

## CHAPTER III

### RESEARCH METHOD

In this part, the writer described about research method that was used in conducting the research. It is purposed to answer the problem of the study. This chapter consisted of research design, population and sample, instruments of the study, instrument try out, validity, reliability, data collection procedures, and data analysis.

#### **A. Research Design**

This study used the quantitative approach. According to Dornyei, he said “Quantitative research involves data collection procedure that result primarily in numerical data which is then analyzed primarily by statistical method”.<sup>1</sup> Quantitative research used objective measurement to gather numeric data that are used to answer question or test predetermined hypotheses. It generally requires a well-controlled setting.<sup>2</sup> It was the study which measures the effect of YouTube video media in teaching writing of animal description.

Design of this research was apply quasi - experiment design. Quasi-experimental design are similar to randomized experimental design in that they involve manipulation of an independent variable but differ in that subject are not randomly assigned to treatment groups. Because the quasi-experimental design does not provide full control, it is extremely important that writer be aware of the threats to both internal and external validity and considers these factors in their

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<sup>1</sup> Dornyei Zoltan, *Research Method in Applied Linguistics Quantitative, Qualitative A Mixed Methodologies*, p. 24.

<sup>2</sup> Donald Ari, Lucy Chesar Jacobs, Chris sorensen, AsgharRazavieh, *introduction to research in education*, Eight Edition, 2010, p. 22.

interpretation. Although true experiments are preferred, quasi-experimental design are considered worthwhile because they permit writer to reach reasonable conclusions even though full control is not possible.<sup>3</sup>

**Table 3.1 Nonrandomized Control Group, Pretest-Post Test Design**

<b>Group</b>	<b>Pretest</b>	<b>Independent Variable</b>	<b>Posttest</b>
<b>A</b>	<b>Y1</b>	<b>X</b>	<b>Y2</b>
<b>B</b>	<b>Y1</b>	<b>-</b>	<b>Y2</b>

In this study, the writer took the eighth grade students of MTs N 2 Palangka Raya in the 2015/2016 academic year as the subject of the research. The subject divided into two groups, the first group was become experiment group that taught by YouTube video media and the second group was become control group that taught by picture media.

## **B. Population and Sample**

### 1. Population

A population is defined as all members of any well - defined class of people, events, or objects.<sup>4</sup> According to Darmawan, population is source of the data in research that has quantity amount and wide.<sup>5</sup>

In this research, the population of the study was all students of the eighth grade students in MTs N 2 Palangka Raya in the 2015/2016 academic year.

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<sup>3</sup> Donald Ari, Lucy Chesar Jacobs, Chris sorensen, Asghar Razavieh, *introduction to research in education*, Eight Edition, 2010, p. 316

<sup>4</sup> *Ibid*, p. 148.

<sup>5</sup> Deni, Darmawan, *Metode Penelitian Kuantitative*, Bandung: PT. Remaja Rosdakarya, 2013, p. 137.

**Table 3.2 The Number of the Eighth Grade of MTs N 2 Palangka Raya.**

No.	Classes	The Number of Students
1.	VIII A	20
2.	VIII B	27
3.	VIII C	31
4.	VIII D	31
5.	VIII E	30
6.	VIII F	31
7.	VIII G	32
8.	VIII H	32
Total		234

## 2. Sample

The small group that is observed is called a sample. A sample is a portion of group of a population.<sup>6</sup> Sample is part of population.<sup>7</sup> To take the sample, the writer used cluster sampling because it is unit chosen, not an individual but, rather, a group of individuals. Cluster sampling is collecting sample randomly and unit. Member of sample in this technique is units, then each unit taken the smallest of the same unit.<sup>8</sup> In this study, the writer took VIII G and VIII H classes. The reasons why the writer took VIII G and VIII H classes as the sample of the research because those classes have represented the average English achievement

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<sup>6</sup> Donald Ari, Lucy Chesar Jacobs, Chris sorensen, Asghar Razavieh, *introduction to research in education*, Eight Edition, 2010, p. 148.

<sup>7</sup>Deni,Darmawan,*Metode Penelitian Kuantitative*, Bandung: PT. Remaja Rosdakarya, 2013,p.138.

