CHAPTER III

RESEARCH METHODOLOGY

In doing his final project, the writer collected the required data and information from the two main sources: library research and field research. Library research refers to the activity of gathering data from library facilities such as references of fundamental theories, which support the writer's effort in doing the research. Field research refers to the research conducted at English Department of STAIN Kediri. I chose the fourth semester students of English department as the subject of the research because in the writer's opinion, they had already passed the IC program and got grammar 1 lesson. This chapter deals with the population, sample, and the instruments used in this research as well as the scoring technique. The administration of the test and the method of analyzing the data will also be presented in this chapter.

A. The Research Design

The writer will obtain data by using descriptive method. It is for covering and collecting data to prove the hypothesis. Method of descriptive research is as an activity covering data collecting in order to testing hypothesis or answer the question which is concerning to the situation of when which is walk from fundamental of an research.

The writer will conduct the observation in one class. The test will be held in two times: The first test is given to measure the students' mastery in using parts of speech. The second one is given to measure the students' ability in constructing English sentence.

B. Research Method

Based on the research problem and objective, the writer used descriptive method. This method is used to describe and investigate the existence of the relationship between two different variables.

Descriptive research is to discover a correlation between two variables or more.[15] Descriptive method may classify order and correlate data seeking to describe relationship that were discoverable in phenomena themselves. All the activities are aimed to find out the correlation between students' parts of speech mastery and their ability in building basic sentence structure.

C. Population and Sample

1. Population

A population could be of any size and whole the items. As quoted by Arikunto from Encyclopedia of Educational Evaluation 'A population is a set of element processing one or more attributes of interest'.

Conducting the definition above, the writer took the fourth smester of STAIN Kediri as the population.

There are some the writer's considerations in choosing the fourth smester of STAIN Kediri as the population:

- They already got IC and grammar 1 program.
- They already parts of speech and how to arrange sentence lessons.

[15]IrawanSoehartono,*MetodePenelitian*Sosial. Bandung; RosdaKarya 2008. P. 34

2. Sample

Sample namely by a pulling of partly from population to representing of all population.[16] The sample for the research was selected from population. The writer would take 50 students as the sample from the population. The sampling technique that was used was purposive sample. The technique is based on current purpose, and it was usually applied because of current considerations. *"Sample bertujuan dilakukan dengan cara mengambil subjek bukan didasar kanatas strata, random atau daerah tetapi berdasarkan atas adanya tujuan tertentu"*.[17]

D. Research Variables

"Variable adala hobjek penelitian atau apa yang menjadi titik perhatian suatu penelitian".[18] The research is a quantitative research, it means the data will be served with changeable numeral or variably. So that, in the research the variables are defined as follows:

- Parts of speech is independent variable. It is because the variable gives influence to the other variable. The variable is symbolizedby variable X. and
- English sentence structure is dependent variable. It is because the variable depends on the other variable. The variable is symbolized by variable Y.

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[16]WinarnoS,*PengantarPenelitian-penelitianIlmiah.*Bandung; Tarsito 1994. P. 93
[17]Arikunto S, *ProsedurPenelitianSuatuPendekatanPraktek*. Jakarta; RinekaCipta 1996. P 127
[18] Ibid, p.99

E. Hypothesis

Hypothesis is meant as a prediction about relationship among variables which was not only testable, but also was repeatedly tasted against data. Hypothesis is a conclussion, but the conclussion has not been final, it has to be proved its correction.[19]

The following are the forms of hypothesis:

- Research hypothesis $H_a$means There is no correlation between parts of speech mastery and students' ability in constructing english sentence at Stain Kediri.
- Hypothesis null $H_o$means There is a correlation between parts of speech mastery and students' ability in constructing english sentence at Stain Kediri.

Based on the hypothesis above, the writer forms the correlation formula to support the the result of prediction.

The correlation is divided into three forms:

a. Positive correlation.

   If the first test and the second one result positive correlation. It means that the student who gets high score on the first test, and neither on the second one.

b. Null correlation.

   It is named by zero correlation coefficient. It means that there is no correlation between the two tests.

[19]WinarnoSurakhmad,*PengantarPenelitian-penelitianIlmiah.*Bandung; Tarsito 1994. P.68

c. Negative correlation.

If the first test and the second one result negative correlation. It means that the student who gets high score on the first test, but getting low scores on the second one.

F. Instrumentation

> *"If there is a lack of fit between at least some candidate of productive and respective skills, then performance on a multiple choice test may give a quite inaccurate picture of those candidates' ability. A multiple choice grammar test score…that gap will mean that test scores are at best giving incomplete information*".[20]

Based on the quotation above, the writer states to make the test without options because it can be a poor indicator someone's ability in using grammatical structures.

The writer makes those two variables above as the main data. The instruments will be needed to collect the data and the writer will use two kind of achievements test. These are tests in differentiating parts of speech and tests in building English sentence structure.

