III. RESEARCH METHOD

This chapter discussed about the method of the research which consist of research design, sample of the research, research procedure, data of the research, data collecting strategies and data analysis.

3.1. Design

In this research, the researcher used Non Co-relational Study, Ex-Post Facto design. The researcher had two phases of collecting data and used two kinds of instruments in each phase. The first instrument that the researcher would use was a mute picture storybook. With the first instrument, the researcher would collect the vocabulary data that the samples produce. The second instrument was a questionnaire. It would be used to get the samples exposure of the literature product that they associated with.

$T_x T_y$

T_x: Story book test

T_y: Questionnaire

T_x is a test used story book. The test is to take variable x (samples written vocabulary). It made from story book which had been modified; the narration and the dialogue from the book had been removed.

T_y is a questionnaire. The questions from the questionnaire were made based on two categories to measure samples' preference: ownership/ possession and associate.

3.2. Sample and Population

The population of this research was all the students of English Department in Faculty of Teacher Training and Education, University of Lampung. 29 samples were selected by using *Judgmental sample.* This sample uses information from the past or existed from population which is used as sample as the base. The researcher selected the sample by looking into the existed information as the basis to decide the individual. Another reason why the researcher chose them was because they were *Convenience sample*.

3.3. Procedure

The procedure was started by conducting the first test. The sample had been given a blank paper and a paper with a serial picture printed on it. They would be asked to fill the paper based on what they saw in the picture; they would be asked to fill the paper based on their own imagination of the picture. The researcher would give thirty minute time limit.

Through the first test, the researcher extracted the samples' vocabulary achievement in writing or can be named variable X; it was the text that sample made. Then, the text was analyzed through text analysis software. From the analysis the researcher got scores of word count (X_1), lexical density (X_2), and readability (X_3).

After that, it continued to second test, the researcher gave the samples a questioner. From this test, the researcher measured which preferences that sample have the highest interest in. Then, the researcher categorized sample into based on which preference he/she prefer most (variable Y).

3.4. Data

This research has two variables, X and Y. Dependent variable X was correlated with independent variable Y. Variable X taken from the paper contained the samples writing after being analyzed by text analysis software. After the analysis, the variable was divided into three levels (X_1, X_2, and X_3).

X_1 is word count. In text analysis, word count means the number of words in a document or passage or text. The counted was done as:

> "It was a tough day for Alfred, a hectic week without even had a free day to let the pressure of her job gone."

From total 24 words, 12 are counted. In this counting, as the research did, articles, preposition and conjunctions are all excluded.

X_2 is lexical density which counted by divided the total number of words counted divided by the different words, and then multiplied by 100%. Example:

> "It was a tough day for Alfred, a hectic week without even had a free day to let the pressure of her job gone"

From total 13 words counted (colored word), there are 11 words counted. There are 2 same words (blue-marked) which counted as one. Then the calculation is:

$\frac{11}{13} \times 100\% = 84.6\%$.

X_3 is readability; in text analysis it is the ease with which text can be read and understood. In this research, the researcher measures the readability by using *Gunning Fog* formula: Grade level= 0,4*((Average sentence length)+(percentage of Hard Words)) where Hard Words = words with more than two syllables. Example:

> "It was a tough day for Alfred, a hectic week without even had a free day to let the pressure of her job gone"

There is only one hard word (pressure) and make the percentage of hard words: 4.8%. The calculation is: $0.4 \times \big((24) + (4.8\%)\big) = 9.6192$

Variable Y was taken from the questionnaire. It was a closed-mind and Likert Scales questionnaire. The researcher used Likert Scales to find the correlation between X and Y. There are three subjects literature in the questionnaire: prose, song, and movie. The data was used to make sample's preference categorization. Based on the highest subject score from questionnaire, samples were categorized into three categories preference: prose, song, and movie.

Data result is collected from the comparison of variable X (X_1, X_2, and X_3) between categories of variable Y (prose, song, and movie):

X_1	$Y_{(prose)}$ $Y_{(song)}$ $Y_{(movie)}$	X_2	$Y_{(prose)}$ $Y_{(song)}$ $Y_{(movie)}$	X_3	$Y_{(prose)}$ $Y_{(song)}$ $Y_{(movie)}$

Reliability and Validity

The type of validity used was construct validity. For each subject, the questionnaire has three indicators to measure the aspect (preference): ownership, association, and fondness. The researcher used reliability analysis to measure the validation of each indicator in each subject; the result of the validity test can be seen in appendix 6.

To measuring the reliability of the questionnaire, the researcher first tabulated the result of the test. Then the result was copied into SPSS; the version of the software which was used is *SPSS 17.0 for Window*. Cronbach's Alpha was used to measure the consistency of the reliability of the test.

Table 1. Reliability Test for the Questionnaire

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.768	.753	36

Measurement showed: the Cronbach's Alpha is 0.768. It describes that the test has a good internal consistency ($0.7 \leq \alpha \leq 0.9$).

To measuring the reliability of the result from the text analyzer software used in the first test, the researcher used three different softwares in analyzing the data. It has been tested by the researcher with result:

Table 2. Table of Specification for Text Analyzing Software Test

	Word Count	Lexical Density	Readability
Software 1	13	92.3 %	9.6
Software 2	14	94 %	9.6
Software 3	13	92.1`%	9.5

The result showed the three softwares showed relatively same results. Stability of the tests assured the reliability of the first test. Researcher only used software 1 which can be seen from table above that result from this software is credible. The researcher used software 1 because it has better addition features the researcher need.

3.5. Data Analysis

In order to see whether there are different effects in students' vocabulary in writing, the researcher analyzing the data by:

1. Conducting text analysis to every text samples produce. The researcher analyzed the samples' text by using text analysis software.
2. Tabulating the data based on the preference categories.
3. Comparing variable X (X_1, X_2, and X_3) from the three subjects based the result from questionnaire, variable Y (preference).

4. Using *ANOVA* to draw a conclusion

3.6. Hypothesis Testing

The finding of the research would be used to test the hypothesis that is previously put forward:

$H_1$0 : There is no significant effect of literature product preference on students' vocabulary achievement in writing.

$H_1$1 : There is significant effect of literature product preference on students' vocabulary achievement in writing.

If none of the achievements (word count, lexical density, and readability) showed any significance, $H_1$0 was approved; in the other hand, if one (or more) of the achievements showed significance, $H_1$1 was approved.

$H_2$0 : Students with different literature product preference don't have different vocabulary achievement with their word production.

$H_2$1 : Students with different literature product preference have different vocabulary achievement with their word production.

The hypothesis was analyzed by using statistical computerization, *SPSS 17.0 for Windows*. By comparing the mean, the researcher determined which preference gave the best effect. The significance determined by $P<0.05$. $H_2$1 was approved if sig. $P<0.05$.

H_30 : Students with different literature product preference don't have different vocabulary achievement with their lexical density.

H_31 : Students with different literature product preference have different vocabulary achievement with their lexical density.

The hypothesis was analyzed by using statistical computerization, *SPSS 17.0 for Windows*. By comparing the mean, the researcher determined which preference gave the best effect. The significance determined by $P<0.05$. H_31 was approved if sig. $P<0.05$.

H_40 : Students with different literature product preference don't have different vocabulary achievement with their readability.

H_41 : Students with different literature product preference have different vocabulary achievement with their word readability.

The hypothesis was analyzed by using statistical computerization, *SPSS 17.0 for Windows*. By comparing the mean, the researcher determined which preference gave the best effect. The significance determined by $P<0.05$. H_41 was approved if sig. $P<0.05$.

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