CHAPTER III

RESEARCH METHOD

This chapter consisted of research design of the study, research type of the study, population and sample, data collection procedure, instrument of the study, and data analysis procedure.

A. Research Design of the Study

In this study, the writer used quasi experimental design. Quasi experimental design is similar to randomized experimental design in that involves independent variable but differ in that subjects are not randomly assigned to treatments groups.[30]

The writer used nonrandomized control group pre-test and post-test design with a kind of treatment. There were two groups in this model, control group and experiment group. Both of group was given pre-test to measure the early score of the students before the treatment was given.

The experimental group was given treatment (teaching descriptive text through Facebook) and the control group was not given the treatment. After having treatment, both groups were given post-test. Finally, the result of post-test was compared using T test.

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[30]Donald Ary et all, *Introduction to Research in Education,* 8th Edition, Canada: Wadsworth Cangage Learning, 2010, P. 316

Table 3.1

The Scheme of the Quasi Experimental Design.

Subject	Pre-test	Treatment	Post-test
E	Y1	X	Y2
C	Y1	-	Y2

Where;

    E   : Experiment group

    C   : Control group

    Y1   : Pre-test

    Y2   : Post-test

    X   : Treatment

B. Research Type of the Study

Descriptive quantitative approach was used in this study. Ary et all, stated that quantitative research is inquiry employing operational definitions to generate numeric data to answer predetermined hypotheses or questions. [31]

This study used a quantitative approach. It was because the aimed of the study is to measure the usage of Facebook in teaching descriptive text at tenth grade students of SMAN 2 Pahandut Palangka Raya needed statistical calculation which using quantitative approach.

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[31]*Ibid* , P 648

C. **Population and Sample of the Study**

1. **Population**

Population is defined as all members of any well-defined class of people, events or objects. [32] It means population is all individuals for whom the data are collected. The population of this research is the tenth grade students of SMAN 2 Pahandut Palangka Raya. The tenth grade students of SMAN 2 Pahandut Palangka Raya were divided into ten classes. There are 30-39 students each class. The total numbers of the population are 352 students. [33]

Table 3.2

The Number of the Students in SMAN 2 Pahandut Palangka Raya

No	Class	Male	Female	Total
1	X Bahasa	22	11	33
2	X MIPA 1	20	16	36
3	X MIPA 2	21	15	36
4	X MIPA 3	26	13	39
5	X MIPA 4	22	17	39
6	X MIPA 5	23	16	39
7	X MIPA 6	22	17	39
8	X IIS 1	15	15	30
9	X IIS 2	15	16	31
10	X IIS 3	16	14	30
TOTAL				352

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[32] I*bid*, p 138

[33] Data Keadaan Peserta Didik SMAN 2 Pahandut Palangkaraya

2. Sample

Sample is the small group that is observed.[34] Getting sample is very important scientific research because the total number of population is usually too many. To determine the sample form population, the writer used cluster sampling take based on established class.

The writer took X-MIPA 1 and X-MIPA 2 grades. The number of the sample of this study is 36 students of X-MIPA 1 and 36 students of X-MIPA 2 grades as the sample of the study.

Table 3.3

The Number of Sample

No	Grades	Group	Number of Students
1	X-MIPA 1	Control	36
2	X-MIPA 2	Experimental	36
The Total Number of the Students			**72**

D. Instrument of the Study

Instruments of the study are very needed in research. It is because the instruments are tools to get the data of the study, in which the data are the important things to help the writer in answering the problem of the study and also to prove the hypothesis. The data also needed to find the aim of the study.

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[34]*Ibid*, p 637

1. Observation

The writer did observation to know how the students' attitude while teaching learning process is going on. The observation is purposed to get specific data, they were:

a. The general description of the location of the study

b. The syllabus and lesson plan of the school

c. The number of class

d. The number of students

2. Test

Test which sets out to measure students' performance as fairly as possible without any way setting traps for them can be effectively used to motivate the student. [35]To know how well the students do the writing descriptive text and how well implement Facebook as media in descriptive text. The test consisted of the instructions and statement and subject addressed in their writing and the alternative topics to be chosen. In this sense, the students were assigned to choose one of the topics that interest them. They were asked to develop the topic into a text containing about 100-150 words. The allocated time to do each writing test is 90 minutes. The test item was showed in appendix 3 and adapted from book of Pathway to English Senior High School Grade X by M Sudarwati and Eudia Grace, Erlangga Pubisher 2013. There were two test in this research are pre-test and post-test;

