

III. METHOD

This chapter includes procedure of the research (research design), design instrument, population and sample, research instrument, research procedure, and data analysis.

3.1. Design

This research use a quantitative because it is very useful for providing factors connected with second language development. Setiyadi (2006:5) cites that quantitative design aims to investigate a theory has been existed and the data in order to support or reject it.

In conducting the research, the researcher applies *causal comparative study* for Vocabulary Levels Test in the Nation (2001:416). Causal-comparative research attempts to determine the cause or consequences of differences that already exist between or among groups of individuals. The basic causal-comparative approach is to begin with a noted difference between two groups and then to look for possible causes for, or consequences of, this difference (Jack R Frankel, 2006). Level test design is student will get the score of each person at each level (the person's score profile). The result can compare these score profiles between

people and between groups, to see if different people are scoring better than each other at particular levels or overall. This test can also look within people to see if, as might be expected, their scores appropriate with their origin school.

In this design, there must be a difference between the first group and and second group. The research design could be represented as follows:

K1 T1

K2 T1

Where :

K1 : first group

K2 : second group

T1 : test (using vocabulary level test)

3.2. Population and Sample

The populations of this research are the second grades students of SMA Bandar Lampung comprising state and private schools and including favorite and non favorite schools. Although a survey research involves a lot of source of data, the subjects still need limitation. Therefore, a sample should be determined. Based n some considerations and random sampling theory, the sample includes :

- State schools, as favorite public schools, are represented: SMAN 2 Bandar Lampung, SMAN 10 Bandar Lampung, SMAN 3 Bandar Lampung.
- State schools, as non-favorite public schools, are represented: SMAN 15 Bandar Lampung, SMAN 4 Bandar Lampung, SMAN 1 Bandar Lampung,

- Private schools, as favorite schools, are represented: SMA YP UNILA Bandar Lampung and SMA AL-Kautsar, Bandar Lampung.
- Private schools, as non-favorite schools, are represented by SMA Budaya Bandar Lampung and SMA Perintis Bandar Lampung.

The sample of the research tends to be purposive random sampling in a way that it will be focused on all students in each class of all schools. To make the data more clear the researcher will do the research in several different meeting in the same total of students.

3.3 Data Collecting Techniques

In collecting the data, the researcher used:

1. Questionnaire (Vocabulary Level Test)

After deciding the subject, the researcher gave the questionnaire to the Subject. To find out what students vocabulary size were. There were several questions and the student head to cross the optional.

3.4 Research Instrument

The instrument of this research is Word Definition Matching Format is used as the kind of the vocabulary level test (Sutarsyah 2006). Then, the vocabulary level test is includes four levels. A number of words is selected randomly from different levels, e.g. the first 1.000 words, the second 1.000 words, and the third 1.000 words, and the University Word List as the sample. The test consist of 40 items in

each levels. The test were given to the subject in order to know their vocabulary size.

3.5 Research Procedure

Below are the procedures in administering the research:

1. Determining the research problems

The problem of the research is determined based on the reseracher's experience in SMA N 5 Bandar Lampung. The research problem can be seen in the background in Chapter I.

2. Determining the population and sample

The population of the research will take the students of Private and Public Senior School in Bandar Lampung as population. The samples would be the eleven grade students in each school, there are around 30-40 students. The researcher takes at least two classes as sample randomly.

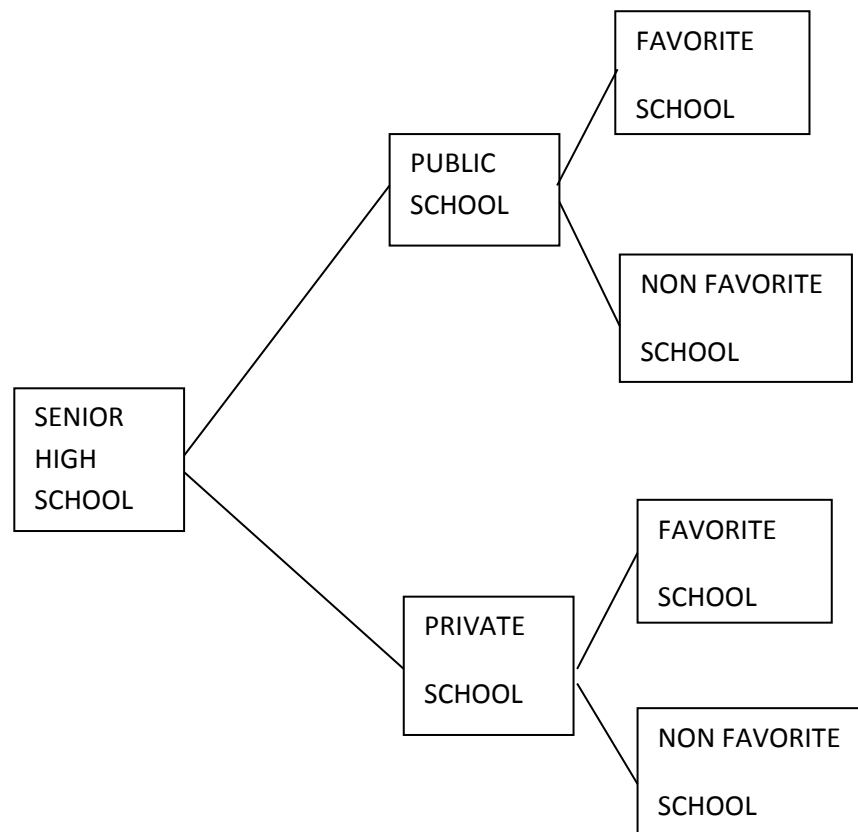


Figure 1. Classification SHS as population in Bandar Lampung

3. Determining the Research Instrument

The researcher will check the students' vocabulary size by giving vocabulary level test to the students. The vocabulary test is divide into four levels where in each levels consist of 40 items and each item four alternative answers. Students will use Word definition matching format ; translation.

