## CHAPTER IV

## RESEARCH FINDINGS

This chapter presents the results of the study that were conducted based on the methods described in Chapter 3. The first section presents the findings of the study, including: the students' vocabulary size and spoken word recognition results, the relationship between mastering specific vocabulary levels in Vocabulary Levels Test and listening comprehension test score, and data analysis. Meanwhile, the second section presents the discussion and implications of the findings for teaching and learning process.

## A. Findings

This section presents the data findings and discussion of this study. the findings includes: first, the students' vocabulary size and spoken word recognition results, second, the relationship between mastering specific vocabulary levels in Vocabulary Levels Test and listening comprehension test score, and third, data analysis. The Vocabulary Levels Test and listening comprehension test were given to 108 students who get enrolled in Literal Listening course. Yet, only 85 students were taken as the sample randomly.

The students remained anonymous throughout the study to guarantee the privacy and confidentiality of the students. The findings of this study are described below:

## 1. The Result of Students' Vocabulary Size

The data about students' vocabulary size were collected through Vocabulary Levels Test on $27^{\text {th }}$ of April 2015 for Literal Listening A and B classes, and on $8^{\text {th }}$ of May 2015 for Literal Listening C, D and E classes. In scoring the Vocabulary Levels Test, each word chosen correctly is awarded one point. This test consists of five sections, divided into four levels of vocabulary frequency $(2,000,3,000,5,000$ and 10,000 -level) and one level of academic vocabulary. Since there are 30 items in every level, the maximum score for this test is 150 and the minimum one is 0 . Therefore, the students' range scores of their total vocabulary size in Vocabulary Levels Test can be drawn into this following chart:

Chart 4.1 Students' Range Score of Total Vocabulary Size in Vocabulary Levels Test ( $\mathrm{n}=85$ )


Based on the chart 4.1, there are 3 students who obtained the score between 0 and 25 , followed by 27 students who obtained the scores between 26 and 50. Meanwhile, the majority of the students (43 students) obtained the scores between 51 and 75 . Furthermore, 9 students obtained the scores between 76 and 100,1 student got the score between 101 and 125 , and 2 students got the scores between 126 and 150. The detailed information about students' range and mean scores of every level of Vocabulary Levels Test is explained in the table below:

Table 4.1 Students' Range and Mean of Score for the Five Vocabulary Levels' Groups in Vocabulary Levels Test

| Levels | $\mathbf{N}$ | Minimum | Maximum | Mean |
| :---: | :---: | :---: | :---: | :---: |
| 2000 | 85 | 1 | 29 | 17.76 |
| 3000 | 85 | 3 | 30 | 14.25 |
| 5000 | 85 | 0 | 28 | 8.53 |
| 10000 | 85 | 0 | 16 | 2.72 |
| Academic | 85 | 3 | 28 | 15.73 |
| Overall Vocabulary Levels | 85 | 11 | 128 | 58.99 |

Table 4.1 shows the students' score of vocabulary size in four levels of word frequencies and one level of academic vocabulary of Vocabulary Levels Test. The maximum score of each level is 30 . It is found that from a total of 30 possible, the mean of the four frequency levels were 17.76 for the 2000 level, followed by 14.25 for the 3000 level, 8.53 for the 5000 level and 2.72 for the 10000 level. Meanwhile, the mean score of the academic vocabulary was 15.73 . The academic vocabulary is different kind from the frequencybased levels and it contains relatively easy words. The academic section is not fixed in placement, but it is flexible according to the demands of each testing situation. In the Vocabulary Levels Test used in this study, the academic section was placed between 3000 and 5000 sections, not after a difficult session (10000 level) in which many students may have given up. Therefore, the test has a balanced-level of difficulty. Furthermore, the instruction of this test discourages participants from guessing blindly "If you have no idea about the meaning of a word, do not guess. But if you think you might know the meaning, then you should try to find the answer". From the data, it appeared
that participants complied with this instruction. As the result, they generally left items blank if they did not know the answers.

