

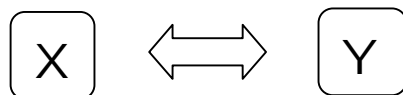
CHAPTER III

RESEARCH METHODOLOGY

A. Research Design

This research was correlation research. Referring to John W Creswell, correlation research is defined as a statistical test to determine the tendency or pattern for two even (or more) variables or two sets of data to vary consistently.¹ Then, Gay stated that correlation research involves collecting data in order to determine whether, and to what degree, a relationship exists between two or more quantifiable variables.²

The research design type used was explanatory design. Thus, the writer had collected two scores (X and Y variables) of each participant of the research. The variables of this research were the perception of classroom environment as independent variable (X) and students' motivation as dependent variable (Y). Furthermore, in this research the writer had investigated coefficient correlation of variables systematically; the model of the relationship between two variables can be described as follows:



X : Perception of classroom environment

Y : Motivation in learning English

↔ : Relation

¹John W Creswell, *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research: Third Edition*,. (New Jersey: Pearson Education, Inc 2008), p. 338

²L. R.Gay and Peter Airasian, *Educational Research, Competencies for Analysis and Application, Sixth Edition*, (United State of America: Prentice Hall, 2000), p. 321

B. The Time and Location of the Research

This research was conducted on September 2013 at MA Darel Hikmah Pekanbaru, it was located on Manyar Sakti street, Panam.

C. The Subject and the Object of the Research

1. The Subject of the Research

The subject of this research was the second year students of MA Darel Hikmah Pekanbaru in 2013/2014 Academic year.

2. The Object of the Research

The object of this research were the correlation between students' perception of classroom environment and motivation in learning English of the second year at MA Darel Hikmah Pekanbaru.

D. The Population and Sample

The population of the research was the second year students of MA Darel Hikmah Pekanbaru which consisted of six classes. The numbers of the students was 128 students.

Table I.1
The Population and Sample

No	Class	Population		25%
		Male	Female	
1	XI IPA 1	-	22	6
2	XI IPA 2	5	12	4
3	XI IPS 1	-	25	6
4	XI IPS 2	8	13	5
5	XI AGM 1	-	19	5
6	XI AGM 2	24	-	6
Total sampling		128		32

In terms of finding the sample for this research, the writer oriented to Arikunto who stated that:

1. If the populations are under 100, the writer can take all of them.
2. If the populations are more than 100, the writer can take 10% - 15% or 20% - 25% as a sample.³

The writer took 25% from the population by using simple random sampling, because the subject of this research had the same background knowledge, ability, and teachers that taught them. So the sample was 32 students.

E. The Technique of Collecting Data

To determine the students' perception of classroom environment and motivation in learning English, the writer used questionnaire. There are two kinds of questionnaire in this research; they are pre-questionnaire and post-questionnaire. This questionnaire consists of some questions for the respondents. It would be twenty items for each variable were representative statements for both indicators.⁴

According to Rensis Likert as quoted in Marguerite et al, Likert scale is the mostwidely used scale in survey research and certainly the one that has found its way into popular culture.⁵

³Arikunto, *Procedure Penelitian: Suatu Pendekatan Praktek*, (Jakarta: PT. Rineka Cipta, 2006), P.134

⁴Riduwan, *Belajar Mudah Penelitian untuk Guru, Karyawan, dan Peneliti Pemula* (Bandung: Alfabeta, 2004), p.87

⁵Marguerite G. Lodico, Dean T. Spaulding and Katherine H. Voegtler, *Methods in Educational Research from Theory to Practice* (San Fransisco: Jossey Bass, 2006), p.107.

F. Validity and Reliability

Validity and reliability is the important key to effective research. According to Louis, reliability is a necessary but insufficient condition for validity in research; reliability is a necessary precondition of validity, and validity may be a sufficient but not necessary condition for reliability.⁶

1. Validity

Before the questionnaires were given to the sample, both of questionnaires had been tried out to 20 students. In this research took twice questionnaires. The purpose was to obtain validity and reliability of questionnaires. It was determined by finding the difficulty level of each item. Item difficulty is determined as the proportion of correct responses.

