

CHAPTER III

RESEARCH METHOD

A. Design of the Research

This research was an experimental research. Based on what Cresswell said that we use experimental research when we wanted to establish possible cause and effect between our independent and dependent variables (Cresswell, 2012). The design of this research has a quasi-experimental research, to know the effect of using Cartoon Media on student's writing ability in descriptive paragraph.

This research design used two groups. The first group was as experiment group treated by using of Cartoon Media. The second group was as control group which was treated without using Cartoon Media. Before doing treatment, the writer administered pre-test to all samples. After treatment, writer will administered post-test to obtain the students' writing ability in descriptive paragraph.

Table III.1 The Research Design

Group	Pre-test	Treatment	Post-test		
E	X_1	X	Y ₂		
С	X_1	-	\mathbf{Y}_{2}		



Note:

E = Experimental Group

= Control Group \mathbf{C}

 X_1 = Pre-test for experimental and control group = Post-test for experimental and control group Y_2

= Treatment for experimental group by using Cartoon X

Media

= The using of conventional method

Adopted Cresswell (2012)

B. The Location and the time of the Research

The research was conducted at Islamic Junior High School Dar-el Hikmah Pekanbaru. This research was conducted from April to May 2016.

C. The Subject and the Object of Research

1. The subject of the research

The subject of the research was the eighth grade students of Islamic Junior High School Dar-el Hikmah Pekanbaru in (2016-2017) academic year.

2. The object of the research

The object of the research was the effect of using Cartoon Media on students' writing ability in descriptive paragraph.

D. The Population and the sample of the Research

The target of the population of this research was the eighth grade of Islamic Junior High School Dar-el Hikmah Pekanbaru. It consisted of 10 classes, 5 classes for female class and 5 classes for



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male class. The number of the eighth grade students of this school was 223 students.

The researcher took the sample of the population of the research by using cluster random sampling. Lodico, et.all (2006:145) Cluster random sampling may be useful. Instead of assigning numbers to individuals, in cluster random selection, numbers are assigned to the cluster or subgroup within the realistic population.

The researcher gave name card to the classes based on every second year class in Islamic Junior High School Dar-el Hikmah Pekanbaru. The researcher mixed these cards then took two cards randomly as the sample of the research. The classes chosen were VIII.A1 female students for experimental class and VIII.A2 female Students for control class. The experimental group consisted of 21 students, while the control group consisted of 21 Students. So, 42 students were representative enough to be sample of the research.

E. Validity and Reliability

1. Validity of the test

The tests used to test students' writing ability should valid and reliable. The test can be valid if it measures accurately what it is intended to measure (Hughes, 2007:26). It means that the valid test should be appropriate, meaningful, and useful. In this research, the writer used content of validity to know the validity of writing ability



test. Hughes also stated that a test is said to have content validity if its content constitutes sample of the language skill, structures and etc.

Thus, the test was given based on the material studied by the students.the writer used the materials tested based on the materials that they learned. It was about descriptive paragraph. It dealt with the 2006 curriculum applied in students' handbooks. One of them was *English in Focus for Grade VIII Junior High School (SMP/MTs)* for Eighth Grade Students. It was clear to explain that the tests taken for this research were valid.

The index of writing descriptive paragraph test in this research was based on these categories, as follows:

- a. Completing blank texts in short essay of descriptive paragraph.
- b. Arranging sentence becomes functional text in writing descriptive paragraph.
- c. Writing an essay in English writing descriptive paragraph form.

2. Reliability of the test

A test must first be reliable as meaning instrument. Reliability is a necessary characteristic of good test. According to Brown (2004:20), a reliable test is consistent and dependable. Reliability has to do with accuracy of measurement. Hughes (2003:44) stated that there are 2 components of test reliability: the performance of candidates from occasion to occasion and the reliability of the scoring.



There are some factors influencing the reliability of the test result. They are students-related reliability, rater reliability (inter-rater reliability and intra-rater reliability), test administration and test reliability (Brown, 2004:21). In this case, the rater used rater reliability especially inter-rater reliability because the score gotten from the test were evaluated by two raters, of course, the score given were different.

