

## **Chapter Four**

### **Finding and Discussion**

This chapter describes the analysis of the data that had been collected during the experiment. The first part talks about the finding of the data. The finding includes mean, normality, reliability, and the students' tests score. The second part talks about the effect of using pop-up book to the students' vocabulary mastery.

#### **Findings**

This part focused on answering the two research questions. Those were to know the students' vocabulary mastery level and the effectiveness of using pop-pop book as media to master English vocabulary. To know the answer of those questions the researcher did an experimental research. There were 21 students in grade fifth who the researcher chose as participants. Then, the researcher gave some tests before and after the treatment. Both of the tests were used to measure the students' vocabulary mastery. The next step was the researcher gave the students' scores after they did the tests. Afterwards, the researcher analyzed the data of the students' tests score.

#### **The Condition of the Students' Vocabulary Mastery**

**Students vocabulary mastery before treatment.** The students' vocabulary mastery before treatments was categorized into "low". The way researcher knew the students' vocabulary mastery level before using pop-up book was by giving pre-tests before the treatments. The pre-tests were given for three

times. The pre-tests were conducted on August 30, August 31 and September 01, 2016. After the participants did the pre-tests then the researcher checked their answers to get the students' pre-test scores. The scores were used to analyze the students' vocabulary mastery before they used the pop-up book in the learning activities. Then, the results had shown that the students' vocabulary mastery was low.

After the researcher got the students' scores then the researcher calculated the data. The researcher calculated the mean, normality and reliability as follow:

	N	Mean		Std. Deviation
	Statistic	Statistic	Std. Error	Statistic
Pretest1	21	40.95	2.279	10.443
Pretest2	21	48.10	2.638	12.091
Pretest3	21	52.86	3.173	14.541
Valid N (listwise)	21			

The table above described the mean of each pre-test score. The mean of pre-test 1 was in poor level and the pre-test 2 and pre-test 3 was in low level based on Palupi's indicator scoring in the table 3.5. Then, the table below described the mean of all pre-test.

	N	Mean		Std. Deviation
	Statistic	Statistic	Std. Error	Statistic
Pretest	21	47.30	2.296	10.522
Valid N (listwise)	21			

The mean total of students' pre-tests scores were in the low level. The table showed that the mean total of the pre-test was 47.3. It could be concluded that the students' vocabulary mastery was in low level based on the indicator score.

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Pretest1	21	-.206	.501	.492	.972
Pretest2	21	.589	.501	-.412	.972
Pretest3	21	.310	.501	.894	.972
Valid N (listwise)	21				

A data could be called as normal if the value of the skewness and kurtosis were around -1 up to 1. The skewness and the kurtosis of the pre-tests that showed in the table were normal because there was no value of the pre-tests that exceed from -1 up to 1. If the data was categorized as normal so, the researcher could use this data for this research and moved to the next step to know the answer the questions of this research.

Table 4. 4 <i>Reliability Statistics of the Pre-test</i>	
Cronbach's Alpha	N of Items
0.79	3

The value of reliability of the pre-test that showed in the table was categories as reliable. If the cronbach's alpha was bigger than 0.7. It meant that the reliability of the instrument was accepted. The table above showed that the cronbach's alpha was .797. It meant that the instrument that was used in this research was reliable because the value was more than 0.7.

The analysis of students' pre-test score showed that the students' mean score was in low level vocabulary mastery. It could be concluded that students' needed to improve their vocabulary mastery to master English language.

**Students vocabulary mastery after using pop-up book.** The students' vocabulary mastery after the treatments was improved. After the researcher gave the treatments, the researcher gave the post-tests. The post-test were given for three times. It was conducted on September 13, September 14, and September 15, 2016. The scores of the students' post-tests showed that students' scores were higher than students' pre-tests scores.

After the researcher collecting the students' post-tests scores then the researcher calculated the mean, normality, and reliability of the scores and it was described in the following table:

	N	Mean		Std. Deviation
	Statistic	Statistic	Std. Error	Statistic
Post-test1	21	80.00	2.673	12.247
Post-test2	21	87.14	2.857	13.093
Post-test3	21	89.05	2.381	10.911
Valid N (listwise)	21			

The table above showed that the mean of students' post-test scores in every post-test was categorized as excellent. Those scores were more than 80. The table below described the mean of all post-tests.

