CHAPTER III

RESEARCH METHOD

In this chapter, researcher describes the research design which will be used in this study, hypothesis, setting and research participants, population and sample, data and source of data, data collection procedures, research instrument, and data analysis technique. To make them clear, the researcher elaborates them one by one in the following part of this thesis.

A. Research Design

This is a descriptive quantitative design. It is called descriptive because the research tries to describe about the students' ability to write logical argument in argumentative writing class of English Teacher Education Department of Faculty Of Education And Teacher Training Of State Islamic University Sunan Ampel Surabaya. According to McMillan and Schumacher, they said that "Research using a descriptive design simply describes an existing phenomenon by using numbers to characterize individuals or a group" 32.

It is also called quantitative because the data obtained from the test result done by the students in which concluded by numerical as symbol of grade of

³²McMillan and Schumacher. Research in Education. 1997. P.37

quality. According to Gay "Quantitative is the collection and analysis of numerical data to describe, explain, predict, or control phenomena of interest.³³

B. Hypothesis

H_a: the students` ability to write logical argument in argumentative writing class of English Teacher Education Department of Faculty of Education and Teacher Training Of State Islamic University Sunan Ampel Surabaya is high.

H_o: the students` ability to write logical argument in argumentative writing class of English Teacher Education Department of Faculty of Education and Teacher Training of State Islamic University Sunan Ampel Surabaya is low.

The creations of hypothesis are:

1. If t-value >t-table, H_o is rejected and H_a is accepted If t-value < t-table, H_o is accepted and H_a is rejected

2. If sig. score > 0.05, H_o is accepted and H_a is rejected If sig. score < 0.05, H_o is rejected and H_a accepted³⁴

C. Setting and Research Participants

This research will be conducted in argumentative writing class of English

Teacher Education Department of Faculty of Education and Teacher Training

³³Gay. Educational Research. 2009. P. 7

³⁴Muhid, Abdul. Analisis Statistik (Surabaya: Duta Aksara. 2010). P.13

of State Islamic University Sunan Ampel Surabaya 2015. The researcher selects the students of argumentative writing class as participants of this study because in this class, the students study about how to write a logical argument in argumentative essay.

D. Population and Sample

According to McMillan and Schumacher "A Population is a group of elements or cases, whether individuals, objects, or events, that confirm to specific criteria and to which we intend to generalize the results of the research"³⁵.

In this research, the population is all of the students of argumentative writing class at Faculty of Education and Teacher Training of State Islamic University of Sunan Ampel Surabaya 2015. There are 119 students of this course who are divided into four classes: A, B, C and D class.

As Azwar defined "Sample is part of the representative of population that is observed"³⁶. The sample of this research is 31 students. The sample is taken from A and B class because this research is used purposive sampling. Purposive sampling is technic of determining of sample by some considerations³⁷. The consideration in choosing this sample is because only in

³⁵McMillan and Schumacher . Research in Education. 1997. P.164

³⁶From thesis LatifMashadi .A Descriptive Analysis on Students' Ability In Using Articles (A, An and The) in Elevent Grade of MA Al-BidayahCandi, Bandungan in The Academic Year of 2011-2012. (Salatiga: 2013).

³⁷Sugiyono.StatistikaUntukPenelitian. (Bandung: CV ALFABETA) 2007.p. 68

A and B class, the students are asked to write argumentative essay. While, other classes do not write argumentative essay, just argue to someone's claim.

E. Data Sources

The data source of this research is taken from the result of students' argumentative essay in the middle test. The students are asked to find an article contains someone's argument to the topic by the lecturer. Then, the students must write an argumentative essay based on the article whether they agree and disagree to someone's claim.

F. Data Collection Procedure

This is descriptive quantitative research. To get the data, the procedure to collect the data as follows:

- The researcher asks the result of students in middle test of argumentative writing course to the lecturer on Wednesday, 15 May, 2015
- 2. The researcher gets 31 essays as data because the number of participant in this research is 31 students.
- 3. The researcher analyzes the students' essay by using the instrument of this research one by one.
- 4. The researcher gives score the students' argument by giving 1, 2, 3 and 4 score for each criterion on the rubric.

- The researcher sums the total score, average score, percentage and also analyze t-test
- 6. The researcher calculate all of the data by using and SPPSS

G. Research Instrument

The researcher needs some instruments to make the researcher easier to collect the data. The instruments are:

1. Documentation

Documentation is anything that is copied needs to be documented.

The researcher uses documentation because the researcher will take the argumentative essay of middle test as the document.

