

## CHAPTER IV

### FINDINGS AND DISCUSSION

This chapter deals with findings, data analysis, and discussion. The result of the data was presented in findings (description of the research) and further explained in data analysis technique and discussion.

#### **A. Findings**

##### **1. Description of the research**

To find out the answer of the research question in the previous chapter, the researcher administrated a test. The test was a vocabulary test that was given twice, pre-test and post-test. The researcher also gave questionnaire to know how the students responses toward Mnemonics technique. The pre-test was given before treatment process to know the student's vocabulary mastery, while the post-test was given after treatment, which aimed to know the answer of the problem statement : "is Mnemonics technique able to enhance the students' vocabulary mastery?". Post-test was given to compare the students' vocabulary mastery before the researcher applied and after the researcher applied Mnemonics technique. This research was encountered by using one independent sample to know there were any influences of the students' achievement in vocabulary by applying Mnemonics technique.

##### **2. Findings Through the Test**

###### **a. Score of the pre-test**

Before giving the treatment, the researcher had given pre-test to know how the students' vocabulary mastery of the students of Rumah Bambu Pintar before they were getting the treatment by using Mnemonics technique. In this research, the

researcher gave six meetings to the treatment. There was result of the students' pre-test.

Table. 4.1 The Students' Score of the Pre-Test

No	Pre-test of Students (XI)		XI <sup>2</sup>
	Max score X	Score XI	
1	100	43	1.849
2	100	43	1.849
3	100	23	529
4	100	40	1.600
5	100	40	1.600
6	100	63	3.969
7	100	30	900
8	100	43	1.849
9	100	73	5.329
10	100	40	1.600
11	100	60	3.600
12	100	63	3.969
13	100	40	1.600
14	100	17	289
15	100	17	289
16	100	55	3.025
17	100	40	1.600
18	100	35	1.225

19	100	53	2.809
20	100	30	900
		848	40.380

(Source : the result of the pre-test of the students' Rumah Bambu Pintar)

Based on the result of the pre-test analysis in the table above, the researcher would like to present the table about students classification, frequency and percentage as follow:

Table. 4.2 The Classification of Frequency and Percentage Score of the Students' Vocabulary Mastery in Pre-Test

No	Classification	Score	Frequency	Percentage
1	EXCELLENT	81-100	0	0 %
2	GOOD	71-85	1	5 %
3	FAIR	56-70	3	15 %
4	POOR	41-55	5	25 %
5	VERY POOR	$\leq 40$	11	55 %
$\Sigma$			20	100 %

(Source : The classification of pre-test the students' Rumah Bambu Pintar)

The data above shows that from 20 students, there were 11 (55%) students in very poor level, 5 (25%) students in poor level, 3 (15%) students in fair level, 1 (5%) student in good level and nobody students got excellent level. It means that the students' vocabulary was low before getting the treatment.

The students did not get excellent because they forgot or did not know the vocabulary. Some of them said that they have studied the vocabulary but they forgot

again. So, it means that they were low in remembering again the vocabulary that they have gone and low in used in their life. Some of them also matched sentences with non-partners. It means that they were low in memorizing the vocabulary that they have studied.

#### b. Score of post-test

The researcher has given the students post-test to know how the students' vocabulary mastery after getting treatment by Mnemonics technique for six meetings. They could be memorized the vocabulary from the material that researcher gave them with the correct writing. There was result of the students' post-test.

