CHAPTER III
RESEARCH METHOD

A. Place of The Study

The place of the study was the English Education Study Program of IAIN Palangka Raya.

B. Research Type and Design

Considering the purposes of the writer and the nature of the problem the type of research is quantitative research. Quantitative research uses objective measurement to gather numeric data that were used to answer questions or test predetermined hypotheses.[65] It divided be experimental and non-experimental. Experimental research is involving a study of the effect of the systematic manipulation of one variable on another variable. The manipulated variable is the experimental treatment or independent variable. The observing and measuring variables are the dependent variable.[66] In this case, the writer used experimental quantitative research that found the effect of the strategy.

The writer used pre-experimental as research design by employing one group Pre-Test/Post Test design. It absorbs three steps: (1)managing a pretest measuring the independent variable; (2) applying the experimental treatment X

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[65] Donal Ary, at al, *Research in Education 8th ed*, Canada: Wadsworth Cen gage Learning, 2010, p. 22.
[66] *Ibid,* p. 26.

subject; and (3) administering a posttest, again measuring the dependent variable.[67]

Table 3.1

Table of Experiment Design

(One-Group Pretest-Posttest)

Pre-Test	Treatment	Post-Test
Y_1	X	Y_2

C. Approach of the Study

In this study, the writer used quantitative approach. It was because the writer measured the students' writing ability by tests; pretest and post test. Creswell stated that a qualitative study, consistent with the quantitative paradigm, is an examination into a human problem base on testing a theory ordered of variables, measure with numbers, and analyze with statistical, in order to establish whether extrapolative generalizations of the theory hold true.[68]

D. Population And Sample of the Study

1. Population

Population is total indication or unit what we want to researched.[69] This research took the population were all of English students in the fourth semester at English Department Student of IAIN Palangka Raya.

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[67] *Ibid,* p. 304.
[68] John W. Creswell, *Quantitative and Qualitative Approach*, California: SAGE Publications, Inc, 1994, p, 2.
[69] Bambang Prasetyo, & Lina Miftahul Jannah, *Metode Penelitian Kuantitatif*, p. 110.

2. Sample

Sample is part of the population what we want to research and sample also should refer to as assumption on population and does not population itself.[70] From another meaning by Fernandez in Suharto states sample is part of the smallest class put on treatment and it gives respond independently.[71] From those meanings, sample was part of population that used to find the effect. In this research used nonprobability sampling with purposive sampling technique. The writer classified one class was class B of the fourth semester.

D. Data Collection Procedure

The writer collected the data by using some techniques below:[72]

1. Collecting

a. The writer gave the pre-test to write an argumentative essay that the test paper with detail instructions. It would be assesment to see early the students' writing ability about argumentative essay.

b. The writer scored the students' worksheet using analitycal scoring rubric on argumenttive essay. It was the first score ability on students' writing and as reference to compare with post-test score.

c. The writer gave the treatment by socializing used of FRIEND strategy in teaching argumentative essay. It means that the treatment as alliteration

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[70] Mohammad Adnan Latief, *Research Method on Language Learning an Introduction, M*alang: UM Press, 2014, p. 119.

[71]G. Suharto, *Suatu Pengantar Methodologi Penelitian dalam Pendidikan Bahasa,* Jakarta: Depdikbud Direktorat Jendral Pendidikan Tinggi, 1998, p. 68.

[72] Bambang Prasetyo, & Lina Miftahul Jannah, *Metode…*p.171-177.

on students' ability on writing an argumentative essay to their score would be increased.

d. The writer gave the post-test. It would be the last test to see the students' ability increased or not after giving the treatment. It compared to pre-test as reference to see their writing ability.

e. The writer colculated the result of the data in the score. It used the analytical scoring rubric on argumentative essay.

2. Coding

It was an activity to classify the data by hiding identity with codes. Like Sindi becomes B01, Muhammad becomes B02, etc. Y and X were the codes for pre-test and post-test. It means to keep credibility of subjects.

3. Scoring

After giving codes to each result of the test, the writer gave the score for the students' writing with marking system, with the table of analytic scoring rubric is.[73]

