second class was as the control group. Gay and peter Airasian stated that quasi experimental design is used when the researcher keeps the students in existing classroom intact and the entire classroom are assigned to treatment³.

This quasi experimental design was focused on nonequivalent control group design. Nonequivalent control group design involves random assignment of intact groups to treatments, not random assignment of individuals⁴. This research operated two variables and consisted of two classes, an experimental class taught

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

²David Nunan. *Research Method in Language Learning*. (New York: Cambridge University Press, 2008), P. 41

³L. R. Gay and Peter A. *Educational Research: Competences for Analysis and Application (Sixth Edition)*. (New Jersey: Pearson Prentice-Hall, 2000),P. 394

⁴*Ibid.* 395.

by using Running Dictation strategy and a control class taught without Running Dictation strategy. Both of groups took pretest and posttest; the researcher gave the treatment to the experimental class only.

According to Creswell, the type of this research was designed as follows⁵:

TABLE III.1
The Research Design

Select control group	Pre-test	No treatment	Post-test
Select experimental group	Pre-test	Experimental treatment	Post-test

B. The Location and the Time of the Research

The location of this research was the MTs Darul Hikmah Pekanbaru at Manyar Sakti Street Pekanbaru. The research was conducted from August until September 2013.

C. The Subject and the Object of the Research

The subject of the research was the first semester of the second year students of MTs Darul Hikmah Pekanbaru, in the academic year 2013/2014. The object of this research was the effect of using Running Dictation strategy and student's reading comprehension on descriptive text.

D. The Population and Sample of the Research

The population of this research was the second year students of MTs Darul Hikmah Pekanbaru in 2013/2014 academic years. It had 10 classes; the number of

⁵ John W. Creswell, *Op. Cit.*, p. 314

the second year students of MTs Darul Hikmah Pekanbaru was 292 students. The specification of the population can be seen as follows

TABLE III.2
The Population of the Second Year Students of MTs Darul Hikmah
Pekanbaru

No	Class	Total
1	VIII A 1	30
2	VIII A 2	30
3	VIII A 3	30
4	VIII A 4	30
5	VIII A 5	30
6	VIII B 1	26
7	VIII B 2	26
8	VIII B 3	30
9	VIII B 4	30
10	VIII B 5	30
Total		292

The population above was large enough to be all taken as sample of the research. Based on the design of the research, the researcher took only two classes as the sample of this research by using cluster sampling. According to Cohen by doing cluster sampling, the researcher can select a specific number of schools and test all the students in those selected schools⁶. Moreover, Singh believes that a cluster sampling is to select the intact group as a whole. In cluster sampling the sample units contain groups of elements (clusters) instead of individual members or items in the population. In addition Gay believes that cluster sample randomly selects group, not individual⁷. The classes were VIII B 3 and VIII B 4. Those were

⁶Louis Cohen, Lawrence Manion, and Keith Morison. *Research Methods in Education Sixth Edition*. (New York: Roulledge, 2007). p. 282

⁷L. R. Gay. *Loc. Cit.* p. 129

as the sample of the research by number 60 students; 30 students for experiment class and 30 for control group. The table of total sample is shown as follow:

TABLE III.3
The Sample of the Research

No	Class	Male	Number of students
1	VIII B 3	30	30
2	VIII B 4	30	30

Based on the table above, the researcher used cluster sampling to take the sample, VIII B3 as experimental class and VIII B4 as control class. The number of this sample was 60 students.

E. The Technique of Collecting the Data

In this research, the researcher used test to collect the data. The students were tested by reading comprehension test. The test was given before and after the researcher, taught the students by using Running Dictation strategy to the experimental class and without using Running Dictation strategy to the control class in reading comprehension. It is called pre-test and post-test. Kind of the test in this research was multiple choices. According to Huges, the multiple choices technique is best suited to relatively infrequent testing of large number of candidates⁸. The multiple choices technique can assess the students' reading comprehension. All of the items were tried out to all of the students in order to know the validity and reliability of the test. The advantages of multiple choice were cheating is likely to be more difficult and guessing will (or should)

⁸ Arthur Huges. *Testing for Language Teachers Second Edition*. (Cambridge: Cambridge University Press, 2003), P. 78

contribute less to test scores. The classifications of the students' score are follows⁹:

TABLE III.4
The classification of students' score

Score	Categories
80-100	Very good
70-79	Good
60-69	Enough
50-59	Less
0-49	Fail

TABLE III.5
Blue Print of Reading Comprehension

No	Indicators	Number
1	Students are able to identify topic in descriptive text	1, 5, 9, 13, 17
2	Students are able to identify generic structure in descriptive text	2, 6, 10, 14, 18
3	Students are able to identify the language feature in descriptive text	3, 7, 11, 15, 19
4	Students are able to identify the communicative purpose in descriptive text	4, 8, 12, 16, 20

1. Validity

The test used for testing students' reading comprehension had to have validity and reliability. Before the tests were given to the sample of the research, both of the tests were tried out to 30 students of second year. The purpose of the try out was to obtain validity and reliability. The test is said to be valid if it measures accurately what it is intended to measure¹⁰. It was determined by finding the difficulty level of each item. The formula of item difficulty is as follows:

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

⁹Anas Sudijono. *Pengantar Statistic Pendidikan*. (Jakarta: PT. Rafindo Persada, 2007), p.

¹⁰ Ibid, p. 26

Where:

P : index of difficulty

B : the number of correct answer

JS : students taking the test

The formula above was used to find out the level of difficulty of each item that researcher gave to respondents. The items that did not reach the standard of difficulty were excluding from the test and they were changed with the new appropriate items. Based on the standard level of difficulty used, the item that is 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 and over 0.70. then the proportion of correct answer is represented by "p", whereas the proportion of incorrect answer is represented by "q". It can be seen from the following tables:

TABLE III.6
The Students are Able to find out the Topic

Variable	Find the Topic					N
Item no	1	5	9	13	17	30
Correct	13	17	18	14	13	
P	0.43	0.56	0.6	0.46	0.43	
Q	0.57	0.44	0.4	0.54	0.57	

Based on the table above, the item number 1, 5, 9, 13, and 17 were to find out the topics from 20 questions. The proportion of correct answer for item number 1 shows the proportion of correct 0.43, item number 5 shows the proportion of correct 0.56, item number 9 shows the proportion of correct 0.6, item number 13 shows the proportion of correct 0.46, item number 17 shows the proportion of correct 0.43. Based on the standard level of difficulty" <0.30 and"

>0.70 , the item were not too easy and not too difficult, it is pointed that the difficulty in average of each item number for finding out the topic is accepted.

TABLE III.7
The Students are Able to Find the Generic Structure

Variable	Find the Generic Structure					N
Item no	2	6	10	14	18	30
Correct	12	11	14	10	13	
P	0.4	0.36	0.46	0.33	0.43	
Q	0.6	0.64	0.54	0.67	0.57	

Based on the table above, the item number 2, 6, 10, 14, and 18 were to find the generic structure from 20 questions. The proportion of correct answer for item number 2 shows that the proportion of correct 0.4, item number 6 shows that proportion of correct 0.36, item number 10 shows that the proportion of correct 0.46, item number 14 shows that the proportion of correct 0.33, item number 18 shows that the proportion of correct 0.43. based on the standard level difficulty $p < 0.30$ and $q > 0.70$, the items were not too easy and not too difficult, it is pointed out that the difficulty in average of each item number for finding generic structure is accepted.

TABLE III.8
The Students are Able to Find the Language Features

Variable	Find the Language Features					N
Item no	3	7	11	15	19	30
Correct	11	16	13	13	13	
P	0.36	0.53	0.43	0.43	0.43	
Q	0.64	0.47	0.57	0.57	0.57	

Based on the table above, the item number 3, 7, 11, 15, and 19 were to find the language features from 20 questions. The proportion of correct answer for

item number 3 shows that the proportion of correct 0.36, item number 7 shows that the proportion of correct 0.53, item number 11 shows that proportion of correct 0.43, item number 15 shows that the proportion of correct 0.43, item number 19 shows that the proportion of correct 0.43. Based on the standard level of difficulty $p < 0.30$ and $q > 0.70$, the items were not too easy and not too difficult, it is pointed out that the difficulty in average of each item number for finding language features is accepted.