Table. 4.3 The Students' Score of Post-Test

No	The score of post test (X2)		X2 <sup>2</sup>
	Max score X	Score X2	
1	100	90	8.100
2	100	88	7.744
3	100	87	7.569
4	100	83	6.889
5	100	87	7.569
6	100	97	9.409
7	100	83	6.889
8	100	70	4.900
9	100	97	9.409
10	100	87	7.569

11	100	100	10.000
12	100	100	10.000
13	100	100	10.000
14	100	57	3.249
15	100	56	3.136
16	100	97	9.409
17	100	67	4.489
18	100	60	3.600
19	100	87	7.569
20	100	60	3.600
		1653	141.099

*Source: the result of the post-test*

Based on the result of the pre-test analysis in the table above, the researcher would like to present the table about students classification, frequency and percentage as follow :

Table. 4.4 The Classification of Frequency and Percentage Score of Students' Vocabulary Mastery in Post-Test

No	Classification	Score	Frequency	Percentage
1	EXCELLENT	86-100	12	60 %
2	GOOD	71-85	2	10 %
3	FAIR	56-70	6	30 %
4	POOR	41-55	0	0 %
5	VERY POOR	≤ 40	0	0 %

$\Sigma$	20	100 %
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*(Source: The classification of Post-test)*

The data above shows that from 20 students, there were 12 (60%) students got excellent level, there 2 (10%) students got good level, and there 6 (30%) students got fail level, and no one students in poor and very poor level. It described that the quality of the students' vocabulary mastery was good. They got an improvement after getting treatment by using Mnemonics technique.

The students' vocabulary increased after getting the treatment. Before getting the treatment, the students was difficult to remembering again the vocabulary that they have gone and it made them difficult in working the pre-test. But after getting the treatment, the students was easy to remembering again the vocabulary that they have gone in learning process, and it made them got good and excellent in post-test. It means that their vocabulary increase when using Mnemonics technique in treatment.

c. The overall result of pre-test and post-test

The result explained that the pre-test and post-test were used to measure the students' knowledge gained in the treatment by applying Mnemonics technique in this research. In other words to determine the students' knowledge level of their vocabulary mastery, the pre-test was given to the students before doing treatment, it means that the students had to answer the test well and post-test was given after doing treatment with the same kind of the test. In another the word to measure the

students' knowledge level of vocabulary mastery was applying by Mnemonics technique.

The comparison of the gained score between pre-test and post-test can be illustrated as following:

Table 4.5 The Comparison Between Pre-Test and Post-Test Result

No	Respondent	The score of Pre-test	The score of Post-test
1	Sri Rahayu	43	90
2	Putri Andini	43	88
3	Ika wijaya Muksin	23	87
4	Nurkhafifah kasau	40	83
5	Risnatia Haliza Nasya	40	87
6	Nurcahyati	63	97
7	Dewi wulang sari	30	83
8	Nur rezky ramadhani	43	70
9	Lilis sukasi	73	97
10	Rukmana	40	87
11	Ririn afriani	60	100
12	Nur amni	63	100
13	Nur aisyah	40	100
14	Miftahul janna	17	57
15	Na'imatus sahira	17	56
16	Kharisma	55	97
17	Mahyuni	40	67

18	Mutmainna	35	60
19	Friska	53	87
20	Annisa	30	60
Mean		42,2	82,65

(Source: primary data processing)

The table above shows that the students got improvement by gaining score before and after treatment. It proved that the students got improvement in their vocabulary mastery through Mnemonics technique. The improvement can be measured by presenting the minimum and maximum score of pre-test and post-test. The minimum score of pre-test was 17 and the maximum score of pre-test was 73, beside that the minimum score of post-test was 56 and the maximum score of post-test was 100. The mean of the pre-test was 42,2 and the mean of the post-test was 82,35. Before giving the treatment, the students got the poor category but after giving the treatment, the students got the good category, it mean that there was improvement with students' vocabulary mastery.

Table 4.6 The Mean Score and Standard Deviation of The Pre-Test and Post-Test

Test	Mean Score	Standard Deviation (SD) Score
Pre test	42.2	0.481
Post-test	82.65	0.484



#### d. T-test value

The test was used to ensure that students got an improvement after giving treatment. The following was the table to find out the difference of the mean score between pre-test and post-test.