From the table 4.1, it is also found that the mean score of overall vocabulary levels in Vocabulary Levels Test for 85 students was 58.99 with 11 as the minimum score and 128 as the maximum. Yet, this result indicates that the students' total vocabulary size scores in Vocabulary Levels Test were quite low because their mean score was only 58.99 from a total of 150 as the maximum score.

## 2. The Result of Students' Spoken Word Recognition

The data about students' spoken word recognition were collected through listening comprehension test. This test was distributed by the Literal Listening lecturers to the students. Therefore, it did not disturb the teaching and learning process. The data collection of listening comprehension test was done on $6^{\text {th }}$ and $15^{\text {th }}$ of May 2015 for Literal Listening A and B classes, and on $15^{\text {th }}$ and $22^{\text {nd }}$ of May 2015 for Literal Listening C, D and E classes. The listening comprehension tests consist of three listening worksheets, worksheet 1 and 2 about Future Plans, and a worksheet about Advice. This test score was obtained by calculating the mean score from those listening worksheets. The minimum score of this test is 0 and the maximum one is 100 . The result of the students' listening comprehension test is presented in the following chart:

Chart 4.2 Students' Range Score of Listening Comprehension Test ( $\mathrm{n}=85$ )


Based on the chart 4.2, there are 4 students who obtained the listening score between 0 and 25 , followed by 37 students who obtained the scores between 26 and 50 . Meanwhile, the majority of the students (41 students) obtained the scores between 51 and 75 . Furthermore, only 3 students got the scores between 76 and 100. The detailed information about the students' range and mean scores of every listening worksheet is explained in the table below:

Table 4.2 Students' Range and Mean of Scores of Listening Comprehension Test

| Worksheets | $\mathbf{N}$ | Minimum | Maximum | Mean |
| :---: | :---: | :---: | :---: | :---: |
| Future Plans 1 | 85 | 0 | 70.00 | 21.53 |
| Future Plans 2 | 85 | 10.00 | 100.00 | 55.65 |
| Advice | 85 | 0 | 100.00 | 78.00 |
| Overall Listening <br> Worksheets | 85 | 6.67 | 86.67 | 51.73 |

Table 4.2 shows the students' score of listening comprehension test. The students' mean score of worksheet 1 of Future Plans is 21.53 , followed by 55.65 for worksheet 2 of Future Plans and 78 for advice worksheet. Meanwhile, it is also found that the mean score of overall listening worksheets for 85 students is 51.73 . This result indicates that the students listening comprehension were also quite low because their mean score was only 51.73 from a total of 100 as the maximum score.
3. Relationship between Mastering the Specific Vocabulary Levels in Vocabulary Levels Test and Listening Comprehension Test Score

As mentioned in Chapter 3, a mastery criterion of the particular vocabulary level is 26 out of 30 . Thus, students who obtained a score of 26 or above at the $2000,3000,5000,10.000$, and academic vocabulary levels were regarded as having mastery of that particular vocabulary level. Meanwhile, the mean score of overall listening worksheets for 85 students was 51.73 , so the students who had scores of 51.73 or above were classified as high and the scores below 51.73 were classified as low. The relationship between
mastering specific vocabulary levels in Vocabulary Levels Test and obtaining a score above or below average in listening comprehension test is presented in the table below:

Table 4.3 The Relationship between Mastering Specific Vocabulary Levels in Vocabulary Levels Test and Scoring Above or Below Average in Listening Comprehension Test ( $\mathrm{n}=85$ )

| Vocabulary Levels | Listening Score |  | Total |
| :---: | :---: | :---: | :---: |
|  | $\begin{gathered} <51.73 \text { (Below } \\ \text { Average) } \\ \hline \end{gathered}$ | $\begin{gathered} \geq 51.73 \text { (Above } \\ \text { Average) } \\ \hline \end{gathered}$ |  |
| $\begin{gathered} -2000 \\ -3000 \\ -5000 \\ -10000 \\ \text {-Academic } \end{gathered}$ | 45 | $31$ | 76 |
| $\begin{gathered} \hline+2000 \\ -3000 \\ -5000 \\ -10000 \\ \text {-Academic } \end{gathered}$ | 0 | 6 | 6 |
| $\begin{gathered} +2000 \\ +3000 \\ -5000 \\ -10000 \\ + \text { Academic } \end{gathered}$ | 0 | $2$ | 2 |
| $\begin{gathered} +2000 \\ +3000 \\ +5000 \\ -10000 \\ + \text { Academic } \end{gathered}$ | 0 | 1 | 1 |
| Total | 45 | 40 | 85 |