TABLE III.9
The Students are Able to Find the Communicative Purpose

Variable	Find the Communicative Purpose					N
Item no	4	8	12	16	20	30
Correct	13	12	10	15	15	
P	0.43	0.4	0.33	0.5	0.5	
Q	0.57	0.6	0.67	0.5	0.5	

Based on the table above, the item number 4, 8, 12, 16, and 20 were to find the communicative purpose from 20 questions. The proportion of correct answer for item number 4 shows the proportion of correct 0.43, item number 8 shows the proportion of correct 0.4, item number 12 shows the proportion of correct 0.33, item number 16 shows that the proportion of correct 0.5, item number 20 shows that the proportion of correct 0.5. based on the standard level of difficulty $p < 0.30$ and $q > 0.70$, the items were not too easy and not too difficult, it is pointed out that the difficulty in average of each item number for finding communicative purpose in descriptive text is accepted.

2. Reliability

According to Douglas Brown, a reliable test is consistent and dependable¹¹. It also has accuracy of measurement, it means that obtaining similar result when measurement is on different occasions or with different person or by different instruments. The characteristic of reliability is sometimes termed consistency. It means that the test is reliable when examiners results are consistent on repeated measurement.

To obtain the reliability of the test given, the researcher used Kuder-Richardson (K.R 20) and the formula as follows¹²:

$$\text{KR 20: } r_i = \frac{k}{(k-1)} \left\{ \frac{s_t^2 - \sum p_i q_i}{s_t^2} \right\}$$

Where:

K : number of items in the instrument

P_i : proportion of subject who answered the item correctly

Q_i : proportion of subject who answered the item wrong (1-p_i)

∑p_iq_i : the multiplication result between p and q

S_t² : total variance

Firstly the writer calculated the total of variance

Where:

¹¹ H. Douglas Brown. *Language Assessment: Principles and Classroom Practices*. (San Francisco: Pearson Longman, 2003), P. 20

¹²Sugiyono. *Statistika Untuk Penelitian*. (Bandung: Alfabeta, 2011), P. 359

TABLE III.10
Descriptive Statistics of Reliability

	N	Minimum	Maximum	Mean	Std. Deviation
Tryout	30	30	60	44.33	7.279
Valid N (listwise)	30				

$$r_i = \frac{k}{(k-1)} \left\{ \frac{s_{t^2} - \sum p_i q_i}{s_{t^2}} \right\}$$

$$r_i = \frac{20}{(20-1)} \left\{ \frac{7.279^2 - 4.76}{7.279^2} \right\}$$

$$r_i = \frac{20}{19} \left\{ \frac{48.223}{5.2983} \right\}$$

$$r_i = 1.05 \times 0.91$$

$$r_i = 0.95$$

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

F. Technique of Data Analysis

1. Normality Test

Before analyzed the data by using t-test formula, the researcher has to find out the normality test of the data. The normality test of the data was analyzed by using Kolmogorov Smirnov technique with SPSS.

Analysis:

Ho : population with normal distribution

Ha : population with not normal distribution

if the probability $> 0,05$ H_0 was accepted

if the probability $\leq 0,05$ H_0 was rejected

2. Analysis Data t-test

In analyzing the data in this research, the researcher used t-test formula. According to Hartono, t-test is one of the statistic tests that is used to know whether there is or not a significant effect of two samples of mean in two variables¹³. T-test was used in order to find out whether there is a significant effect of students' reading comprehension on descriptive text taught by using Running Dictation and students' reading comprehension on descriptive text taught without using Running Dictation strategy. The data were statistically analyzed by using SPSS 16.0 version.

The t-table was employed to see whether or not there was a significant effect of gain score both experimental and control class.

Statistically hypothesis:

H_0 : variance population identic

H_a : variance population not identic

H_a : $t_0 > t\text{-table}$

H_0 : $t_0 < t\text{-table}$

H_a is accepted if $t_0 > t\text{-table}$ or there is a significant effect of using Running Dictation strategy toward students reading comprehension on descriptive text of the second year students of MTs Darul Hikmah Pekanbaru.

¹³ Hartono. *Statistik Untuk Penelitian*. (Yogyakarta: Pustaka Pelajar, 2008). P. 171

H_0 is accepted if $t_0 < t\text{-table}$ or there is no significant effect of using Running Dictation strategy toward students reading comprehension on descriptive text of the second year students of MTs Darul Hikmah Pekanbaru.