**CHAPTER III**

**RESEARCH METHODOLOGY**

1. **Research Design**

This research used quantitative based on the experimental research. An experimental design was the general plan for carrying out a study with an active independent variable. The design is important because it determines the study’s internal validity, which is the ability to reach valid conclusions about the effect of the experimental treatment on the dependent variable.[[1]](#footnote-1) It means that experimental design was a general plan of research design that is used to reach valid conclusion about the influence of the variable in this research.

This research used quasi experimental research design. Quasi experimental design is a research design that includes assignment, but not random assignment of participants to groups.[[2]](#footnote-2) It means that the writer applied the pre-test and post-test design approach to a quasi experimental design, the writer gave experimental and control treatments, administers a pre-test to both groups, conducts experimental treatment activities with the experimental group only, and then administers a post-test to assess the differences between the two groups after that the writer gave pre-test and post-test for both of class groups to know the differences between the two groups and only conducted the experimental treatment in experimental class.

**B. Research Variable**

Creswell defined that variable is a characteristic of attribute of an individual or an organization that the writer can measure or observe and varies among individuals or organization study.[[3]](#footnote-3) This research consists of two variables, there were :

1. Independent variable is Web Blog (X).
2. The dependent variable is students’ Descriptive Text Writing Ability as (Y).

**C. Operational Definition of Variable**

The operational definition of variable is used to explain the variables which are used in this research to avoid misconception of variables presented in this research. The operational definitions of variables are as follows:

1. Independent Variable (X)

Blogging is a technique, it can helps a quiet and shy students to express their idea because web blog offer opportunities for students to develop their communication skills through writing in web blog.

1. Dependent Variable (Y)

Students’ Descriptive Writing Ability is their ability to produce or compose a text that describes the characteristics of an object; it can be a person, a place or thing, which fulfills such criteria of a good writing as content, organization, vocabulary, language and mechanics.

**D. Population, Sample and Sampling Technique**

**1. Population**

Population is defined as all members of any well-defined class of people, events, or objects.[[4]](#footnote-4) Population of this research is the students at the first semester of eleventh grade of Multimedia Classes in SMK N 5 Bandar Lampung in the academic year 2017/2018.

The total numbers of population are 86 students that consists of three classes.

**Table 2**

**The population based on the number and gender of students at the first semester of the eleventh grade of Multimedia Classes in SMK N 5 Bandar Lampung in the academic year 2017/2018**

|  |  |  |  |
| --- | --- | --- | --- |
| **No** | **Class** | **Gender** | **Total** |
| **Male** | **Female** |
| 1 | X MM 1 | 15 | 16 | 31 |
| 2 | X MM 2 | 14 | 16 | 30 |
| 3 | X MM 3 | 8 | 17 | 25 |
| Total of Students | 86 |

*Source: The data of Multimedia students at the Eleventh Grade of SMK N 5 Bandar Lampung in the Academic Year of 2018/2019.*

**2. Sample**

The sample of the research was two classes, one is the experimental class and the other as the control class.

**3. Sampling Technique**

In getting the sample from population, the writer used cluster random sampling. Fraenkel and Wallen say that the selection of groups or cluster of subjects rather that individuals is known as cluster random sampling.[[5]](#footnote-5) It means that the experimental and control class were chosen randomly by using a small piece of paper and the name of each class written in a small piece of paper and then the papers rolled and shaken. The first paper was an experimental class and the second paper was control class.

**E. Data Collecting Technique**

In collecting the data, This research used some techniques, they were:

1. Pre-test

The pretest had been given before the treatment. The pretest was administered to measure the student’ descriptive text writing ability. The students asked to wrote a descriptive text consist of 100 words or more by choosing the topic had beed provided.

1. Post-Test

 The Post test had been given after treatments, the students asked to wrote a
 descriptive text in consist of 100 words by choosing the topics had been
 provided.