Table 4.7 The Worksheet of Calculating of the Score Pre-Test and Post-Test

No	Respondent	The score of Pre-test	The score of Post-test	(D)	(D) <sup>2</sup>
1	Sri Rahayu	43	90	47	2.209
2	Putri Andini	43	88	45	2.025
3	Ika Wijaya Muksin	23	87	64	4.096
4	Nurkhafifah Kasau	40	83	43	1.849
5	Risnatia Haliza Nasya	40	87	47	2.209
6	Nurcahyati	63	97	34	1.156
7	Dewi Wulang Sari	30	83	53	2.809
8	Nur Rezky Ramadhani	43	70	27	729
9	Lilis Sukasi	73	97	24	576
10	Rukmana	40	87	47	2.209
11	Ririn Afriani	60	100	40	1.600
12	Nur Amni	63	100	37	1.369
13	Nur Aisyah	40	100	60	3.600
14	Miftahul Janna	17	57	40	1.600
15	Na'imatus Sahira	17	56	39	1.521
16	Kharisma	55	97	42	1.764
17	Mahyuni	40	67	27	729

18	Mutmainna	35	60	25	625
19	Friska	53	87	34	1.156
20	Annisa	30	60	30	900
Mean				805	34,731

*(Data source: the worksheet of the calculating on pre-test and post-test)*

There were 20 students have worked pre-test before getting treatment and worked post-test after getting treatment. The table above shows that the difference of the mean score between pre-test and post-test. It showed the value of the difference of the mean score was 805.

Based on the calculating on pre-test and post-test above, the researcher would like to present the table about T-test and T-table as follow:

Table. 4.8 T-test and T-table

Variable	T-test	T-table
Pre-test and Post-test	20,1	1,729

*Source: T-test and T-table*

Table above shows the value of T-test and T-table. The value of T-test from the result of test significance of pre-test and post-test (20,1) meanwhile the value of T-table from the distribution of t-Table based on the total sample of this research. It was 20 students, so T-table was 1,729 . It mean that T-test bigger than T-table.

#### **e. Test of significant**

In order to know whether the means score of the pre-test and the means score of the post-test was significantly different, the researcher used T-test. The result of

the T-test was  $t = 20,1$ . To find out the degree of freedom (df) the researcher used following formula:

$$df = N-1$$

$$df = 20-1$$

$$df = 19$$

For the level of significance ( $p = 0,05$ ) and  $df = 19$  then the value of the table = 20,1 the value of the T-test was greater than the t-table ( $20,1 > 1,729$ ) it mean that there was an improvement with the students' vocabulary mastery after giving the treatment. So, the null hypothesis ( $H_0$ ) was rejected and the alternative hypothesis ( $H_i$ ) was accepted. It has been found that there was improvement of Mnemonics technique on students' vocabulary mastery.

#### f. The Finding Through the Questionnaire

Questionnaire was used as an instrument to gain more information about students' responses. In order to get the information from the respondent, there were 20 questions which were asked in the questionnaire. The students' answer then were classified into five categories.

Table 4.9 The Result of Questionnaire

Respo ndent	Item																				Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
1	4	4	4	4	4	4	4	4	4	4	5	5	4	5	5	4	4	4	4	4	84
2	5	4	4	5	4	4	4	4	4	2	4	4	4	4	4	4	4	3	4	4	79
3	5	4	4	5	5	4	4	4	4	4	5	4	2	4	4	5	5	4	5	4	85
4	5	5	5	5	4	4	4	4	4	4	4	4	4	4	5	5	5	5	5	4	89