The plus sign (+) in the table 4.3 indicates that the students have mastered the particular vocabulary level, meanwhile, the minus sign (-) indicates that students have not mastered it. From Table 4.3, it can be
observed that 76 of 85 students have not mastered the 2000 vocabulary level as the minimum. Furthermore, 6 students mastered only the 2000 vocabulary levels, 2 students mastered 2000, 3000 and academic vocabulary levels, and only 1 student mastered 2000, 3000, 5000 and academic vocabulary levels. Yet, from 85 students, no one has mastered the 10000 level. It is also found that all of the students ( 9 of 85 students) who have mastered the 2000 vocabulary level performed above average in the listening comprehension test. Meanwhile, 45 of 76 students ( $60 \%$ ) who have not mastered this 2000 level performed below average. Yet, there are 31 of 76 students ( $40 \%$ ) scored above average even though they have not mastered the 2000 vocabulary level.

## 4. Data Analysis

In order to explore the relationship between vocabulary size and the spoken word recognition in Literal Listening, correlation as well as regression analyses were conducted using SPSS version 16.0. The details are explained below:

## a. The Correlation between the $2^{\text {nd }}$ Semester Students' Vocabulary Size and Their Spoken Word Recognition in Literal Listening

Pearson correlation is used to answer the first research questions about the correlation between $2^{\text {nd }}$ semester students' vocabulary size and their spoken word recognition in Literal Listening. Yet, before conducting the correlation analysis, it is essential to plot a scatterplot to look at the
general trend of data. ${ }^{1}$ A scatterplot is a graph that plots each person's score on one variable against their score on another. A scatterplot tells several things about the data such as whether there seems to be a relationship between the variables and what kind of relationship it is. The scatterplot below was analyzed by SPSS version 16.0. The result is presented in the following chart:

Figure 4.1 Scatterplot of Vocabulary Size Score against Listening Comprehension Test Score


The scatter-plot in Figure 4.1 shows an uphill pattern from left to right. Both variables move in the same direction. In other words, as

[^0]vocabulary size increases, the listening score also increases. Furthermore, to examine the strength of correlation between those two variables, Pearson correlation analysis was conducted. The correlation coefficient was calculated at $5 \%$ or 0.05 margin of error. The result obtained from this computation is presented in the following tables:

Table 4.4 SPSS Analysis of Pearson Correlations between Vocabulary Size Scores in Vocabulary Levels Test and Listening Comprehension Test Scores ( $\mathrm{n}=85$ )

## Correlations

|  |  | Vocabulary Size Score | Listening Comprehension Test Score |
| :---: | :---: | :---: | :---: |
| Vocabulary Size | Pearson Correlation | 1 | . 713 ** |
|  | Sig. (2-tailed) |  | . 000 |
|  | N | 85 | 85 |
| Listening | Pearson Correlation | .713** | 1 |
|  | Sig. (2-tailed) | . 000 |  |
|  | N | 85 | 85 |

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4.4 displays the SPSS analysis of Pearson correlation coefficient between the scores of vocabulary size and listening comprehension tests for 85 students. The Pearson analysis produces a highly positive correlation of 0.713 , which means students' vocabulary size is found to be strongly correlated with their spoken word recognition in Literal Listening. This correlation analysis was calculated at 0.05 -level
(5\%) but the result shows that this calculation is also significant at $0.01-$ level (1\%) margin of error.