**F. Research Instrument**

According Cresswell, “An instrument is a tool for measuring, observing, or documenting quantitative data. It contains specific questions and response possibilities that people establish or develop in advance of the study”.[[6]](#footnote-6) The writer used Web Blog and measure the students descriptive text writing ability, topic had been provided, they were :

**Table 3**

**Writing Test Instruments**

|  |  |  |
| --- | --- | --- |
| **No** | **Instrument** | **Topic** |
| 1 | Pre-Test | Hero : Ironman |
| Indonesia Historical Place : Candi Perambanan |
| Animal : Crocodile |
| 2. | Post-Test | Hero : Superman |
| Indonesia Historical Place : Candi Borobudur |
| Animal : Komodo |

The reason why the writer choose the topics above because:

1. Ironman and Superman have many stuff as his characteristic in human form and superhero form.
2. Indonesian Historical Place like Borobudur and Perambanan Temple is popular in Indonesia
3. Komodo is Famous animal from Indonesia, there is an Island named Komodo in Indonesia too, since the Crocodile has similar posture like Komodo so, the writer choose Crocodile as the topic too and the Writer just has Interested of Komodo and want to introduce it.

**G. Scoring Scale for Evaluating Students’ Writing Descriptive Text Ability**

The Scoring Procedure is based on the following scoring system proposed by Tribble:[[7]](#footnote-7)

**Table 4**

**System of Scoring**

|  |
| --- |
| **Task Fulfillment/Content** |
| **Excellent to very good:** 20-17Excellent to very good treatment of the subject, considerable variety of ideas or argument; independent and through interpretation of the topic; content relevant to the topic; accurate detail. |
| **Good to average:** 16-12Adequate treatment of topic, some variety of ideas or argument; some independence of interpretation of the topic; mostcontent relevant to the topic; reasonably accurate detail. |
| **Fair to poor:** 11-8Treatment of topic is hardly adequate,little variety of ideas or argument; some irrelevant content to the topic; lacking detail. |
| **Very poor:** 7-5inadequate treatment of topic, no variety of ideas or argument; content irrelevant, or very restricted; almost no useful detail. |
| **Inadequate:** 4-0fails to address the task with any effectiveness. |

 **Organization**

|  |
| --- |
| **Excellent to very good:** 20-17Fluent expression, ideas clearly stated and supported; appropriately organized paragraphs or sections; logically sequenced (coherence); connectives appropriately used (cohesion). |
| **Good to average:** 16-12Uneven expression, but main ideas stand out; paragraphs or sections evident;logically sequenced (coherence): some connectives used (cohesion). |
| **Fair to poor:** 11-8Very uneven expression, ideas difficult follow; paragraphing/organization does not help the reader; logical sequenced difficult to follow (coherence); connectives largely absent (cohesion). |
| **Very poor:** 7-5Lacks fluent expressions, ideas very difficult to follow. Little sense of paragraphing / organization; no sense of logical sequence. |

 **Vocabulary**

|  |
| --- |
| **Excellent to very good:** 20-17Wide range of vocabulary; accurate word/idiom choice and usage; appropriate selection to match register. |
| **Good to average:** 16-12Adequate range of vocabulary; occasional mistakes in word/idiom choice and usage; register not always appropriate. |
| **Fair to poor:** 11-8Limited range of vocabulary; a noticeable number of mistakes in word/idiom choice and usage; register not always appropriate. |
| **Very poor:** 7-5No range of vocabulary; uncomfortably frequent mistakes in word/idiom choice and usage;no apparent sense of appropriate. |
| **Inadequate:** 4-0Fails to address his aspect of the task with any effectiveness. |

 **Language**

|  |
| --- |
| **Excellent to very good:** 30-24Confident handling of appropriate structures, hardly any errors of agreement, tense, number, word order, articles, pronouns, prepositions; meaning never obscured. |
| **Good to average:** 23-18Acceptable grammar-but problem with more complexes structures; mostly appropriate structures; some errors of agreement, tense, number, word order, articles, pronouns, prepositions; meaning sometimes obscured. |
| **Fair to poor:** 17-10Insufficient range of structures with control only shown in simple constructions; frequenterrors of agreement, tense, number, word order, articles, pronouns, prepositions, meaning sometimes obscured. |
| **Very poor:** 9-6Major problems with structures – evensimple ones; frequent errrors of negation, agreement, tense, number, word order/function, articles, pronouns, prepositions; meaning often obscured. |
| **Inadequate:** 5-0Fails to address his aspect of the taskwith any effectiveness. |

