

III. RESEARCH METHODOLOGY

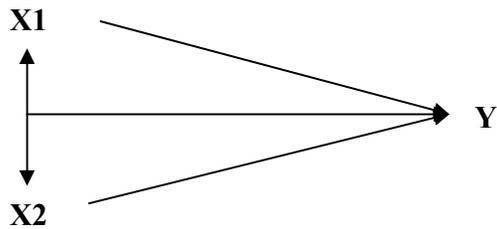
A. Research Design

It is clear that this research was a quantitative research. Quantitative research is associated with social survey technique like structured interviewing and self-administered questionnaires, experiments, structured observation, content analysis, and the analysis of official statistics. It implies the application of measurement of predetermined variables, as well as to the gathering and analysis of numerical data.

This research was intended to investigate whether there is correlation of language learning strategies and students' motivation towards their achievement in reading comprehension. The research was conducted by using descriptive survey method. Winarno Surakhmad (1985: 139 in Uniroh, 1990: 27) states that descriptive survey method is a method which simply analyze, classify, and reveal an investigation by using some techniques such as interview, questionnaires, observation or by using test technique, case study, and comparative study. It can happen that descriptive research tries to compare the similarities and the differences of a certain phenomenon or to measure a dimension like in quantitative study (questionnaire, test, interview, etc.) or to make classification, determine correlation one element to another.

In this research, the researcher analyzed the current data that were taken from students' language learning strategies and students' motivation in learning English and their reading comprehension achievement. The data, then, were correlated to find out the correlation each other. The design of the research was presented as below:

correlation



Where:

X1 : Students' Motivation

X2 : Language Learning Strategies

Y : Students' Reading Comprehension Achievement

B. Variables

In this research, the researcher identified two variables: independent and dependent variables.

Independent variable is the major variable which I investigated. It is the variable which was selected, manipulated, and measured by me as the researcher. Dependent variable, on the other hand, is the variable which I observed and measured in determining the effect of the independent variable. It is a product from interaction of all variables that involve in a research (Setiyadi: 2006). From the explanation, the researcher determined the variables as follow:

1. Motivation and language learning strategies as independent variables because it is assumed that motivation and language learning strategies influence students' achievement.
2. Students' reading comprehension achievement as a dependent variable because it is assumed that achievement is affected by students' motivation and the use of language learning strategies in learning English.

C. Population and Sample

1. Population

The population of this research was the second grade students of SMA Negeri 1 Bandar Lampung in academic year 2010/2011.

2. Sample

In conducting this research, the researcher used *simple random probability sampling*. From all the classes of second grade students, the researcher chose 3 classes randomly.

D. Data Collecting Technique

In collecting the data, the researcher used two techniques: questionnaires and written test of reading.

1. Questionnaires, it is a list of questions and statements to be answered by the students used to measure the students' motivation and language learning strategies used in learning English.
2. Test, it is a set of questions and problems in form of objective test used to measure the students' reading comprehension achievement.

The questionnaires were held in two ways namely: motivation and the use of strategies. There were 70 questions to be answered in these questionnaires. The time to answer these 70 questions was just 60 minutes. It means that every item in the questionnaire had to be answered less than 1 minute. This was done to make the students think fast of the questions and answer it honestly.

1. Questionnaire of Motivation

The questionnaire is often used by the researcher to measure the students' motivation. By using this technique, the researcher wanted to get more sources of the data from the subjects. The researcher gave a set of questionnaires in order to investigate the students' motivation in learning English. The questionnaires instrument consists of 40 items. The questionnaires measure the students' motivation in learning English. The score are based on the Likert Scale and the range of 1 to 4s.

NO	ITEMS	STUDENTS' SCORE			
		a	b	c	d
1	1, 3, 7 (a)	4	3	2	1
2	2, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40.	4	3	2	1

Table 1. Students' Score of Questionnaire of Motivation

Each alternative was defined as follows:

A = 4; for high motivated students.

B = 3; for high motivated students.

C = 2; for low motivated students.

D = 1; for low motivated students.

In addition to the indicator of motivation in learning, the researcher takes the indicators from Abin Samsudin Makmun (1983: 33-34) in Uniroh (1990: 32) who categorized motivation in eight factors:

NO	INDICATOR OF MOTIVATION	NO. OF ITEM
1	Duration	1,2
2	Frequency	3,5,6,13
3	Persistence	4,7,17,40
4	The Toughness of Endurance	8,9,12,19,20
5	Students' Aspiration	10,21,22,23,25,26,30
6	Qualification Level of Students' Achievement	28,29,31,32,33,38,39
7	Devotion	11,14,15,16,18
8	Attitude	24,27,34,35,36,37

Table 2. Indicators of Motivation

2. Questionnaires of the Use of Strategies

On the use of strategies, the researcher also used questionnaires; it is called Language Learning Strategies Questionnaires (LLSQ) (Setiyadi, 2006: 76) because the researcher wanted to know their learning strategies in learning English. The language learning strategies was classified within one main area only, that is: reading.