2. Assessment Rubric

Assessment rubric is a scoring tool used to assess a set list of criteria and objectives. The researcher will use assessment rubric because the researcher will assess student's ability in writing logical argument in argumentative essay. Assessment rubric will make the researcher easy when the researcher will analyze student's ability. This is the rubric that the researcher used to analyze the students' ability in writing logical argument in argumentative essay:

Table 3.1³⁸
Critical Essay Rubric of Amy Glenn

CATEGORIES	4 points	3 points	2 points	1 point	POINTS
INTRODUCTION	Well-developed intro	Introduction creates	Intro is generic,	Intro is collection	
Thesis	engages reader &	interest.	creating little interest.	of random info not	
	creates interest.			create interest	
explanation of topic	Contains well-defined	Contains an	Contains adequate	Explanation of	
	& thorough	explanation of topic.	explanation of topic	topic is vague or	
	explanation of topic.		but is vague.	unclear.	
Body	Argument logical &	Argument present &	Argument present but	Argument not	
Argument	thoughtful.	adequate.	weak.	present.	
supporting examples	Supporting examples	Supp <mark>orting</mark> examples	Few supporting	No supporting	
	are concrete &	general and/or	examples given are	examples given.	
	detailed.	u <mark>nsp</mark> ecific.	we <mark>ak o</mark> r irrelevant.		
ORGANIZATION	Logical progression of	Logical progression of	Structure is clear but	No discernible	
Structure	ideas with a clear	ideas but structure not	at times is awkward	structure and/or	
	structure that	always clear.	and <mark>/or</mark> distracting	organization.	
	enhances topic.			× .	
		×	Some weak/poor		
Transitions	Transitions are	Transitions are	transitions are	No transitions are	
	thoughtful & flow with	present, but often	present.	present.	
	essay.	weak or awkward.			
CONCLUSION	Conclude the essay	Contain adequate	Contains vague	No conclude the	
		conclusion of the essay	conclusion	essay	

Rubric. Taken from http://universitycollege.illinoisstate.edu/downloads/Critical Essay Rubric.pdf.accessed on 14thNopember 2014. This rubric is used for critical essay rubric.

H. Data Analysis Technique

The researcher analyzes and calculates the score gotten by the students from the argumentative essay. The data analysis is based on two analyses. The first analysis is looked from the result of indicators from translation of the rubric of "critical essay" by Amy Glenn and the second is from the analysis of t-test. For the detail explanation of each analysis as follow:

1. Indicator of Logical Argument in Argumentative Essay

a. Is the introduction contains a debatable thesis?

- The scoring of thesis based on these score:
 - 4 = Well-developed to engages the reader and creates interest
 - 3 = creates interest
 - 2 = creating little interest
 - 1= not interest

b. Is the introduction contains explanation of topic?

- The scoring of explanation of topic based on these score:
 - 4 = Well-defined and well-explained to the topic
 - 3 = contains an adequate explanation of topic
 - 2 = contains explanation of topic but it is vague
 - 1= not explained to topic

c. Is the body contains argument?

• The scoring of argument based on these score:

- 4 = Logical and thoughtful argument
- 3 = adequate argument
- 2 = weak argument
- 1= argument no present

d. Is the body contains evidence?

- The scoring of evidence based on these score:
 - 4 = Support the thesis with relevant evidence
 - 3 = few evidence are weak
 - 2 = not relevant to the argument
 - 1= no evidence

e. Is the organization contains well-structured?

- The scoring of well-structured based on these score:
 - 4=Logical progression of ideas with a clear structure
 - 3 = Logical progression of ideas but structure not always clear
 - 2= Structure is clear but at times is awkward and/or distracting
 - 1= No discernible structure and/or organization

f. Is the organization contains well-transition?

- The scoring of well-transition based on these score:
 - 4 = Transitions are thoughtful & flow with essay
 - 3 = Transitions are present, but often weak or awkward
 - 2 = Some weak/poor transitions are present

1= No transitions are present

g. Is the conclusion contains restatement of the essay?

- The scoring of well-transition based on these score:
 - 4 = well-concluded and thorough conclusion of the thesis
 - 3 = contain adequate conclusion of the essay
 - 2 = contains vague conclusion
 - 1= no conclude the essay

From the indicators above, the researcher do analysis to the students' essays to know the students' ability to write logical argument in argumentative essay which is looked by these analyses:

a. Looked by the percentage of total score gotten by all of the samples

There are 31 samples of this study. Each sample has highest score if they get 28. Because the researcher makes the percentage from the total score gotten by all of the samples, so the formula as follow:

Total score gotten by all of the students x 100% 868

The criteria of high and low as follow:

- 1) The highest score form all of the students is 868.
- 2) Low is gotten from the data when the percentage is 1-50 %
- 3) High is gotten from the data when the percentage is 51 100%

b. Looked by the percentage of total samples who get low and high score.