F. Technique of the Data Collection

The kind of instrument used to collect the data needed in this research was a test. Test is used to measure the ability of objects being researched (Arikunto, 2006:223). To collect the data from sample, the writer used only written test. The test was used to find out the students' ability in writing descriptive paragraph. The test will be given before and after the treatment.

After giving the test to student's the writer will gave the score, in scoring the students' writing, the writer used analytic scoring. Genese and Upshur (1997: 206) purpose analytic scoring as a type of scoring in which different components and features of students' writing are given separated scores. The components are content that deals with appropriateness to the title, organization deal which text cohesion and paragraph unity, vocabulary deal which precision of choosing and using the word, language use or grammar dealing which tenses, and mechanic that deals with spelling and punctuation.

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G. Technique of the Data Analysis

The collective data were analyzed by using statistical analysis. The writer utilized the formula of T-Test (Hartono, 2004:191). The formulation can be seen as follows:

$$t_o = \frac{Mx - My}{\sqrt{\left(\frac{SD_x}{\sqrt{N-1}}\right)^2 + \left(\frac{SD_y}{\sqrt{N-1}}\right)^2}}$$

Where,

 t_o = The value of t-obtained

Mx = Mean score of experimental sample

My = Mean Score of control sample

SDx = Standard deviation of experimental group SDy = Standard deviation of control group.

The following are the formula of Effect Size:

$$\Delta = \frac{\overline{X}_e - \overline{X}_c}{s_c}$$

Where Δ : effect size for a difference between means

 X_e mean of the experimental group

 X_c : mean of the control group

 S_c : standard deviation of the control groupe

Statistically the hypotheses are:

Ho: to<t-table

Ha: to>t-table

Ho is accepted if to< t table or there is no significant difference of students' writing ability in descriptive paragraph between those who are



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taught by using Cartoon Media and those who are taught without Cartoon Media at Islamic Junior High School Darel Hikmah Pekanbaru.

Ha is accepted if to> t-table or there is no significant difference of students' writing ability in descriptive paragraph between those who are taught by using Cartoon Media and those who are taught without Cartoon Media at Islamic Junior High School Darel Hikmah Pekanbaru.

H. Homogeneity Test of Data

According to Siregar (2013:167), the purpose of homogeneity test is to know whether the object of the research has the same variance or not. The method used in this test was comparing the biggest variance with the smallest one. In this research, the writer assessed the homogeneity of data by using SPSS 17.0. The result of the test can be seen as follows:

TABLE III.2
Test of Homogeneity of Variance

State	Levene Statistic	df1	df2	Sig.	
post test experiment and	Based on Mean	.335	1	32	.567
control	Based on Median	.089	1	32	.768
Unive	Based on Median and with adjusted df	.089	1	31.999	.768
TS	Based on trimmed mean	.258	1	32	.615

From the table, it was known that the value of significance (sig.) was 0.567. According to Siregar, data are homogenous or variant when the value Sig. is higher than 0.05. Based on the table, it was clear that Sig. is higher than 0.05

post t



which indicates the homogeneity of the data. The comparison can be stated by 0.567 > 0.05.

I. Normality Test of Data

Neil Abell (2009:121) stated that the Kolmogorov-Smirnov Z test was typically used to assess univariate normality. In order to ensure that the data were normally distributed, the writer used the Kolmogorov-Smirnov Z test. The normal distribution of data was computed by using SPSS 17. The SPSS result for Kolmogorov-Smirnov test would be interpreted as follows:

TABLE III.3
Test of Normality

		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
grup		Statistic	Df	Sig.	Statistic	df	Sig.
post test experiment and	1.00	.197	17	.077	.923	17	.164
control	2.00	.147	17	.200*	.927	17	.197

a. Lilliefors Significance Correction

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

Based on the table above it, it explained that significance level in Kolmogorov-Smirnov test of experiment class was 0.777, it means that 0.777 > 0.005, and significance level of control class was 0.200; it means that 0.200 > 0.05. To sum up, the data were in normal distribution.

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The Technique of Data Analysis

In order find out whether there was or no significant effect of using cartoon media on students' ability in writing descriptive paragraph, the data were analyzed statistically. To analyze the data, the writer took score of pretest and post-test of the experimental class and control class. The writer used Independent Sample T-Test to find out the significant difference of using cartoon media on students' ability in writing descriptive paragraph.