ASPECT	SCORE	LEVEL/CRITERIA
CONTENT	20-18	EXCELLENT TO VERY GOOD: knowledgeable, substantive, thorough development of thesis, relevant to assigned topic
	17-14	GOOD TO AVERAGE: some knowledge of subject, adequate range, limited development of thesis, mostly relevant to the topic, but lacks detail
	13-10	FAIR TO POOR: limited knowledge of subject, little

		substance, inadequate development of topic
	9-7	VERY POOR: does not show knowledge of subject, non-substantive, not pertinent, OR not enough to evaluate
ORGANIZATION	30-27	EXCELLENT TO VERY GOOD: introduction grabs reader's an attention with interesting question and surprising fact, well-defined thesis presents specific issue and writer's point of view, reasons are clearly, persuasive evidence supports each reasons for the opinion and reflects a consistent point of view, body thoroughly elaborates upon reasons and evidence, reasonable counterarguments are thoroughly and persuasively addressed, conclusion clearly.
	26-22	GOOD TO AVERAGE: introduction only partially develops attention –grabbing opening, thesis presents issue and writer's point of view but is somewhat vague, reasons are some supporting details are out of order, relevant evidence support each reason and reflects a consistent point of view but some reasons need more specific evidence, body elaborates upon reasons and evidence but more detail is needed, at least one counterargument is adequately addressed, conclusion is slightly vague.
	21-17	FAIR TO POOR: introduction does not engage reader's attention, thesis is unclear and omits point of view, reasons not in order of importance, evidence is not clearly relevant to the reasons, body elaborates upon only one reason, one counterargument is mentioned, conclusion only sums up topic.
	16-13	VERY POOR: Introduction is trite and dull, thesis is omitted, reasons are random order, no evidence supports any stated reasons, body does not elaborate upon evidence, reader concern and counterarguments are ignore, formal conclusion is omitted.

COHERENCE	20-18	EXCELLENT TO VERY GOOD: effective transitional words and phrases, parallel structure, and repetition create coherence throughout the essay.
	17-14	GOOD TO AVERAGE: transitional words and phrases, parallel structure, and repetition create coherence in most sections of the essay.
	13-10	FAIR TO POOR: occasionally, transitional words and phrases, parallel structure appropriately connect ideas, but sometimes they are used inappropriately.
	9-7	VERY POOR: transitional words and phrases, parallel structure are omitted.
GRAMMAR	25-22	EXCELLENT TO VERY GOOD: standard English grammar and sentence structure (with emphasis on varied sentence beginnings) are used appropriately for this grade level throughout the essay.
	21-18	GOOD TO AVERAGE: standard English grammar and sentence structure (with emphasis on varied sentence beginnings) are used appropriately for this grade level, with few problems.
	17-11	FAIR TO POOR: inconsistent use of standard English grammar and sentence structure (with emphasis on varied sentence beginnings) appropriate for this grade level jars the reader.
	10-5	VERY POOR: use of standard English grammar and sentence structure (with emphasis on varied sentence beginnings) are used appropriate for this grade level is minimal and confuses the reader.

MECHANICS	5	EXCELLENT TO VERY GOOD: standard English, punctuation, and capitalization are used appropriately for this grade level throughout the essay.
	4	GOOD TO AVERAGE: standard English, punctuation, and capitalization are used appropriately for this grade level, with problems.
	3	FAIR TO POOR: inconsistent use of standard English spelling, punctuation, and capitalization appropriate for this grade level jars the reader.
	2	VERY POOR: minimal use of standard English spelling, punctuation, and capitalization appropriate for this grade level confuses the reader.

4. Tabulating

    The last step was the process of the data. It tabulated the data in a table and then calculated them. It means to organize the data into table and for the easily to the analysis data.

D. Instruments of the Study

1. Test

    Test is measurement tool that very important for education research.[74] This study used writing test about argumentative essay writing with different topic.

    The writer collected the data from pretest and posttest. From them found the effect of the FRIEND strategy in argumentative essay writing. Pretest gave in first before treatment. The last test was posttest. It aims to comparing the pretest scores to the posttest scores. In the treatment the

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[74] Arief Furchan, *Pengantar Penelitian Dalam Pendidikan,* Yogyakarta: Pustaka Pelajar, 2004, p. 268.

writer tough argumentative essay with FRIEND strategy found the effect to the student's score.

2. Documentation

Documentation was one way to support the data with directly from the place of research, activity, photos that the relevant research and data. The writer in this research collected some information data classes, the students' name list, syllabi, and score of students. All those data collected from the documents that available at IAIN Palangka Raya.

E. Instruments Validity

1. Content Validity

Content validity is a requirement of the test performance that being to measuring.[75] The writer used argumentative essay test that was based on syllabi of the fourth semester. The test measured the students' writing ability.

Table 3.2

Significant of Content Validity

Competence Standard	Material	Type of Test	Kind of Question
The students are able to write an essay about 300 up to 450 words.	Argumentative Essay	Performance Test	Essay Test

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[75] H. Douglas Brown, *Teaching by Principles: An Interactive Approach to Language Pedagogy,* San Frasisco: Longman, 2000, p. 388.

2. Face Validity

Face validity is a design to achieve the performance on the test.[76] In this study, the test items used English and suitable on the syllabi of English Writing of the fourth semester at IAIN Palangka Raya, with following:

1) Writing essay test instruction on the test.