- 1) There are 7 criterions. They are thesis, explanation of topic, argument, evidence, structure, transition and conclusion. Each criterion has 1- 4 score. The lowest score of each criterion is 1 and the highest score of each criterion is 4. So, the total score is 28.
- 2) Low is gotten from the data when the score of each sample is 1-14
- 3) High is gotten from the data when the score of each sample is 1-28 Moreover, the researcher calculates the numbers of the sample who get low and high score by using this formula:

The percentage gotten from =
$$\sum R \times 100\%$$

Note: $\sum R = \text{total of samples who get low and high score}$
 $N = \text{Total of sample}$

From the formula above, the researcher displays the percentage of each criterion in the table below in order easy to be understood:

Table 3.2
The percentage of students' ability on logical argument

No	Criteria	Score	∑R	N	%
1	Low	1-14			
2	High	15-28			

The criteria from the result of the percentage in the table above as follow:

- 1) Low is gotten from the data when the percentage is 1-50 %
- 2) High is gotten from the data when the percentage is 51 100%

c. Looked by the percentage of total score of each criterion gotten by all of the samples

The next analysis is the researcher sums the total score from each criterion from all of the students consist of thesis, explanation of topic, argument, evidence, structure, transition and conclusion. After sums the total scores of each criterion, the researcher percentages it one by one. For the criterion of this analysis as follow:

- 1) There are 31 samples
- 2) The highest score of criterions is 4.
- 3) The researcher makes the average percentage from the entire sample. So, the highest score for each criterion is 124. 124 are gotten from 31×4 .
- 4) Low is gotten from the data when the percentage is 1-50 %
- 5) High is gotten from the data when the percentage is 51-100 % The formula of the percentage of each criterion as follow:

The percentage of each criterion:
$$\frac{S}{\sum S} \times 100\%$$

Note: S = Total score gotten by all of the students $\sum S = \text{the highest score for each criterion}$

The researcher displays the percentage of each criterion in the table below in order easy to be understood:

Table 3.3

The percentage of each criterion on students' ability to write logical argument

No	Criterion	S	$\sum S$	%
1	The thesis			
2	Explanation of topic			
3	Argument			
4	Evidence		24	
5	Structure			
6	Transition			
7	Conclusion			

d. Analysis of Logical Argument by Using T-test

T-test is chosen by the researcher because the sample of this study is one sample group. The researcher using t-test because the researcher wants to test whether the hypothesis of this study are accepted or rejected. The researcher will use "Uji pihak kiri" because in the hypothesis Ha, the researcher assume that the students' ability to write logical argument in argumentative essay is high and for Ho, the

students' ability to write logical argument in argumentative essay is low.

The significant of hypothesis analysis is 5%. It means that the probability of error level when the hypothesis is accepted is 5%. While, the confidence interval of hypothesis analysis is 95% means that 95% from the score of sample, represent all of the population of this study. All of the calculation of t-test below is from SPSS:

Table 3.4

One-Sample Statistics					
	N	Mean	Std. Deviation	Std. Error Mean	
Students ability to write logical argument in argumentative essay					

From the table above, it can be seen the mean of total score by all of the samples, standard deviation and standard error mean.

Table 3.5
One sample test

	Test Value = 100			
	Df	Sig.(1tailed)	Mean	95%
			Difference	confidence
				interval of the
				difference
			Lower	Upper
Students`abilityto write				
logical argument				

From the table above, it can be seen t-value, signification, mean difference, the percentage of lower and upper.

By referring to the calculations of t-test above, if the score of t-value> t-table, it means that Ho is rejected and Ha is accepted. Conversely, if the score of t-value < t-table, it means that Ho is accepted and Ha is rejected. If it is looked by the significant score, if the significant score is more than 0.05, it means that Ho is accepted and Ha is rejected. While, if sig. score is less than 0.05, it means that Ho is rejected and Ha is accepted.

From the result of two kinds of analyses analysis above, it can be concluded whether the students' ability to write logical argument in argumentative writing class of English Teacher Education Department of Faculty of Education and Teacher Training of State Islamic University Sunan Ampel Surabaya in academic year 2014-2015 is high or low.