 **Mechanics**

|  |
| --- |
| **Excellent to very good:** 10-8Demonstrates full command of spelling, punctuation, capitalization, and layout. |
| **Good to average:** 7-5Occasional errors in spelling, punctuation, capitalization, layout. |
| **Fair to poor:** 4-2Frequent errors in spelling, punctuation, capitalization, and layout. |
| **Very poor:** 1-0Fails to address his aspect of the task with any effectiveness. |

*Source: Christopher Tribble, Language Teaching Writing, (England: Oxford University*

*Press, 1996), p. 130.*

Final Score = C + O + V + L + M = 20+20+20+30+10= 100

Note:

C : Content (20)

O : Organization (20)

V : Vocabulary (20)

L : Language (30)

M : Mechanics (10)

**H. Research Procedure**

In conducting this research, the writer applied some procedures as follows:

**1. Finding the subject of research**

 The writer chose the students of Eleventh Grade of First Semester of Multimedia Classes of SMK N 5 Lampung as a subject of the research that consist of 3 classes. One class was experimental class and one class was control class.

**2. Designing the instruments of the research**

 The instrument of this research is writing test. The students got the same instrument for both classes in several topics.

**3. Administering of Pre-Test**

 The pre-test used to find out the students’ initial ability. Here, students will be asked to write descriptive text that consists of 100 words or more by choosing topics hade been provided. The topics were:

1. Hero : Ironman
2. Indonesia Historical Place : Candi Perambanan
3. Animal : Crocodile

**4. Conducting treatments**

1. First Treatment, the writer Introduced a Web Blog and teach the students how to create a web blog and then asked the students to open writers blog to study about Descriptive Text and Generic Structure.

2. Second Treatment to measure the understanding about descriptive text, the writer asked the students to wrote Descriptive text on writers’ web blog based on topic prepared.

3. Third Treatment, asked the students to make their own descriptive text in their own web blog.

**5. Administering the post-test**

 Post-test used to measure whether there were an improvement of students’ descriptive text writing ability. The students asked to make a descriptive text consists of 100 words or more on their own blog by choosing the topics had been provided. The topics were:

1. Hero : Superman
2. Indonesia Historical Place : Candi Borobudur
3. Animal : Komodo

**6. Analyzing the result** **(pre-test and post-test)**

 After finishing the Post-Test, the writer compared the result of pre-test and post-test to see whether the score of the post-test is higher than the score in the pre-test.

**I. Validity of the Test**

To know whether the test is good or not, some criteria should be considered. The criteria of a good test are validity (content validity, construct validity and items validity), and reliability. Validity is defined as the extent to which scores on a test enable one to make meaningful and appropriate interpretations.[[8]](#footnote-8) It means that Validity is a criterion in a test that makes the text good and suitable for students. To measure whether the test has good validity or not, this research used the content validity and construct validity.

 **1. Content Validity**

 Content validity is the extent to which the questions on the instrument and the scores from these questions are representative of all the possible questions that can be asked about the content or skills[[9]](#footnote-9). To know whether the instrument has fulfilled the criteria of content validity or not, the writer sees the syllabus, the test adapted with the textbook and based on the syllabus for the eleventh grade of senior high school. So, the test is suitable with the material that taught to the students.

 The test should be able the students’ writing ability especially in descriptive text at the eleventh grade of Multimedia Classes of SMK N 5 Bandar Lampung. In this research, the writer asks the instrument to the English teacher of SMK N 5 Bandar Lampung. It is done to make sure that the instruments are valid. (See appendix 4)

 **2. Construct Validity**

Construct validity is the degree to which scores on a test can be accounted for by explanatory construct of sound theory.[[10]](#footnote-10) It means that construct validity is a measurement of values on a score based on theoretical concept. In this research, This research administered the test that the scoring covered five aspect of writing they were: Task Fulfillment / Content, Organization, Vocabulary, Language, Mechanic. To make sure, This research consulted the instrument of the test (pre-test and post-test) to the English Teacher of SMK N 5 Bandar Lampung as a validator, for determining whether the test has obtained construct validity or not. The Result was valid (See appendix 6)

**J. Reliability of the Test**

The way to know a good test is by reliability. Reliability refers to the consistency of test scores. People who use such measuring instruments must identify and use techniques that will help them determine to what extent their measuring instruments are consistent and reliable.[[11]](#footnote-11) Reliability is the consistency of the measurement and dependable of the measurement. Besides a good test should have high validity, a good test should have high reliability, scores need to be consistent.