1. Parts of Speech Test

In this testing, part of speech consists of word classification test. It consists of fifty one questions. The writer considers those items of the test is enough to recognize the students' mastery on parts of speech. Here is the analysis of the test:

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[20]Arthur H, *Testing for Language Teacher*. New York; Cambridge University Press 1989. P.60

Table 3.1

Analysis of Parts of Speech Test

No	Items of the Test	Description	Objective
1	Item No 1 to 40	Identify parts of speech of words	It is to measure the student's mastery in identifying parts of speech
2	Item No 41to 48 And 53 to 55	Identify parts of speech of words in sentences	It is to measure the student's mastery in identifying parts of speech of words in sentences

The writer considers that all items of the test are enough to measure the students' mastery in identifying parts of speech.Then, the result of the test will be scored and calculated.

2. Basic Sentence Structure Test

The writer will give an achievement test in sentence structure. The test consists of fifteenitems. The test result will be scored and calculated to prove the hypothesis.

The writer includes some kindof sentences in the items of the test. It is to measure the test accurately. The forteen items are expected to be able to measure the students' ability in building English sentence structure. The following is the analysis of the test items:

Table 3.2

Analysis Basic Sentence Structure Test

Items of the Test	Description	Objective
Item No 49 to 52	Sentence structure test	It is to measure the student's ability in identifying unoppropiate standard English structure.
Item No 56 to 58	Sentence structure test	It is to measure the student's ability in arranging words into correct sentences.
Item No 59 to 65	Sentence structure test	It is to measure the student's ability in translating English sentences.

After collecting the test result, the writer will evaluate by using statistical computation whether the hypothesis will be accepted or not. In this case the writer will use correlation coefficient to relate the two variables.

G. The Scoring Technique

1.Scoring Parts of Speech Test

$$The\ final\ score = \frac{The\ sum\ of\ the\ right\ answers}{51} x100$$

- The sum of right answers is divided by 51 because there are twenty five items.
- To avoid the decimal score, the writer applied the commonly use formula that is the score obtained with a decimal number more than 0,5 will be changed into 1, and when the score that is obtained with a decimal less than 0,5 will be changed into 0 (zero)

2. Scoring Basic Sentence Structure

$$The\ final\ score = \frac{The\ sum\ of\ right\ answers}{14} x100$$

- The sum of right answers is divided by 14 because there are fifteen items.
- As on parts of speech test, the score obtained with a decimal number more than 0,5 will be changed into 1, and when the score that is obtained with a decimal less than 0,5 will be changed into 0 (zero)

H. Technique of Data Collection

The writer will collect the two results of the test that has been done before by the students as the data will be investigated. After the results of investigation are obtained, the data will be calculated for getting the score.

I. Techniques of Data Analysis

The writer will use achievement test to analyze data. It needs several steps of computation in carrying out gathered data. The researcher uses statistical computation.

The following are the formulas:

1. Mean for part of speech/base sentence structure data

$$M = \frac{\sum X}{n}$$

Where: M = The mean

$\sum X$ = The sum of the scores X or Y

N = The number of score in the distribution

2. Standard deviation for parts of speech/ basic sentence structure data

$$n = \sqrt{\frac{n\sum x^2 - (\sum x)^2}{n(n-1)}}$$

Where: s = Standard deviation

$\sum X$ = The sum of the scores X or Y

N = The number of students[21]

3. Correlation coefficient

$$\boldsymbol{r = \frac{n.(\sum XY) - (\sum X).(\sum Y)}{\sqrt{\{n.\sum X^2 - (\sum X)^2\}.\{n.\sum Y^2 - (\sum Y)^2\}}}}$$

Where:

r = correlation coefficient

$\sum X$ = Sum of the raw of X scores

$\sum Y$ = Sum of the raw of Y scores

$\sum XY$ = Sum of product of each X multiplied by each Y

$\sum X^2$ = Sum of the squares of each X scores

$\sum Y^2$ =Sum of the squares of each Y scores

$(\sum X)^2$= The squares of the total sum of X scores

$(\sum Y)^2$ = The squares of the total sum of Y scores

N = The number of paired scores[22]

[21]Sundayana, *PanduanPraktikumKomputasi Data Statistika*. Garut 2010. P. 56
[22] Ibid,.

4. Criteria Correlation Coefficient

The criteria correlation coefficient is as follow:

CC = 0 = There is no correlation

0,00 s/d 0,20 = Very low correlation/Almost no correlation

0,20 s/d 0,40 = Low correlation

0,40 s/d 0,60 = Medium/ Average correlation

0,60 s/d 0,80 = High correlation

0,80 s/d 1,00 = Very hight correlation

CC = 1 = Excellent correlation[23]

[23] S. Arikunto,.*ProsedurPenelitianSuatuPendekatanPraktek*. Jakarta; RinekaCipta 1998. P. 260