2) Scoring system for evaluation the essay.

3) Writing argumentative essay for the kind of essay test.

4) The language of items was English.

5) The test was suitable on the syllabi.

3. Construct Validity

Construct validity is the theoretical construct in the language learning and teaching which was operational the entity being received.[77] In this study, the test items followed the purpose of syllabi that aims at developing the students knowledge and skill in essay writing with various types of paragraph developments: argumentative essay.

Measuring the validity of the instrument, the writer used the formulating of product moment by Pearson as follows:[78]

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

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[76] *Ibid,* p. 388.
[77] *Ibid,* p. 389.
[78] Ridwan, *Metode dan Teknik Menyusun Thesis,* Bandung: Alfabeta, 2007, p. 110.

Where:

r_{xy} : Total coefficient of correlation

$\sum X$: Total value of score X

$\sum Y$: Total value of score Y

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

N : Number of Students

Table 3.3
Criteria of Validity

Validity	Interpretation
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
0.000-0.199	Very Poor Validity

F. Instruments Reliability

Reliability refers to the consistence of score.[79] In this study, the writer employed two raters. They were the writer self and lecturer of writing class. The rater used scoring rubric to measure the writing product of students.

The coefficient and interpretation of inter rater reliability were according to Djiwandono as show in table 3.5 and it helps by SPSS formula: [80]

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[79] *Ibid,* p. 386.
[80] *Ibid,* p.

Table 3.4
Inter-rater coefficients Correlation Interpretation

Correlation Coefficient	Interpretation
0.90 to 1.00 or -0.90 to -1.00	Very High or Negative Correlation
0.70 to 0.89 or -0.70 to -0.89	High Positive or Negative Correlation
0.50 to 0.69 or -0.50 to -0.69	Moderate Positive or Negative Correlation
0.30 to 0.49 or -0.30 to -0.49	Low Positive or negative correlation
0.00 to 0.29 or -0.00 to -0.29	Little if any Correlation

After doing inter-rater realibility, the writer would be examined the reability of the items by using Alfa Cronbach Technique on SPSS Program.

G. Data Analysis Procedure

In order to analyze the data, the writer did some procedures:[81]

1. Collecting the score of the student work sheet result. With the table:

Code of Students	Experimental Class	
	Y	X
SUM ($\sum$)		

Where:

Y   : Pretest

X   : Posttest

2. Tabulating the data into the distribution of frequency of the score table, then found out the mean of students' score, standard deviation, and standard error of variable by using the formulas bellow:

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[81] Triwid Syafarotun Najah, *Statistik,* Palngka Raya: Sekolah Tinggi Agama Islam Negeri (STAIN) Palangka Raya, Diktat, p 70.

a. Mean

$$M = \frac{\sum FX}{N}$$

Where:

M = Mean

F = Frequency

$\sum$ = The sum of

X= The scores

b. Measuring the sum of standard deviation.

$$SD = \sqrt{\frac{\sum D2}{N} - \frac{(\sum D)2}{(N)}}$$

Where:

SD = Standard deviation

$\sum D$ = The square deviation sum of experimental group

N = The total number of respondents

c. Measuring the standard error.[82]

$$SEM = \frac{SD}{\sqrt{N-1}}$$

Where:

SEMD = Standard error of the mean

SD = Standard deviation

N = Number of case

1 = Bilangan konstan

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[82] Anas Sudijono, *Pengantar Statistik Pendidikan*, Jakarta: Rjawali Press, 2012, p.282.

4. The writer used normality test. It used normality data found the normal distribution or not.

5. The writer used homogeneity test. It used relatively to found the same variant or not.

5. Then the writer applied all of them into t-test formula. That purpose was found there is effect of FRIEND strategy in writing or not. The formula was:[83]

$$t_o = \frac{MD}{SE\ MD}$$

Where:

MD   = Mean of Different

SEMD = Standard error of the mean

t_o = T Test

By the criteria:

If $t_{test} \geq t_{table}$, Ha is accepted and Ho is rejected

If $t_{test} \leq t_{table}$, Ha is rejected and Ho is accepted

6. The last, the writer calculate degree of freedom (d.f) by using formula:

df = N-1

After getting t-count, then the writer compared with it to t-table of certain significant level. If the t-count is higher than t-table, it means that there is positive effect of FRIEND strategy in teaching writing. The point

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[83] Riduawan, *Metode dan Teknik Menyusun Thesis,* Bandung: Alfabeta, 2010, p. 157.

was writer hypothesis is accepted. In contrary, the t-count is lower than t-table, the writer is not accepted.

7. In addition, the writer used SPSS 21.0 program to compare the data.