To get the reliability of the test, the writer utilized inter-rater reliability. This inter-rater reliability counted the level of the reliability based on two series of score gotten by two raters. They were the English teacher and the writer and then the writer uses SPSS *(Statistical Package for Social Science).* Furthermore, to know the degree or the level of reliability of the test, the writer consults with the criteria of reliability as follows:

**Table 5**

**Criteria of Reliability[[12]](#footnote-12)**

|  |  |
| --- | --- |
| 0.80 – 1 | Very high reliability |
| 0.60 – 0.80 | High reliability |
| 0.40 – 0.60 | Fair reliability |
| 0.20 – 0.40 | Low reliability |
| 0 – 0.20 | Very low reliability |

After the writer calculated the data, the result reliability of the pre-test was 0.984 (experimental class) and 0.956 (control class) and the criteria of reliability were very high (See appendix 12) and the result reliability of the post-test was 0.943 (experimental class) and 0.939 (control class) the criteria of reliability were very high (See appendix 12)

**K. Readability of the Test**

 Readability tests were indicators that measure how easy the direction and instruction can be read and understood[[13]](#footnote-13). To know readability of the Descriptive text writing ability test instrument, this research follow Kouame’s research.

 To measure the readability, the writer gave a questionnaire that consist about instructions and the understandability of each item on a scale of 1 to 10, where, 1 describes an item that is easy to read and 10 describes an item that is difficult to read.[[14]](#footnote-14) Based on the finding of Kouame’s research, if the mean of all items of the instrument text has mean under 4.46, the instrument is quite readable and understandable by the readers or test takers.[[15]](#footnote-15)

 Because the mean of the items (instrument) of writing test above was 2 (lower than 4.46), it means that the instrument was readable (See appendix 13)

**L. Data Analysis**

1. **Fulfillment of the Assumptions**

Parametric statistical significance tests, such as analysis of variance and least squares regression, are widely used by writers in many disciplines, including, statistics parametric tests to produce accurate results, the assumptions underlying them such as normality and homogeneity test must be satisfied.[[16]](#footnote-16) It means that to get the accurate result, the writer did some tests such as normality test and homogeneity test.

* 1. **Normality Test**

This research used normality test to know whether the data in the experimental class and control classes are normally distributed or not. In this research, This research used statistical computation by using SPSS (*Statistical Package for Social Science*) 16 for normality. The hypotheses for the normality test formulated as follows:

Ho : The data are normally distributed.

Ha : The data are not normally distributed.

While the criteria of acceptance or rejection of hypotheses for normality test were as follows:

Ho is accepted if Sig. > α = 0.05

Ha is accepted if Sig. < α = 0.05

* 1. **Homogeneity Test**

This research used homogeneity test to determine whether the data in experimental class and control class are homogeneous or not. In this case, This research used statistical computation by using SPSS (*Statistical Package for the Social Science*) 16 for homogeneity of test.

 The hypotheses for the homogeneity tests formulated as follows:

 Ho = the variances of the data are homogenous

Ha = the variances of the data are not homogenous.

 While the criteria of acceptance or rejection of homogeneity test were as follow:

Ho is accepted if Sig. > α = 0.05

Ha is accepted if Sig. < α = 0.05

**2. Hypothetical Test**

After the writer knew that the data were normal and homogeneous, the data was analyzed by using t-test in order to know the significance of the treatment effect. According to Ary *et. al.,* the *t-*test for independent samples is a straight forward ratio that divides the observed difference between the means by the difference expected through chance alone.[[17]](#footnote-17) A physical education teacher conducted an experimental to determine if the students’ perform better if they got frequent free writing concerning their performance or did better with infrequent free writing. The formula used in this research was independent sample t- test as follows:[[18]](#footnote-18)

$$t=\frac{\overbar{x}\_{1}-\overbar{x}\_{2}}{\sqrt{\frac{∑x\_{1}^{2}- \frac{(∑x\_{1})^{2}}{n\_{1}}+ ∑x\_{2}^{2}- \frac{(∑x\_{2})^{2}}{n\_{2}}\_{}^{}}{n\_{1}+n\_{2}-2}(\frac{1}{n\_{1}}+\frac{1}{n\_{2}})}}$$