<sup>8</sup> Ibid,p.148.

of the whole of population and also they have classroom Lcd, the important facilities that the writer needed.

The writer determined the two classes into two groups. They were VIII H as experimental group and VIII G as control group.

**Table 3.3 The Number of Sample**

No.	Classes	Groups	Number of Students
1.	VIII H	Experiment	32
2.	VIII G	Control	32
Total			64

### C. Instrument of the Study

The instruments was help the writer to measure the effect of YouTube video toward students' English writing skill in animal description of the eight grade students at MTs N 2 Palangka Raya. The instrument is:

#### 1. Test

Brown states a test, in plain words, is a method of measuring a person's ability or knowledge in a given domain.<sup>9</sup> A test is an instrument or procedure designed to elicit performance from learners with the purpose of measuring their attainment of specified criteria. Tests are almost always identifiable time periods in a curriculum when learners muster all their faculties to over peak performance, knowing that their responses are being measured and evaluated. Tests can be

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<sup>9</sup> H. Douglas Brown, Teaching by Principles an Interactive Approach to Language Pedagogy, Second Edition, p.384.

useful devices among other procedures and tasks designed to assess students.<sup>10</sup> Tests are valuable measuring instruments for educational research. A test is a set of stimuli presented to an individual in order to elicit responses on the basis of which a numerical score can be assigned.<sup>11</sup>

The test is a systematic procedure proposed by the Evaluators to compare the behavior of two or more students. In fact, the tests generally consist of a set of questions or tasks that must be answered by the students or the test is a group of questions or tasks to which a student is to respond. The purpose of testing is to produce a quantitative representation of the pupil trait that is designed to measure.<sup>12</sup>

In this study, the writer assigned students to write descriptive text based on the animal looks like in the YouTube video showed. The test did twice. They were pretest and posttest in experimental group and control group.

The results of writing test that assigned by the writer for experimental and control group showed that the students who were taught using YouTube video media got higher score than students who were taught without using YouTube video media. Based on the result of hypothesis test calculation, it was found that the value of  $T_{\text{observed}}$  was greater than the value of  $T_{\text{table}}$  at 5% significance level or  $2,000 < 4,914$ . It meant  $H_a$  was accepted and  $H_o$  was rejected.

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<sup>10</sup> H. Douglas Brown, *Teaching by....*, p. 401- 402.

<sup>11</sup> Donald Ari, Lucy Chesar Jacobs, Chris sorensen, Asghar Razavieh, *introduction to research in education*, Eight Edition, 2010, p. 201.

<sup>12</sup> Sukardi, *Evaluasi Pendidikan Prinsip dan Operasionalnya*. Yogyakarta: Bumi Aksara, 2003, p. 20

### 3.4 Instrument of Writing Test

Instructions the students writing test:

1. You will have 60 minutes to write the animal description based on how the animal looks like in YouTube video. If you do not write your description, your paper will not be scored. If you miss some part of video, ask the examiner to playback.
2. You may make an outline if you wish, but your outline will not count toward your score.
3. Write about at least 10 sentence (100-150 words) in one paragraph.
4. You will not be graded on the appearance of your paper, but yourhandwriting must be readable.
5. Your paragraph will be judged on clarity of the writing aspects on
  - Hand writing originality
  - Appropriate content with title
  - Ordinally text
  - Diction
  - Grammar
  - Diction writing
  - Handwriting orderly

Adapted from MELAB instruction.<sup>13</sup>

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<sup>13</sup> Sara Cushing Weigle, *Assessing Writing*, series editor: J. Charles Akderson and Lyle F. Bachman, New York: Cambridge University Press, 2002, p.104.