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[35]J.B Heaton, *Language Testing*, San Fransisco:Longman, 1987, P 1

a. Pre-test

Pre-test is a preliminary test that purpose to measure the students' scores in writing skill before having treatment.[36] Student was given the writing test with the instruction to choose on of the following topics about tourism place that the students' interested consisted of identification and generic structure of the text.

b. Post-test

Post test is a test given after a lesson period of instruction to determine what the students' have learned.[37] The purpose of post-test is to measure the students' scores in writing skill after the treatment has be done by writer. Post-test gave to the students after their learning about descriptive text with Facebook and Non Facebook. The writer asked the students to produce the descriptive test in traditionally for the control group, and asked the students in the experiment group to formulate their descriptive text on the Facebooks' group as a social network. Facebook was not the new thing on students' life, so that it would be easy for the students in activities on Facebook. The writer asked students to open their gadgets and open their account Facebook, then the students had to post the descriptive text on the timeline of Facebooks' group.

3. Documentation

Documentation here is the collecting data by using written documents that is gotten and or related to the data that is needed. The data is needed are:

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[36] AnasSudijono, *Pengantar Evaluasi Pendidikan*, Jakarta: PT Raja Grafindo Persada, 2007 P 69

[37] *Ibid* P 70

a. Photo of teaching learning process in the class.

b. The students' English score.

c. The students' assignment based on the students' writing on Facebook.

d. Lesson plan.

e. Syllabus.

E. Instrument Validity

The validity of test is the extent to which it measures what it is supposed to measure and nothing else.[38] Related to the study, test is aimed to measure the student's writing skill. There are three types of validation: content validity, face validity, and construct validity.[39]

1. Content validity

A test had content validity if the test requires the test-taker to perform the behavior that is being measured.[40] In the study, the test is aimed to measure the students' writing skill. Therefore, the test consisted of writing test. In this study, the validation of the instrument was mainly directed to the content validity. Related to the writing test, the content validity is checked by examining and the test used to measure the objectives.

The writer used inter-rater method (test of validity). Inter-rater is two raters who score the students' writing to get the score compositions as possible.

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[38]J.B Heaton, *Language Testing* P 153

[39] H, Douglas Brown, *Teaching By Principles: An Interactive Approach to Language Pedagogy*. San Fransisco:Longman, P 388

[40]*Ibid* P 388

The writer used product moment correlation as the formula to calculate the validity from the test result. [41]

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

Where:

r$_{xy}$: Index Correlation Number "r" Product Moment

N : Number of Cases

$\sum$X : Total value of score X

$\sum$Y : Total value of score Y

$\sum$XY : Multiplication result between score X and Y

Interpretation:

$r_{xy} > t\text{-}_{table}$ = Valid

$r_{xy} < t\text{-}_{table}$ = Not Valid

Ridwan stated the criteria of interpretation of validity:[42]

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

2. **Construct validity**

This type of validity assumed the existence of certain learning theories or constructs underlying the acquisition of abilities and skills.[43] Writing skill, in the study, the test items of writing is the form of written test.

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[41]Anas Sudijono, *Pengantar Statistik Pendidikan*, Jakarta: PT Raja Grafindo Persada, 1997 p 193

[42]Riduwan, *Metode danTeknik Menyusun Thesis,* Bandung: Alfabeta, 2007 P 110

F. Instrument Reliability

Reliability is a necessary characteristic of any good test: for it to be valid at all, a test must first be reliable as a measuring instrument. [44]A test is reliable to extent that the scores made by an individual remain nearly the same in repeated measurements.[45]Inter-rater reliability is a procedure when making observations of behavior. It involves observations made by two or more individuals of an individual's or several individuals' behavior.[46]The writer uses Alpha as a formula to measure the reliability of essay test with the criteria;

$r_{11} > r_{table}$ = Reliable

$r_{11} < r_{table}$ = Not Reliable

To know the reliability of the instrument, the value of r_{11} is interpreted based on the qualification of reliability as follows:[47]

0.800-1.000   = Very High Reliability

0.600-0.799   = High Reliability

0.400-0.599   = Fair Reliability

0.200-0.399   = Poor Reliability

0.000-0.199   = Very Poor Reliability

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[43] J.B Heaton, *Language Testing*, P 154

[44]*Ibid* P 155

[45] Abdul Qodir, *EvaluasiPembelajaran Bahasa Inggris,* Solo: Katalog Dalam Terbitan (KDT) , 2009, P 19