	N	Mean		Std. Deviation
	Statistic	Statistic	Std. Error	Statistic
Post-test	21	85.40	2.200	10.080
Valid N (listwise)	21			

On the table above, the data showed that the mean of the all post-test was 85.4. Based on the passing grade if the score was around 80 - 100 was considered as excellent. It meant that the mean of the post-test was categorized as excellent. It was because the score was more than 80.

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Post-test1	21	.180	.501	-.807	.972
Post-test2	21	-.594	.501	-.946	.972
Post-test3	21	-.561	.501	-.950	.972
Valid N (listwise)	21				

The data above showed that the data was categorized as normal because the skewness and the kurtosis were -1 up to 1. The value of the skewness and the kurtosis of this data were normal because there was no value that more than -1 up to 1. It meant that the researcher was able to use this data and went to the next step to find the data that the researcher needed to know the answer of the two research questions of this research.

Cronbach's Alpha	N of Items
0.77	3

The value of cronbach's alpha of the post-test was reliable because the score was 0.77. It was higher than 0.7 so it was accepted.

### **The Effect of Using Pop-up Book to the Students' Vocabulary Mastery**

After the researcher collected the data and analyzed it, the researcher found that there was an improvement of the students' vocabulary mastery level. It was shown from the scores of the tests before and after using pop-up book in the learning activities. The mean score of the pre-tests was 47.3 and the mean score of the post-tests was 84.5. It meant that the mean of the post-test was higher than the mean pre-test. The difference was calculated from the post-test minus the pre-test, so  $84.5 - 47.3 = 37.2$ . It meant that the result of students' vocabulary mastery improvement was increased 37.2 points.

Furthermore, the significance of the treatments was measured by using Paired Sample T-test. Paired sample t-test was used to compare two means that were from the same individual, object or related unit (Kent, 2014). The two means were typically represent two different times. That was why the researcher used paired sample t-test because the researcher wanted to compare the condition of the students' vocabulary mastery before and after using pop-up book in the learning activities. The result was shown in the table below:

#### **Paired samples statistics**

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Posttest	85.40	21	10.080	2.200
	Pretest	47.30	21	10.522	2.296

### Paired sample test

Table 4. 10 <i>Paired Samples Test</i>		
Paired Differences		Pair 1
		Post-test – Pre-test
Mean		38.105
Standard Deviation		7.718
Standard Error Mean		1.684
95 % Confidence Interval of the Difference	Lower	34.592
	Upper	41.618
T		22.626
Df		20
Sig. (2 - tailed)		0.000

The table above showed that the used of pop-up book had significant effect to the students' vocabulary mastery. It was proven by the value of the significant paired sample test. The table showed that the significance was 0.000. According to Sugiono and Susanto (2015) a hypothesis was accepted if the significance was smaller than 0.05 or 0.05, so alternative hypothesis was accepted and null hypothesis was rejected. The value of the significance for the data was 0.000 and it meant that it was smaller than 0.05, so it was accepted.



To know the effect of using pop-up book to the students' vocabulary mastery the researcher used Effect Size method. The method was used to calculate the effectiveness of the use pop-up book to the students' vocabulary mastery Cohen (2011) explained the criterions of effect size as in the table below.

Effect Size	Level	Criterion
0.10	Small effect	The effect explains 1% of the total variance.
0.30	Medium effect	The effect accounts for 9% of the total variance.
0.50	Large effect	The effect accounts for 25% of the variance.

$$\text{Effect Size} = \frac{\sqrt{t^2}}{\sqrt{t^2 + df}}$$

$$\text{Effect Size} = \frac{\sqrt{22,626^2}}{\sqrt{22,626^2 + 2,086}} = 0.99$$

The use of pop-up book in the learning activities had large effect in improving students' vocabulary mastery. It could be concluded as had a large effect because the value of effect size was higher than 0.50. The effect size value of the students' score was 0.99. The score was higher than 0.50, so it could be concluded that the pop-up book had a large effect to improve students' vocabulary mastery.