## b. Hypothesis Testing

The hypothesis testing can be done by comparing the significance level (written by Sig. in SPSS) and the margin of error (0.05). If the significance level is higher than 0.05 ( $>0.05$ ), then the Ho (null hypothesis) is accepted and Ha (alternative hypothesis) is rejected, which means there is no correlation between two variables. But, if the significance level is lower than 0.05 (<0.05), then the Ho (null hypothesis) is rejected and Ha (alternative hypothesis) is accepted, which means there is a correlation between two variables.

The correlation analysis on Table 4.4 above shows that the significance level is 0.000 , it means the significance is lower than 0.05 ( $0.000<0.05$ ). Therefore, Ho is rejected and Ha is accepted, thus it can be concluded that there is a correlation between the $2^{\text {nd }}$ semester students' vocabulary size and their spoken word recognition in Literal Listening, and the degree of listening comprehension depends on vocabulary size.

## c. The Extent of Association between the $\mathbf{2}^{\text {nd }}$ Semester Students' Vocabulary Size and Their Spoken Word Recognition in Literal <br> Listening

To answer the second research question about the extent of association between $2^{\text {nd }}$ semester students' vocabulary size and their spoken word recognition in Literal Listening, a simple linear regression analysis was conducted. The analysis was also calculated at $5 \%$ or 0.05 margin of error. The results are presented in the tables below:

## Coefficient of Determination

Table 4.5 Coefficient of Determination from Simple Linear Regression Analysis ( $\mathrm{n}=85$ )

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the <br> Estimate |
| :---: | :---: | :---: | :---: | :---: |
| 1 | $.713^{\mathrm{a}}$ | .509 | .503 | 10.28352 |

a. Predictors: (Constant), Vocabulary Size Score
b. Dependent Variable: Listening Comprehension Test Score

Table 4.5 presents the values of $\mathrm{R}^{2}$ (coefficient of determination) of the correlation coefficient. $\mathrm{R}^{2}$ is always between 0 and $100 \%$. $0 \%$ indicates that the independent variable explains none of the variability of the dependent variable. Meanwhile, $100 \%$ indicates that the independent variable explains all the variability of the dependent variable. ${ }^{2}$ In the Table 4.5, the coefficient of determination of 0.509 is interpreted that

[^1]vocabulary size can predict $50.9 \%$ of the variance in listening score. It suggests that vocabulary size can predict half of the variance in the listening scores. Meanwhile, the $49.1 \%$ is predicted by the other variables which are not examined in this study.

## Simple Linear Regression Equation

Table 4.6 Simple Linear Regression Equation with Vocabulary Size as the Predictor Variable and Listening Score as the Dependent Variable Coefficients ${ }^{\text {a }}$

| Model | Unstandardized <br> Coefficients |  | Standardized <br> Coefficients | t | Sig. |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  | B | Std. Error | Beta |  |  |
| (Constant) | 21.536 | 3.441 |  | 6.259 | .000 |
| Vocabulary_Size | .512 | .055 | .713 | 9.275 | .000 |

a. Dependent Variable: Listening Comprehension Test Score

In the Table 4.6, the predictor variables are written under the "Model" column. The "Constant" represents Y intercept or the listening comprehension test score. The column labeled "B" shows the values for the regression coefficients. These are called "Unstandardized Coefficients" because they are measured in their natural units. Based on these regression coefficients, the regression equation can be presented as:

$$
Y=21.536+0.512 X .
$$

$Y$ represents the listening score and $X$ represents the students' vocabulary size.

## B. Discussion

From Table 4.2, it can be observed that all of the students (9 of 85 students) who have mastered the 2000 vocabulary level performed above average in the listening comprehension test. This table also shows that 76 of 85 students have not mastered the most frequent 2000 words in English. As the result, 45 students scored below average ( $<51.73$ ) in listening comprehension test. Yet, 31 students scored 51.73 or above $(\geq 51.73)$ even though they have not mastered the 2000 level. This findings point out that vocabulary size is not the only one factor which affects the students' listening comprehension. However, the majority of the learners ( 45 of 76 students) who have not mastered the 2000 vocabulary level performed below average in listening comprehension tests. These results suggest that the 2000 level represents an important vocabulary threshold for $2^{\text {nd }}$ semester students to be able to perform above average in listening comprehension test.