[46]John W Creswell, *Educational Research Planning, Conducting And Evaluating Quantitative And Qualitative Research*, 4th Edition, Lincoln: University Of Nebraska, 2012, P 161

[47]Riduwan, *Metode dan Teknik Menyusun Thesis*P 113

G. **Data Collection Procedure**

The writer collected the data by implementing some procedures. There were some steps in the procedures as follows:

1. **Collecting**

   a. The writer determined the class into the experiment group and control group.

   b. The writer gave the pre-test to the experiment group and control group

   c. The writer gave scores to the students worksheet

   d. The writer gave material by using Facebook in teaching descriptive text to the experiment group

   e. The writer gave material by using picture only in teaching descriptive text to the control group

   f. The writer gave the post-test for both of group

   g. The writer resulted of score to the data from experiment and control group.

2. **Editing**

   After collecting all the needed data, the writer checked the data, whether or not the data were completed, understandable, and consistent and had appropriate respond.

3. **Coding**

   It was an activity to classify the data by giving identify so that having a certain meaning in analyzing. C and E were the codes for control and experimental class.

4. Scoring

After giving codes to each result of the test, the writer gives the score for the students' writing with marking system: it can be seen in the following table:[48]

Table 3.4

The Scoring Rubic of Writing Assessment

NO	ASPECT	SCORE			
		1	**2**	**3**	**4**
1	The Idea	It does not have the originality of the idea, it is not appropiate with the genre, it does not expand clearly and not focus on the idea	The originality of the idea, it is appropiate with the genre, it does not expand clearly and not focus on the idea	The originality of the idea, it is appropiate with the genre, it expands clearly and it is not focus on the idea	The originality of the idea, it is appropiate with the genre, it expands clearly and be focus on tthe idea
2	Organization (structure text and content)	Text is not appropiate with the genre, not relevan, and it is not easily to understand	Text appropiates with the genre, not relevan, and it is not easily to understand	Text appropiates with the genre, relevan, and it is not easily to understand	Text appropiates with the genre, relevan, and it is easily to understand
3	Language Use	Finding many errors on the language feature so that the text	It often find some errors on the language feature, but the text can be	Finding some errors on the language feature, but it does not influence	The language feature is significant, the meaning and the

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		difficult to understand	understood	on the meaning and the content of the text can be understood	content of the text can be understood.
4	Vocabulary	It does not use the effective sentence, lexical variation is not correctly, using the form of word and idiom not effectively.	Using the effective sentence, lexical variation is not correctly, using the form of word and idiom not effectively.	Using the effective sentence, lexical variation is correctly, using the form of word and idiom not effectively.	Using the effective sentence, lexical variation correctly, using the form of word and idiom not effectively.

H. Data Analysis Procedure

According to Bogdan and Sugiyono stated that "data analysis is the process of systematically searching and arranging the interview transcript, field notes, and other materials that is accumulated to increase our own understanding and enable you to present what you have discover to others". [49]

To get the answer the problem the study of the effect of Facebook in learning descriptive text at the students' writing skill at tenth graders students of SMAN 2 Pahandut Palangka Raya. The writer used statistical t_{test} to answer the problem of the study. In order to analyze the data, the writer did some way procedures:

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[49]Sugiyono, *Metode Penelitian Kualitatif*. Bandung:Remaja Rosda Karya. 1987, P 90

1. The writer gave tests (pre-test and post-test) to the students of the tenth graders of SMAN 2 Pahandut Palangka Raya.

2. The writer collected the score of the students work sheet result.

3. The writer tabulated the data into the distribution of frequency of score table, then find out the mean of students' score, standard deviation, and standard error of variable X1 (Experiment group) and X2 (Control group)

4. The writer analyzed the normality test

   It used to know the normality of the data that is going to be analyzed whether both groups has normal distribution or not.

   Calculation result of $X^2_{observed}$ is compared with X^2_{table} by 5% degree of significance using the criteria:[50]

   If $X^2_{observed} \geq X^2_{table,}$ so the distribution list is not normal.

   If $X^2_{observed} \leq X^2_{table,}$ so the distribution list is normal.

5. The writer analyzed the homogeneity test

   It used to know whether experimental group and control group that are decide, come from population that has relatively same variant or not.

   Notice:

   $X^2_{observed} \leq X^2_{table}$ is homogeneity.

   $X^2_{observed} \geq X^2_{table}$ is not homogeneity.