## D. Validity

Validity is defined as the extents to which the instrument measures what it purports to measure.<sup>14</sup> Validity is the most important characteristic to consider when constructing or selecting a test or measurement technique. A valid test or measure is one which measures what it is intended to measure.<sup>15</sup> Validity is defined as the extent to which scores on a test enable one to make meaningful and appropriate interpretations.<sup>16</sup>

Validity is the most important consideration in developing and evaluating measuring instruments. Historically, validity was defined as the extent to which an instrument measured what it claimed to measure. The focus of recent views of validity is not on the instrument itself but on the interpretation and meaning of the scores derived from the instrument.<sup>17</sup>

Three types of validation are important in the role as a classroom teacher: content validity, face validity, and construct validity.<sup>18</sup>

### 1. Content Validity

Sudijono in Mayasarah states content validity of a learning result test is the validity that is gained after doing the analysis, investigation or examination of the content that is contained in the learning result test.<sup>19</sup> Djiwandono in

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<sup>14</sup> Michael J. Miller, Ph.D., *Reliability and Validity*, Western International RES 600: Graduation Research Methods, p.3.

<sup>15</sup> Postlethwaite, T. Neville, *Educational research: some basic concepts and terminology*, Hamburg University, Series Editor, 2005, p. 39.

<sup>16</sup> Donald Ari, Lucy Chesar Jacobs, Chris Sorensen, Asghar Razavieh, *Introduction to Research in Education*, Eight Edition, 2010, p. 224.

<sup>17</sup> Ibid, p. 225.

<sup>18</sup> H. Douglas Brown, *Teaching by Principles an Interactive Approach to Language Pedagogy (second edition)*, p.388.

<sup>19</sup> Mayasarah, *The Effectiveness of Video Compact Disc as an Audiovisual Medium toward The Students' Listening Comprehension Score of The Tenth Grade Students at MAN*

Mayasarah states content validity demands a content suitability between a skill being measured and a used test to measure.<sup>20</sup> Dornyei states content validity concerned expert judgment about test content.<sup>21</sup> In this study content validity, the writer construct the test based on what material in syllabus.

## 2. Face Validity

Face validity is almost always perceived in terms of content: if the test samples the actual content of what the learner has achieved or expects to achieve, then face validity will be perceived. Ary et al. state face validity is a term sometimes used in connection with a test's content. Face validity refers to the extent to which examinees believe the instrument is measuring what it is supposed to measure.<sup>22</sup> The writer formulate the question test in English language to proved the content validity. The writer formulate the test adapted from MELAB instruction.

## 3. Construct Validity

Dornyei states construct validity showed how the test results conformed to a theory of which the target construct was a part.<sup>23</sup> Djiwandono in Mayasarah states the construct validity is to show the finding score that reflect the same construct with the target skill of its measuring.<sup>24</sup> The writer formulated the test

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Model of Palangka Raya, Unpublished Thesis, p. 16.

<sup>20</sup> Ibid

<sup>21</sup> Zoltan Dornyei, *Research Method in Applied Linguistics Quantitative, Qualitative A Mixed Methodologies*, p. 51.

<sup>22</sup> Donal Ary, Lucy Cheser Jacobs, Chris Sorensen, and asghar Razavieh, *Introduction to Research in Education eight edition*, p.228.

<sup>23</sup> Zoltan Dornyei, *Research Method in Applied Linguistics Quantitative, Qualitative A Mixed Methodologies*, p. 51.

<sup>24</sup> Mayasarah, *The Effectiveness of Video Compact Disc as an Audiovisual Medium toward The Students ' Listening Comprehension Score of The Tenth Grade Students at MAN Model of Palangka Raya*, Unpublished Thesis, p. 17.



item as a test of writing test. The test used to measure the writing skill of the students at the eight grade students of MTs N Palangka Raya in Academic year 2015/2016.

In this study, the validation of instrument was mainly directed to the content validity. According to Sudijono in Mayasarah, validity of learning result test is the validity that is gained after doing the analysis, investigation or examination of the content that is contained in the learning result test.<sup>25</sup> Related to the writing test, the content validity was check by examining and the test use to measure the objectives. The writer was used inter-rater method (test of validity). Inter-rater was two raters who score the students' writing to get the score compositions as possible. The writer used product moment correlation as the formula to calculate the validity from the test result.<sup>26</sup> ( see in appendix)

$$r_{xy} = \frac{N\Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{\{N \Sigma X^2 - (\Sigma X)^2\} \{N \Sigma Y^2 - (\Sigma Y)^2\}}}$$

Where:

$r_{xy}$  : Index Correlation Number “r” product moment.