5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	80
6	5	4	4	4	3	4	4	4	4	3	5	4	4	4	5	5	5	5	5	86
7	5	4	4	5	5	5	4	5	4	5	4	5	5	5	4	5	5	5	5	93
8	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	99
9	4	5	4	5	4	4	5	5	5	4	5	4	5	5	5	5	5	5	5	94
10	5	5	4	5	4	5	5	5	5	5	5	4	5	5	5	5	5	5	5	97
11	5	5	5	5	5	4	4	4	4	4	4	5	5	5	5	3	3	5	4	88
12	4	5	5	5	4	5	4	4	4	4	4	4	4	4	4	4	4	5	4	84
13	5	4	4	4	5	4	4	5	5	5	5	4	4	4	4	5	5	4	5	90
14	5	4	4	5	4	4	5	2	5	5	3	4	4	4	4	3	3	5	5	83
15	5	3	3	4	4	4	4	3	4	3	3	4	4	4	4	3	3	5	5	77
16	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	100
17	5	5	4	4	5	4	5	4	5	5	5	4	4	5	5	5	5	4	5	93
18	5	4	5	4	4	3	4	4	4	3	4	4	4	5	5	3	5	5	5	85
19	5	5	5	5	4	5	4	5	5	5	4	5	5	4	4	5	5	5	4	93
20	5	4	5	5	5	5	5	5	5	5	4	4	4	3	4	4	5	4	5	90
Total																				1769

$$\bar{X} = \frac{\sum X_i}{n} = \frac{1769}{20} = 88,45$$

Based on the result of questionnaire above, the total mean score of all items showed that 88,45 the table 3.4 the rating score of questionnaire page thirty three showed it categorized very strong. It means that the students really interesting to study English vocabulary by using Mnemonics technique. Because the students felt

easy in learning vocabulary by using this technique to memorizing and remembering the vocabulary. In learning process also, the students were enjoyed to getting the material vocabulary by this technique.

## **B. Discussion**

### **1. The way of implementation Mnemonics technique to enhance the students' vocabulary mastery**

There were six meetings for doing treatment in this research. The first meeting was conducted on Sunday, July 12<sup>th</sup> 2020. The lesson was started by praying together and checking attendance list. Then the researcher informed the activities that could be done in the meeting. In the first meeting, the researcher introduced about Mnemonics technique that could be used. Then explained about material pronoun as a the first material and also explained about the method could be used in this meetings.

In this meeting, the researcher explained the material pronoun with one of method of Mnemonics technique that be used. The method was rhyme (song). Before that, the researcher explained how the pronounce the words correctly, then the students followed how the researcher said. After that, the researcher explained about how memorizing the words with rhyme/song technique. The researcher gave paper about the pronoun and then showed the video that had a song. The researcher played a song then the students followed it. So, the students knew how memorizing with the song then they did repeatedly.

In the second meetings, was conducted Saturday, July 18<sup>th</sup> 2020. The lesson was started by praying together and checking attended list. Then the researcher gave warming up as repeated the material in the first meeting. Then the researcher explained about the other technique from Mnemonics that was used it. In this meeting, the researcher used Method of locy.

Then the students memorized the vocabulary with imagine the vocabulary with a place that they knew it. So, every time the students forgot the new words, they will have remembered again when they remember the place. After that, the researcher gave exercise about the material. Before the researcher closed the class, the researcher gave motivation to the students. After that prayed together and teacher gave greetings to close the class.

In the third meetings, was conducted Sunday, July 19<sup>th</sup> 2020. The lesson was started by praying together and checking attended list. Then the researcher gave warming up as repeated the material in the last meeting. Then the researcher explained about the other technique from Mnemonics that was used it. In this meeting, the researcher used Method of locy.

Then the students memorized the vocabulary with imagine the vocabulary with a place that they knew it. So, every time the students forgot the new words, they will have remembered again when they remember the place. After that, the researcher gave exercise about the material. Before the researcher closed the class, the researcher gave motivation to the students. After that prayed together and teacher gave greetings to close the class.

In the fourth meetings, was conducted Saturday July 25<sup>th</sup> 2020. The lesson was started by praying together and checking attended list. Then the researcher explained about the other technique from Mnemonics that was used it. Next, the researcher gave warming up to review the last material. After that, the researcher introduced and explained material about shape.