2000 vocabulary level is a small group of words which are very important because these words cover a very large proportion of the running words in spoken and written texts. These high frequency words cover almost $80 \%$ of the running words in the academic text and it will give a lexical coverage of around $85 \%$ in written text and $90 \%$ in unscripted spoken discourse. ${ }^{3}$ Therefore, this high frequency words should be the first focus of

[^2]vocabulary teaching for the $2^{\text {nd }}$ semester students of English Teacher Education Department, because if students do not master the most frequent 2000 word families in English, they will have great difficulties in understanding the written and spoken text, and it will make it even more difficult to engage actively in written and spoken communication.

Besides, Schmitt also stated that knowledge of the most frequent 2000 words in English provides the lexical resources required for basic everyday oral communication. ${ }^{4}$ Furthermore, 2.000 word families is the most common initial goal for second language learners. It is because this number of words allows learners to cope with the basic conversation and provides a solid basis for moving into more advanced study. ${ }^{5}$ Thus, the students need to master the 2000 vocabulary level first before they are able to master the higher vocabulary level.

Although the students' vocabulary mastery was quite low, the Pearson analysis produced a highly positive correlation of 0.713 , which means students' vocabulary size is found to be strongly correlated with their spoken word recognition in Literal Listening. This finding was consistent with the findings of the previous study by Stæhr which also found positive correlation between vocabulary size and listening skill for low-level learners, producing a

[^3]correlation coefficient of 0.69 . This significant contribution indicates that vocabulary size is an important dimension on vocabulary knowledge to become competent in English listening comprehension.

Furthermore, the simple linear regression analysis shows that vocabulary size can predict $50.9 \%$ of the variance in listening score, while the $49.1 \%$ is predicted by the other variables which are not examined in this study. The regression equation $Y=21.536+0.512 X$ can be used as a basis for estimating the listening scores based on the vocabulary size score. $Y$ represents the listening score and $X$ represents the students' vocabulary size. This model of regression equation indicates that every additional 1 point of vocabulary size score in Vocabulary Levels Test will contribute 0.512 points in increasing listening comprehension test score. This result shows that a larger vocabulary size will lead to a higher degree of text coverage and will thereby strengthen students' listening ability.

## Implications of the Findings for Teaching and Learning Process

The Vocabulary Levels Test provides an estimate of vocabulary size at four levels of word frequency and one level of academic vocabulary. Utilizing Vocabulary Levels Test in this study proved to be useful to diagnose at what stage the students' vocabulary developments are and also help the teacher to determine which vocabulary level should be focused on. Moreover, as vocabulary size is found to be strongly correlated with success in listening, it
emphasizes the need to be more focus on vocabulary learning in the classroom.

The findings of this study indicate that 2000 vocabulary level represents an important vocabulary threshold for $2^{\text {nd }}$ semester students to be able to master the higher vocabulary levels and to perform above average in listening comprehension test. Thus, the teaching attention should be directed more towards strategies and techniques for learning and coping with these words, because if students do not master the most frequent 2000 word families in English, they will have great difficulties in understanding the written and spoken text, and it will make it even more difficult to engage actively in written and spoken communication.


[^0]:    ${ }^{1}$ Andy Field, Discovering Statistics Using SPSS, $2{ }^{\text {nd }}$ Ed. London: SAGE Publications, 2005, 113.

[^1]:    ${ }^{2}$ Andy Field, Discovering Statistics Using SPSS... 154

[^2]:    ${ }^{3}$ I. S. P. Nation, Learning Vocabulary in another Language (Cambridge: Cambridge University Press, 2000), 25.

[^3]:    ${ }^{4}$ Norbert Schmitt, et.al, "Developing and Exploring the Behavior of Two New Versions of the Vocabulary Levels Test". SAGE Publications. Vol. 18 No. 1, 2001, 55-56
    ${ }^{5}$ Norbert Schmitt - Jack C. Richards (Eds.), Vocabulary in Language Teaching. Cambridge: Cambridge University Press, 2000, 142.