N : Number of Case.

$\Sigma XY$  : Multiplication Result between Score X and Score Y.

$\Sigma X$  : Total Value of Score X.

$\Sigma Y$  : Total Value of Score Y.

Interpretation:

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<sup>25</sup> Mayasarah, The Effectiveness of Video Compact Disc as an Audiovisual Medium toward The Students' Listening Comprehension Score of the Tenth Grade Students at MAN Model of Palangka Raya. Unpublished Thesis. p. 16.

<sup>26</sup> Anas Sudijono, *Pengantar Statistik Pendidikan*, Jakarta: PT. RajaGrafindo Persada, 1997, p. 193.

$r_{xy} > r_t = \text{Valid}$

$r_{xy} < r_t = \text{Invalid}$

According to Riduwan in Mayasarah, he states the criteria of interpretation the validity:<sup>27</sup>

0.800 - 1.000 = Very High Validity

0.600 - 0.799 = High Validity

0.400- 0.599 = Fair Validity

0.200- 0.399 = Poor Validity

0.00-0.199 = Very Poor Validity.

### **E. Reliability**

Reliability indicates how consistently a test measures whatever it does measure.<sup>28</sup> The reliability of a measuring instrument is the degree of consistency with which it measures whatever it is measuring.<sup>29</sup> Reliability is concerned with the effect of such random errors of measurement on the consistency of scores. But some errors involved in measurement are predictable or systematic.<sup>30</sup>

Reliability procedures are concerned with determining the degree of inconsistency in score caused by random error.<sup>31</sup> A reliable test is consistent and dependable.<sup>32</sup> Scorer reliability is the consistency of scoring by two or more

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<sup>27</sup> Mayasarah, The Effectiveness of Video Compact Disc as an Audiovisual Medium toward the Students' Listening Comprehension Score of the Tenth Grade Students at MAN Model of Palangka Raya, Unpublished Thesis, p. 18.

<sup>28</sup> Donald Ari, Lucy Chesar Jacobs, Chris Sorensen, Asghar Razavieh, *Introduction to Research in Education*, Eight Edition, 2010, p. 224.

<sup>29</sup> Ibid, p. 236.

<sup>30</sup> Ibid, p.238.

<sup>31</sup> Ibid, p.239.

<sup>32</sup> H. Douglas Brown, *Teaching by Principles an Interactive Approach to Language Pedagogy*, Second Edition, p. 386.

scorers.<sup>33</sup>

A simple way to determine the reliability of ratings is to have two or more observers independently rate the same behaviors and then correlate the observers' ratings. The resulting correlation is called the interrater.<sup>34</sup> It indicated accuracy in scoring compositions of a rater in correcting the students' test score twice.

In this study, the writer used inter-rater to correct the student's scores. The rater are the writer self, and Rahmatun Hasanah alumni of English students of STAIN Palangka Raya in 2011. The writer use analytic scoring. In analytic scoring, scripts are rated on several aspects of writing or criteria rather than given a single score. Depending on the purpose of the assessment, scripts might be rated on such features as content, organization, cohesion, register, vocabulary, grammar, or mechanics.<sup>35</sup>

#### **F. Data Collection Procedures**

In this study, the writer used some procedures to collect the data. The observation did at MTsN 2 Palangka Raya on August 8, 2015. The observation did by asked the number of the students', observed the class facilities such as Lcd, the condition of the students. The procedures to collect the data consisted of some steps as follows:

1. The writer observed the school by headmasters' permission.
2. The writer asked the class with the English teacher who taught English in the class that become the class of research:

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<sup>33</sup> Ibid, p. 387.

<sup>34</sup> Donald Ari, Lucy Chesar Jacobs, Chris sorensen, Asghar Razavieh, *introduction to research in education*, Eight Edition, 2010, p. 256.

<sup>35</sup> Sara Cushing Weigle, *Assessing Writing*, series editor: J. Charles Akderson and Lyle F. Bachman. New York: Cambridge University Press, 2002, p. 114.