   If calculation result of $\mathbf{X^2_{observed}}$ is lower than $\mathbf{X^2_{table}}$ by 5% degree of significance, it means both group has same variant.

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[50]Riduwan, *Metodedan Teknik Menyusun Thesis,* P 182

6. The writer calculated the data by using t_{test} to test the hypothesis of the study using manual calculation and SPSS 21.Program, whether the using of Facebook gave effect to the students' writing descriptive text scores or not. To examine the hypothesis, the writer used t_{test} formula. T-test is used to measure whether Facebook gave effect to the students writing descriptive text score using formula as follows:[51]

$$t_o = \frac{M1 - M2}{SEm1 - m2}$$

Note:

M1- M2   : The difference of two means

SEm1 –SE m2   : The standard error of the difference between two means

     To know the hypothesis accepts or rejects using the criteria; [52]

If $\alpha = 0.05 <$ Sig, Ho accepted and Ha rejected

If $\alpha = 0.05 >$ Sig, Ha accepetd and Ho rejected

     Interpreted the result of $t_{test.}$, the writer accounted the degrees of freedom (df) with the formula:[53]

$$df = (N1 + N2 - 2)$$

Where:

Df   : Degrees of freedom

N1   : Number of subject group 1

N2   : Number of subject group 2
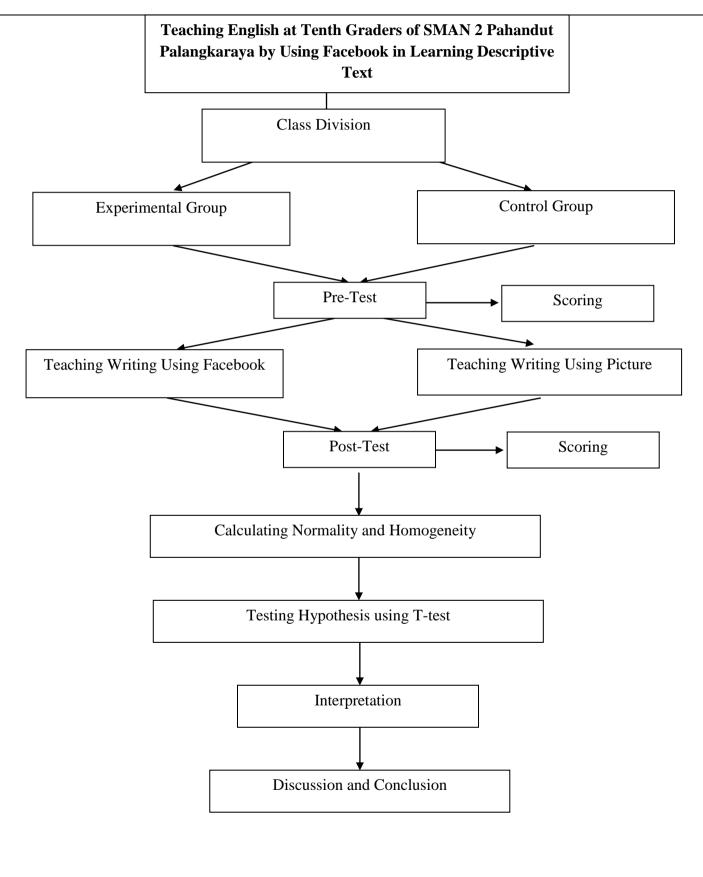
2   : Number of variable

[51] Anas Sudijono, *Pengantar Statistik Pendidikan*, , P.284
[52] Riduwan & Sunarto, *Pengantar Statistika*, Bandung: Alfabeta, 2012, P 245
[53] Anas Sudijono, *Pengantar Statistik Pendidikan,* Jakarta: Rajawali Press, 2012, P 285

After that, the value of t_{test} consulted on the t_{table} at the level of significance 1% and 5%. In this research, the writer used the level of significance at 5%. If the result or t_{test} was higher than t_{table}, it means H_a was accepted. But if the result of t_{test} was lower than t_{table}, it meant H_o was accepted.

7. The writer concluded data analysis.

Data Analysis Procedure

Teaching English at Tenth Graders of SMAN 2 Pahandut Palangkaraya by Using Facebook in Learning Descriptive Text

Class Division

Experimental Group

Control Group

Pre-Test

Scoring

Teaching Writing Using Facebook

Teaching Writing Using Picture

Post-Test

Scoring

Calculating Normality and Homogeneity

Testing Hypothesis using T-test

Interpretation

Discussion and Conclusion