The difficulty level of an item shows how easy of difficult a particular item in the questionnaire. The item that do not reach the standard level of difficulty are excluding from the questionnaire, and they are changed with the new items that are appropriate. Based on the first questionnaire result, it was found that all of items in questionnaire were valid. The researcher found the result as follow:

⁶ Louise, *Research Methods in Education sixth edition*, (Canada: Roulledge, 2007), p.133

Table I.2
Recapitulation of Research Instrument Validity
students' perception.

No	Number of Item	Coefficient Correlation	Validity
1	X1	0.63	Valid
2	X2	0.59	Valid
3	X3	0.51	Valid
4	X4	0.53	Valid
5	X5	0.62	Valid
6	X6	0.66	Valid
7	X7	0.61	Valid
8	X8	0.56	Valid
9	X9	0.58	Valid
10	X10	0.58	Valid
11	X11	0.56	Valid
12	X12	0.69	Valid
13	X13	0.68	Valid
14	X14	0.61	Valid
15	X15	0.68	Valid
16	X16	0.54	Valid
17	X17	0.53	Valid
18	X18	0.51	Valid
19	X19	0.53	Valid
20	X20	0.50	Valid

Table I.3
Recapitulation of Research Instrument Validity
Students' Motivation.

No	Number of Item	Coefficient Correlation	Validity
1	Y1	0.66	Valid
2	Y2	0.51	Valid
3	Y3	0.5	Valid
4	Y4	0.69	Valid
5	Y5	0.5	Valid
6	Y6	0.6	Valid
7	Y7	0.51	Valid
8	Y8	0.68	Valid
9	Y9	0.6	Valid
10	Y10	0.64	Valid
11	Y11	0.64	Valid
12	Y12	0.58	Valid
13	Y13	0.67	Valid
14	Y14	0.61	Valid
15	Y15	0.66	Valid
16	Y16	0.6	Valid
17	Y17	0.65	Valid
18	Y18	0.6	Valid
19	Y19	0.67	Valid
20	Y20	0.53	Valid

2. Reliability

Reliability is a necessary characteristic of a good test. According to Gay, reliability is the degree to which the test consistently measures whatever it is measuring.⁷ It is possible the test can be reliable but it is not valid, whereas the test is valid automatically it is reliable.

To obtain the reliability of the questionnaire given, the researcher used the formula “alpha” as follows:⁸

$$= 2\left(1 - \frac{S_1^2 - S_2^2}{S_x^2}\right)$$

where:

: the reliability of the test

S_1^2 : variants the first score

S_2^2 : variants the second score

S_x^2 : variants all of the score

In analyzing the reliability of the questionnaire, the researcher used SPSS 16.0 for windows. Based on the analysis the researcher found the result as follow:

Table I.4
The reliability of variables (X) and (Y)

Reliability Statistics		Reliability Statistics	
Cronbach's Alpha	N of Items	Cronbach's Alpha	N of Items
.889	20	.851	20

⁷ Gay, Op,Cit, p.175.

⁸ Sudarmanto , *Analisis Linier Ganda Dengan SPSS*, (Yogyakarta: Graha Ilmu, 2005), P.89

G. The Data Analysis Technique

The technique of the data analysis in this study was coefficient contingency. It was used because the data were containing ordinal and ordinal scales, as Hartono pointed out. if the variables are ordinal and ordinal, it was suggested to used the following formula⁹:

$$C = \frac{\sqrt{X^2}}{X^2 + N}$$

Where:

C = Correlation Coefficient Contingency

X^2 = Chi Quadrate

N = Number of Case

In analyzing the data the researcher used SPSS 16.0 for windows. Then to find students' category, the writer used standard deviation and mean to find of each variable. According to Sudijono, the standard deviation is necessary to categorize the students in three levels¹⁰. The formula considered as follow:

$$M - 1SD \quad - \quad M + 1SD$$

M + 1SD		High Ranking
		Middle Ranking
M - 1SD		Low Ranking

Where:

M = Score of Mean

SD = Score of Standard Deviation

⁹Hartono, *Statistik Untuk Penelitian*, (Yogyakarta: Pustaka Pelajar, 2008), p.70

¹⁰Sudijono, *Pengantar Statistik Pendidikan*, (Jakarta: PT. Raja Grafindo Persada 2009), p.176