The Research Instrument that is used in this research is called vocabulary level test. The test belongs to the type of *breadth* vocabulary test. The vocabulary level

test is called *word definition matching format* (Sutarsyah, 2006). The vocabulary test consists of four levels whose level consists of 40 items as a sample. This level is derived from Bauer & Nation (1993) word level (1st 1000 words, 2nd 1000 words, 3rd 1000 words which is basically derived from the list of frequency word order of *General Service List* (GSL) and 800 words of University Word List (UWL). Thus, up to the 3rd level word levels consists of 1000 base words and for UWL consists of 800 base words.

In another word, each level is represented by 40 items or words. The students are to match the two list, left and right, as shown in the example below:

- | | | |
|---|----------|-----------------------------|
| A | original | |
| B | private | 1. _____ lengkap |
| C | royal | 2. _____ pertama |
| D | slow | 3. _____ pribadi/tidak umum |
| E | sorry | |
| F | total | |

Nation's vocabulary levels test use the *General Service List* (GSL) (Bauer &

Nation 1993) on the words in the table above. The sample is taken from all pages

of the *General Service List* (GSL) in which the each level of the four levels

in the GSL in take 40 words to the frequency of each word 40 times to 25 for

retrievals of 1000 words.

4. Analyzing the data.

After scoring the students test the researcher will analyze the result of vocabulary size test by using SPSS.

3.6 Criteria of Good Test

There are four criteria of good test namely, validity, reliability, level of difficulty, and discrimination power.

3.6.1 Validity

Validity refers to the extent to which the test measures and to what is intended to measure. There are two basic types of validity; content validity and construct validity (Hatch and Farhady, 1982:250). A test can be considered to be valid if it can precisely measure the quality of the test.

There are four kinds of validity that are:

1. Face validity, concerns with the lay out of the test;
2. Content validity, depends on a careful analysis of the language being stated;
3. Construct validity, measures certain specific characteristic in accordance with a theory of language learning;
4. Criterion-related validity, concerns with measuring the success in the future as in replacement test.

According to the types of validity above, the writer used content and construct validity. Both of them are explained as follows:

a. Content Validity

Content validity is intended to know whether the test items are good reflection of what will be covered or not. The test items which are adapted from the materials that have been taught to the students should be constructed as to contain a representative sample of the course (Heaton, 1988). Content validity essentially concerns with the systematic examination of the content of the test. The test should cover a representative sample of the behavior domain to be measured (Jafarpur, 1987) . WDMF was prepared with a balance proportion of the levels that were going to be used.

3.7. Data Analysis

In order to know the students' vocabulary size in vocabulary levels test and the students' score are computed by doing three activities:

1. Scoring the vocabulary test
2. Calculating the result of the vocabulary test

$$SS = \frac{\sum s}{SMPL} \times 1000$$

SMPL = Subject's Vocabulary size at a given level

SS = a subject's score on the Levels Test at the relevant level

$\sum s$ = Total students' vocabulary score

For example if a student can answer 30 item correctly in the first level (1st 1000 words), this means he or she estimated to have vocabulary of 750 words in the

first level. That is by calculating the correct answer divided by 40 (sample), then multiply by 1000 ($30/40 \times 1000$), etc.

A students' total Vocabulary size is the sum of those four SMPL. That can of course be assessed against various estimates of the number of words needed to be known to read authentic general English texts or academic texts successfully (Nation 2001:146).

3. Drawing conclusion from the calculated results of the test given, that's by statistically analyzing the data using statistical vocabulary size scoring.

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

Notes :

M = mean (average score)

$\sum x$ = the total students' score

N = total of students

(Hatch and Farhady:1982)

The table below is the illustration how to count students' vocabulary size.

Student Name	Level 1		Level 2		Level 3		Level 4 (UWL)		Total
	Score	ss	Score	Ss	score	ss	score	Ss	
1									
20									
39									
40									
Mean									
Lowest									
Higher									

Figure 2. Data of Vocabulary size from each level and each sample SHS.

3.7 Hypothesis Testing

Hypothesis test was a kind of test to check whether researcher's hypothesis was accepted or not according to the data that was collected. To test his hypothesis, researcher used *T-test* that was conducted at the significant level of 0.05 ($P < 0.05$).

The hypotheses are:

H_0 : There is no different score in vocabulary size between science students and social science students.

H_1 : There is have different score in vocabulary size between science students and social science students.

(Hatch and Farhady, 1982:111)

The criteria for accepting the hypothesis were as follows:

1. H_0 is accepted if the t-value is lower than T-table.

It means that there is no difference between science students and social science students in vocabulary size.

2. H_0 is rejected if the t-value is higher than T-table.

It means that there is a difference between science students and social science students in vocabulary size.