- a. The number of the class.
  - b. The number of the students.
3. The writer determined the class into experiment group and control group.
  4. The writer gave pre test to the experiment group and control group. (see in appendix I)
  5. The writer taught the treatment group using YouTube video media. (see in appendix I)

### 3.5 Table Procedure in Teaching Writing (meeting 1 till 4)

Teaching process using YouTube video (for experimental class)		
No.	Steps of writing	Teacher's activities
1.	Pre writing activity	<ul style="list-style-type: none"> <li>- Connect the computer to internet and LCD in the classroom.</li> <li>- Pick a particular clip to provide the content or illustrate a concept or principle</li> </ul>
2.	Whilst writing activity	<ul style="list-style-type: none"> <li>- Deliver guidelines for students or discussion question</li> <li>- Introduce the video briefly to reinforce purpose</li> <li>- Play the clip and stop the clip at any scene to highlight a point or replay clip for a specific in class exercise</li> <li>- Assign an active learning activity to interact on specific questions, issues, or concepts in clip.</li> </ul>

3.	Post writing activity	<ul style="list-style-type: none"> <li>- set a time for reflection on what was scene.</li> <li>- Structure a discussion around those questions in small group</li> </ul>
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6. The writer taught the control group using picture media (see in appendix I).

### 3.6 Table Procedure in Teaching Writing (meeting 1 til 4)

Teaching procedure using picture (for control class)		
No.	Steps of writing	Teacher's activities
1.	Prewriting activity	<ul style="list-style-type: none"> <li>- Prepare some piece of picture</li> <li>Show the students and explain the picture briefly</li> </ul>
2.	Whilst writing activity	<ul style="list-style-type: none"> <li>- Deliver guidelines for students or discussion question</li> <li>- Assign an active learning activity to interact on</li> </ul>
3.	Post writing activity	<ul style="list-style-type: none"> <li>- Set a time for reflection on what was scene.</li> <li>- Structure a discussion around those questions in</li> </ul>

7. The writer gave post test to the experiment group and control group (see in appendix I).

8. The writer gave score to the data from experiment group and control group.

9. The writer started to analyze the obtained data from the pre test and post test using t-test.

10. The writer interpreted the analysis result.

11. The writer concluded the activity of the study whether the YouTube video media give effect to the students' English writing skill of animal description or not, based in the obtained data.

## G. Data Analysis Procedures

The writer did some procedures in the data analysis, the procedures are:

1. The writer collected the obtained score.
2. The writer arranged the obtained score into the distribution of frequency of score table.
3. The writer calculated the mean, standard deviation, and standard error of variable  $X_1$  from the experiment group.
4. The writer calculated the mean, and standard deviation, and standard error of variable  $X_2$  from the control group.
5. The writer calculated the standard error for the difference mean between variable  $X_1$  and  $X_2$ .
6. The writer used t-test to answer the problem of the study, whether there is difference on students' English writing skill of animal description between using YouTube video media and without using YouTube video media, with the formula:

$$t_o = \frac{M\chi_1 - M\chi_2}{SE_{mx_1 - mx_2}}$$

where:

$M\chi_1 - M\chi_2$  : Differentiation of Two Means.

$SE_{mx_1 - mx_2}$  : The Standard Error of the Difference between Two Means. With the criteria:

If  $t_{test} > t_{table}$  :  $H_a$  is accepted and  $H_o$  is rejected.

If  $t_{test} < t_{table}$  :  $H_a$  is rejected and  $H_o$  is accepted.

7. The writer will use SPSS 21.0 after using t-test to answer the problem of the

study, whether there is difference on students' English writing skill of animal description between using YouTube video media and without using YouTube video media.

8. The writer calculated the degree of freedom with formula:<sup>36</sup>

$$df=(N_1 + N_2-2)$$

where:

df : Degree of Freedom.

$N_1$  and  $N_2$  : Number of Cases.

9. The writer determined the significant level of t observed by comparing the t observed with the t table.
10. The writer interpreted the result of the data analysis.
11. The writer discussed to clarify the research findings. The result of the data analysis are shown in Chapter IV.

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<sup>36</sup> Anas Sudijono, Pengantar Statistik Pendidikan, p. 330.