For this meeting, the researcher used the other technique from mnemonics, it was peg words system. In peg words system, the researcher paired the shape with similar object then the students memorized it easily. After that, the researcher explained how to make sentence and how to ask about shape. Then the teacher gave exercise about the material. Before the researcher closed the class, the researcher gave motivation to the students. After that prayed together and teacher gave greetings to close the class.

In the fifth meetings, was conducted Sunday July 26<sup>th</sup> 2020. The lesson was started by praying together and checking attended list. Then the researcher explained about the other technique from Mnemonics that was used it. Next, the researcher gave warming up to review the last material. After that, the researcher gave new vocabulary about size.

For this meeting, the researcher used the other technique from Mnemonics, it was acronym technique. In acronym technique, the researcher took the first letter of each words and combined with the other words. Example BTS (Big, Tall, Small). After that, the researcher explained how to make sentence and how to ask about size. Then, the researcher gave exercise about the material. Before the researcher closed

the class, the researcher gave motivation to the students. After that prayed together and teacher gave greetings to close the class.

In the six meetings, was conducted Saturday August 8<sup>th</sup> 2020. The lesson was started by praying together and checking attended list. Then the researcher explained about the other technique from Mnemonics that was used it. Next, the researcher gave warming up to review the last material. After that, the researcher explained material about articles and gives the other vocabulary.

For this meeting, the researcher used the other technique from mnemonics, it was link word technique. In link word technique, the students memorized the vocabulary with imagine the vocabulary related to each other and made a short story to help remember the vocabulary. After that, the researcher gave exercise about the material. Before the researcher closed the class, the researcher gave motivation to the students. After that prayed together and teacher gave greetings to close the class.

After doing the treatment for six meetings, the researcher gave post-test on Sunday August 9<sup>th</sup> 2020. Based on the data analysis, it showed that the students' score in pre-test was very low. But during six meetings in treatment, the students got the higher score in post-test. It can be showed in the score of post-test result. Where, the mean of pre-test was 42,2 and the mean of the post-test was 85,65. The mean result of post-test scores was much higher than pre-test scores. So, it can be concluded that the treatment have been effective. The researcher proved that learning vocabulary by using Mnemonics technique can enhance the students' vocabulary mastery.



Before giving the treatment, the students of Rumah Bambu Pintar had a problem in learning English vocabulary. Their problem was very important to memorize and remember again vocabulary that they have memorized. So, it was difficult to them when they would be spoken in English and also when they worked the exercise. Because they forgot the vocabulary. One of the way easily to remember was used our memory to save the vocabulary that we have gotten. Followed by Dominic O' Brien in his book, said that memory depends on three basic process: making something memorable, storing that item in the mind, and recalling it accurately at some future time.<sup>1</sup> In Mnemonics technique could be helped easily to save in our memory. According to dictionary psychologist also, mnemonics is any technique that facilitates the storage and retrieval of information from memory.<sup>2</sup>

But after the students got the six treatment from the researcher by using Mnemonics technique, the students were easy to memorize vocabulary and remember again the vocabulary that they have memorized. It helped the students in speaking or communication in English. The students also easy worked the exercise or could be written in English.

Described by Bower and Bolton, the main idea of rhyme is that the information needed to remembered is made up into a rhyme.<sup>3</sup> In this research rhyme/song method is one of method in Mnemonics that the students liked to use it. Because the students could be remembered the vocabulary easily when they remembered the rhyme/song that the researcher gave them. So, every time when they have need of the vocabulary, they only remembered the rhyme/song. Especially for

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<sup>1</sup> Dominic O'Brien, *How to Develop a Brilliant Memory*, (New York: Shelter Harbor Press, 2005), p. 11

<sup>2</sup> Alex Sobur, *Kamus Psikologi* (Bandung: CV Pustaka Setia, 2016)

<sup>3</sup> Kamis Jurowski and friends, *Mnemonics Devices in Science* (Krakow: Scientiae et Didactics, 2015), p.13

the students that liked to sing a song, they could be changed the rhyme/song of their favorite song in their learning English vocabulary easily.