Notes:

 = Mean of experimental class

 = Meanof control class

$ ∑x\_{1}^{2} =Average deviation in experimental class$

 $∑x\_{2}^{2} =Average deviation in control class$

 = Number of sample in experimental class

 = Number of sample in control class

H0 : There is no a significant influence of using Web blog towards students’ writing descriptive text ability at the first semester of the Multimedia Classes of eleventh grade of SMK N 5 Bandar Lampung in the Academic Year of 2017/2018.

Ha : There is a significant influence of using Web blog towards students’ writing descriptive text ability at the first semester of the Multimedia Classes of eleventh grade of SMK N 5 Bandar Lampung in the Academic Year of 2017/2018.

 While the criteria of acceptance or rejection of hypothesis were:

Ha is accepted if t-observed > t-critical, or (t- observed > t- critical).

Ho is accepted if t-observed < t- critical, or (t- observed < t- critical).

1. Donald Ary, Lucy Cheser Jacobs, and Chris sorensen, *Introduction to Research in Education,* (8th Edition), *(*Belmont: Wadsworth Cengage Learning, 2002), p.301 [↑](#footnote-ref-1)
2. John W. Creswell, *Educational Research: Planning and Conducting Quantitative and Qualitative Research,* ( Boston: Pearson, 2012), p. 309. [↑](#footnote-ref-2)
3. John W. Creswell, *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research,* (Boston: Pearson Educational, 2012), p. 112. (4thed.). [↑](#footnote-ref-3)
4. Donald Ary et.al., *Introduction to Research in Education*, (Canada: Wadsworth Cengange Learning, 2002), p. 148. (8thed.). [↑](#footnote-ref-4)
5. *Ibid*. p. 95 [↑](#footnote-ref-5)
6. John W. Cresswell, *Eduaction Research,* 4th Edition, ( Boston : Person Education, 2012), p.14 [↑](#footnote-ref-6)
7. Christopher Tribble*, Language Teaching Writing,* (England: Oxford University Press, 1996), p. 130 [↑](#footnote-ref-7)
8. Donald Ary, at.al., *Op. Cit*, p. 224 [↑](#footnote-ref-8)
9. John W. Creswell, *op. cit.*, p. 618. [↑](#footnote-ref-9)
10. *Ibid,*p.219 [↑](#footnote-ref-10)
11. Donald Ary, et.al., Op.Cit, p.236 [↑](#footnote-ref-11)
12. Suharsimi Arikunto, *Prosedur Penelitian Suatu Pendekatan Praktik,* (Jakarta: Rineka Cipta, 2006), p. 311. [↑](#footnote-ref-12)
13. Julien B. Kouamé, “Using Readability Tests to Improve the Accuracy of Evaluation Documents Intended for Low-Literate Participants”, Vol. 6(1), 2010, p. 133. [↑](#footnote-ref-13)
14. Julien B. Kouamé*, Journal of Multi Disciplinary Evaluation Vol. VI No. 14 August 2010*: Using Readability Tests to Improve the Accuracy of Evaluation Documents Intended for Low-Literate Participants, Western Michigan University, Michigan, p.133. Available at <http://journals.sfu.ca/jmde/index.php/jmde_1/article/view/280>. Accessed on (July, 7th, 2017) [↑](#footnote-ref-14)
15. *Ibid*, p. 134 [↑](#footnote-ref-15)
16. M. Erceg-Hurn, *Modern Robust Statistical Method.*, (Crawley: American Psychological Association, 2008) p. 591 [↑](#footnote-ref-16)
17. Donald Ary, Lucy Cheser Jacobs, and Chris Sorensen, (8th Edition), *Introduction to Research in Education* (Canada: Wadsworth Cengange Learning, 2010), p.171 [↑](#footnote-ref-17)
18. *Ibid,* 172 [↑](#footnote-ref-18)