	Cognitive	Meta-cognitive	Social
Reading	Item no.1-10	Item no.11-20	Item no.21-30

Table 3. Strategy Classification of the LLSQ

The researcher gave a set of questionnaires consist of 30 items based on the indicators: meta-cognitive, cognitive, and social. Each item was designed to measure the three strategies. The students were expected to give their answer based on their feeling and experience.

3. Written Test of Reading

This test was held to measure the students' achievement in learning English. This step was conducted to know the students' mastery of English subject, especially in reading comprehension. There were 40 questions in form of multiple choices. The alternatives provided include *a*, *b*, *c*, and *d*. The correct answer was scored 1 and the wrong answer was scored 0. The time to do the test was 45 minutes.

Since reading skill includes mastering many aspects of language skill and performance such as vocabulary, structure, etc., the researcher in constructing the reading test divided the test into some parts:

- 1) Vocabulary test; it contains understanding noun cluster (compound words). This part becomes common problem for most students in reading; understanding words in context, that is asking the meaning of the underlined words in a sentence.
- 2) Understanding a sentence; it is used to test the students' ability in understanding central idea of the sentence.

- 3) Understanding a paragraph; the text consists of one paragraph only. It is used to test the students' ability in understanding central idea of the paragraph.
- 4) Understanding a text; the text consists of more than one paragraph. This is the main aim of reading test.

NO	READING SPECIFICATION	ITEM NUMBER
1	Vocabulary test	1 – 10
2	Understanding a sentence	11 – 20
3	Understanding a paragraph	21 – 30
4	Understanding a text	31 – 40

Table 4. Reading Specification

In scoring system students' result of the test, the researcher used Arikunto's formula as follow:

$$\text{Score} = \frac{\text{The number of correct answer}}{\text{answer}} \times 100$$

E. Research Procedure

There were ten steps in this research:

- Determining the problem
- Observation
- Selecting and determining the subject

- Determining the research focus
- Formulating the questionnaires
- Determining the way of collecting and analyzing the data
- Preparing the data collecting technique
- Collecting the data
- Conducting English test
- Evaluating and analyzing the data, and
- Making report of the findings.

F. Data Analysis

To see the correlation of students' motivation and language learning strategies and their achievement, the data was analyzed by using *Pearson product-moment correlation coefficient*.

To see the *product moment* correlation, we have to see “the coefficient” of its relation ($r = 1$) (see Table 4. *r*-Value Interpretation Table) and the significant value ($p < 0,01$) by using this formula:

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

r value	Interpretation
0,000 to 0,200	Very low

0,200 to 0,400	Low
0,400 to 0,600	Middle
0,600 to 0,800	High
0,800 to 0,100	Very high

Table 5. *r*-Value Interpretation Table

(Setiyadi, 2006: 167)

In addition to reading comprehension test analysis, the researcher also calculates the degree of discrimination (discriminating power) by using the formula:

$$DP = \frac{U-L}{\frac{1}{2}N}$$

Notes: DP = Discrimination Power

U = the proportion of the upper group students

L = the proportion of the lower group students

N = number of students

The criteria are:

- 1). If the value is positive discrimination, it means that more high level students than low-level students get the correct. If the value is zero, it means that no discrimination.

- 2). If the value is negative, means that more low level students than the high level students get the item correct.
- 3). In general, the higher the discrimination, the better. In the classroom situation most items should be higher than 0.20 indexes (Shohamy, 1985: 81).

This is done to find out whether the test (reading comprehension test) can be used as instrument of the research. And by this, the researcher can also improve bad items.

G. Reliability

1. Reliability of the Questionnaires

Reliability analysis was performed to see the internal consistency reliability of the components using the Cronbach's alpha coefficient in which the alpha ranges between 0 to 1. The higher the alpha, the more reliable is the questionnaire (Setiyadi, 2006: 190-191).

2. Reliability of the Test

To find the reliability of the test, the split-half method is used; that is by dividing the number of the test items into two groups: odd and even. The formula is:

$$r_1 = \frac{\sum XY}{\sqrt{\sum X^2 \sum Y^2}}$$

Notes: r_1 = coefficient of reliability between first and second half group

X = total numbers of first half group

Y = total numbers of second half group

X^2 = square of X

Y^2 = square of Y

And after being correlated, the researcher will continue the calculation by using formula of Spearman Brown (Hatch and Farhady, 1982: 268):

$$rk = \frac{2rl}{1+rl}$$

Notes: rk = the reliability of the test.

rl = the reliability of the half test.

The criteria of reliability:

0.90 – 1.00 = high

0.50 – 0.89 = moderate

0.00 – 0.49 = low

H. Validity

1. Content Validity

Content validity is the extent to which a test measures a representative sample of the subject matter content. The focus of content validity is on the adequacy of the sample and not simply on the appearance of a test. To assure ourselves of content validity of a test, the content of the test must be carefully defined, and then the test items should correspond to the materials covered in the course.

2 . Construct Validity

Construct validity is concerned with how well the test represents the subject matter content of behaviors to be tested. The procedure for determining content validity is to compare the test content with the universe of content or behaviors supposedly being measured.