Acronym also was the other method that the students liked to use it. They only remembered the first letter of the same vocabulary and could be combined. Dominic O' Brien in his book said that sentence or verse is created from the first letter of each word in sequence to help us remember of information is one of popular form of Acronym.<sup>4</sup>

Based on the result of this research, the researcher concluded that Mnemonics technique is effective to enhance the students' vocabulary mastery. Because this technique helped the students to memorize the vocabulary. Michel Presley and his friends also have applied Mnemonics technique in their research to improve the vocabulary. It proved that Mnemonics technique is effective in learning to enhance the students' vocabulary.<sup>5</sup> In their research, they used keyword technique to learn simple, concrete, Spanish vocabulary words and were provided with keywords. While in this research, the researcher also used keyword technique in the fifth meetings but in English learning. The researcher gave English vocabulary words and to memorize the words, the students would be took the first letter as a keywords from the words.

Joel R. Levin and his friends also have used this technique in their research. It proved that mnemonic techniques is effective for enhancing children's acquisition of new vocabulary words.<sup>6</sup> In their research, they gave a list of relatively complex

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<sup>4</sup> Dominic O'Brien, *How to Develop a Brilliant Memory*, (New York: Shelter Harbor Press, 2005), p. 18

<sup>5</sup> Michael Pressley and his friends, "Use of a Mnemonic Technique to Teach Young Children Foreign Language Vocabulary", *Contemporary Educational Psychology* 6, 1981, p. 110-116.

<sup>6</sup> Joel R. Levin and friends "Mnemonic Versus Non-mnemonic Vocabulary Learning Strategies for Children" *American Educational Research Journal* Spring 19, No. 1, 1982, p. 121-136

English vocabulary words for four-grade students in two experiments. The first experiment, they used mnemonic technique (keyword) contextual or a verbal contextual procedure. The second experiment, they used three other conditions were compared to the keyword context condition. While in this research, the researcher gave English vocabulary words but in one experiment and used some technique of mnemonics.

## 2. The Discussion of Findings through the Questionnaire

In the last day of this research was on Sunday August 9<sup>th</sup> 2020, the researcher also gave the questionnaire to know how the students' responses after getting the six treatment through Mnemonics technique of the students of Rumah Bambu Pintar. In the questionnaire, there were 20 items by using the liker scale. From 20 respondents, most of the students answered very positively. Based on the liker scale of the students, it showed that the total mean score of all items showed that 88,45. It was categorized very strong. It means that the students really interesting to study English vocabulary by using Mnemonics technique.

According to Indonesian Dictionary, Interesting is fun (delight, to attract is sighing (so that it is close, forward, upward, outward, etc.) 2. pleasant (exhilarating, delighting the heart because of its beauty, beauty, goodness, etc.). 3. arouse a feeling of love (affection, like, want, etc.) 4. influence or arouse the desire to pay attention (heed, etc.).<sup>7</sup> The students of Rumah Bambu Pintar were very enthusiastic, pleasant and fun during study English Vocabulary by using Mnemonics technique.

From Mnemonics technique, the students of Rumah Bambu Pintar had a different way to learn English vocabulary. Before using this technique, the students

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<sup>7</sup> Desy Anwar, *Kamus Besar Bahasa Indonesia Terbaru*, (Surabaya: Amelia Surabaya, 2003) p.486

only learned the vocabulary as usually. But after getting this technique in learning process, they felt a new situations and conditions. The students was not only communication with the teacher, but also discussion with their friends about this technique. When some of them forgot the vocabulary, their friend could be remembered with the technique that they have gotten. It means that, this technique helped the students in the other situations, not only for their selves.

Based on the liker scale and the students' responses during learning English vocabulary process, the researcher can concluded that Mnemonics technique was very interesting of the students' Rumah Bambu Pintar. They were enjoyed in learning English vocabulary process by using Mnemonics technique.