## Discussion

This research objective was to explore the students' vocabulary mastery level before using pop-up as media to learn English vocabulary. Then, the researcher also wanted to identify whether the used of pop-up book in the teaching and learning activities was effective to improve the students' vocabulary mastery or no. In this part the researcher discussed the answer of those two questions.

### The Condition of the Students Vocabulary Mastery.

The students' vocabulary mastery level was determined by analyzing students' tests scores. To know the first condition before the students' using pop-up book in the learning activities that the researcher had done some pre-tests. The pre-tests were given for three times. Then the researcher got the students' pre-tests score as follow:

Participant	Pre-test 1	Pre-test 2	Pre-test 3	Mean
P1	40	40	50	43.3
P2	40	50	60	50.0
P3	40	60	50	50.0
P4	20	40	20	26.7
P5	30	50	50	43.3
P6	50	50	60	53.3
P7	60	40	50	50.0

Table 4. 12 <i>Students' Pre-test Score</i>				
Participant	Pre-test 1	Pre-test 2	Pre-test 3	Mean
P8	40	40	50	43.3
P9	30	50	50	43.3
P10	50	40	40	43.3
P11	40	40	40	40.0
P12	50	70	80	66.7
P13	40	50	40	43.3
P14	50	70	80	66.7
P15	40	50	50	46.7
P16	20	40	50	36.7
P17	40	60	60	53.3
P18	60	70	80	70.0
P19	40	30	50	40.0
P20	40	40	60	46.7
P21	40	30	40	36.7
The Mean of All Score				47.3

Based on the table above, the researcher classified the all mean of the students' pre-test score was in low level. Actually there were many variations of the students' vocabulary level. From the table above, it could be seen that there were seven students in low level and eleven students in poor level. There were three students who were in good level. Most of the students' scores were in low

level because they did not use media in the learning activities. Buckingham (2012) stated that media was used as instrument to transfer information. In this case the students got difficulties to understand the materials well.

### **The Effect of Using Pop-up Book to the Students' Vocabulary Mastery**

Pop-up books in the learning activities were given after the researcher gave pre-tests. The treatment was conducted on August 30, August 31 and September 01, 2016. The purpose of using pop-up book in the learning activities was to improve students' vocabulary mastery through interesting media and active in the learning activities. The researcher used the pop-up book to deliver the material and for students' practice writing and memorizing new vocabularies. Like Clark (as cited in Kosim, 2013), he explained that the used of media was important as a way to develop students elementary school into active learning. The used of pop-up book in this research had helped students active in the learning activities. The students like to write their answered in the pop-up book.

After the treatment had conducted, the researcher gave the post-test. The post-tests were given to know students' vocabulary mastery level after the use of pop-up book in the learning activities. The result of students' post-test scores had shown that their vocabulary mastery had increased. Their scores after pop-up book was implemented were higher than their scores before pop-up book implementation.

It was shown in the diagram below:

Figure 4. 1 *The Differentiation Score*

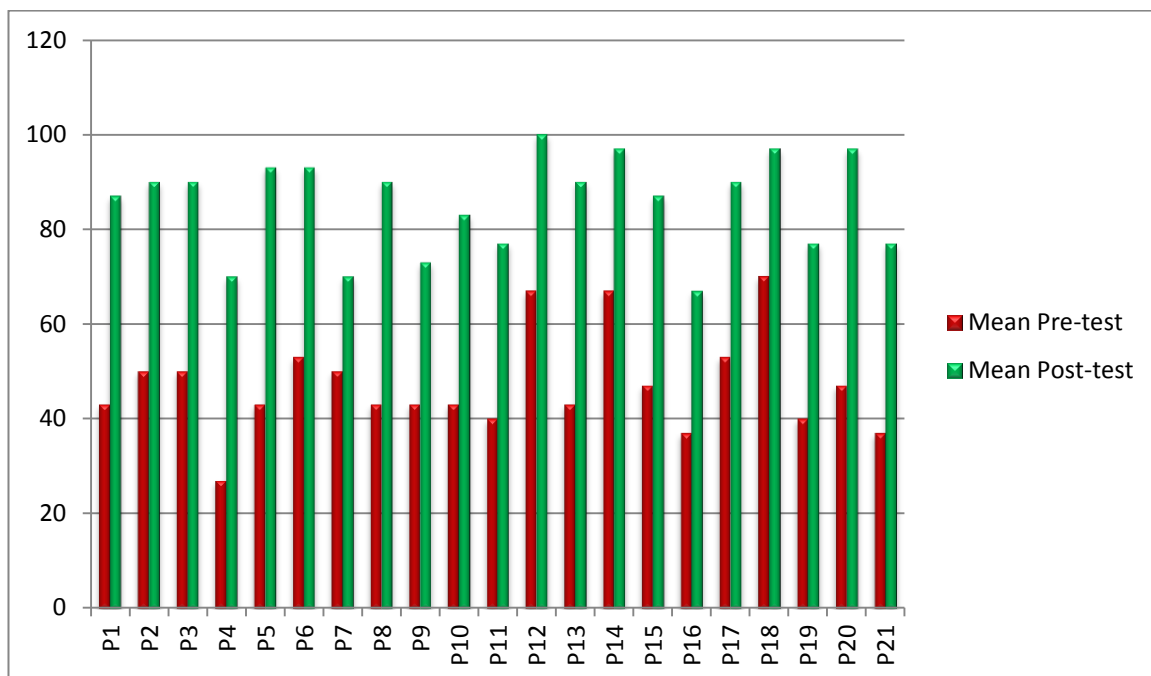


Table 4. 13 *The Students' Differentiation Score*

Participant	Mean of the Post-test	Mean of the Pre-test	The Difference
P1	86.7	43.3	43.4
P2	90	50	40
P3	90	50	40
P4	70	26.7	43.3
P5	93.3	43.3	50
P6	93.3	53.3	40
P7	70	50	20
P8	90	43.3	46.7
P9	73.3	43.3	30
P10	83.3	43.3	40
P11	76.7	40	36.7
P12	100	66.7	33.3
P13	90	43.3	46.7
P14	96.7	66.7	30
P15	86.7	46.7	40
P16	66.7	36.7	30

P17	90	53.3	36.7
P18	96.7	70	26.7
P19	76.7	40	36.7
P20	96.7	46.7	50
P21	76.7	36.7	40

The diagram and the table above showed that students' scores had increased. Fourteen students were in excellent level and seven students were in good level. There was a differentiation score among the students' scores. The mean of the all pre-test was 47.3 and the mean of the all post-test was 84.5. It was showed that was an improvement on the students' vocabulary mastery. The raising score was 37.2. It could be concluded that the use of pop-up book was effective to improve students' vocabulary mastery because of the students' post-test was higher than the students' pre-test score.

The improvement also could be seen from the value of the t-value. If the t-value was higher than t-table it means that there was a significant effect of the use of pop-up book to the students' vocabulary mastery. The t-value that was gotten was 22.626 and the t-table was 2.086. The table of the paired sample test showed that the t-value of this data was higher than the t-table. It meant that the used of pop-up book as media to learn vocabulary had a significant effect for students' vocabulary mastery.

In this research the used of pop-up book was able to improve students' vocabulary mastery. Like Puspitasari (2014) had explained that the used of visual media was able to encourage students into active participate in the learning activities. The benefits of using pop-up book in this research were engaging

students into active learning and improving their vocabulary mastery. Students felt enjoyed to learn new vocabulary by using pop-up book because it had interesting picture, colorful, and because it had movable pages. It helped them remembering the vocabulary better than using module, so it helped them to have many vocabularies. It was supported by Amstrong (as cited in Karimi & Rokni, 2013) stated that the used of visual media to learn and to memorize vocabularies was better to be used than only using text book. In this research, the students were remembering what they had learned better than before using pop-up book.

The result of this research could be concluded that the students' vocabulary mastery was in excellent level. The used of pop-up book in the learning activities improved students' vocabulary mastery. It meant that the used of pop-up book was effective to improve students' vocabulary mastery.