

## **CHAPTER III**

### **PRESENTATION AND ANALYSIS OF THE DATA**

The writer divides this chapter into two sub chapters. The first sub chapter is the data presentation. In data presentation, the writer describes the data from pre-test and post-test scores of both groups: the experimental group and the control group and also the result of students' questionnaire. The second sub chapter is the analysis of the data. Data analysis consists of the quantitative analysis of pre-test and post-test scores by using t-test and the analysis result of students' questionnaire.

#### **3.1. Presentation of the Data**

##### **3.1.1. Data Presentation of Pre-Test and Post-Test Score**

Before doing the treatment, the writer conducted the pre-test that was given to the both groups. The pre-test was multiple choice test type since multiple choice test type tends to have a superior reliability and validity and there is only a specific correct response. Besides, the scoring can be done quickly and involves no judgement as to degrees of correctness (Harris, 7). The pre-test consists 50 items of multiple choice type, 25 items of nouns and 25 items of verbs.

The data of this analysis are presented into two tables. The first table describes the pre-test scores of both the experimental group and the control group. Moreover, in the second table, we can see the difference of post-test scores

from both the experimental and control group. In the first table below we can see the pre-test scores of the experimental and the control group which were collected before doing treatment. The scores of the pre-test were counted only from the correct answers.

Table 1

The Pre-Test Scores of the Experimental and the Control Group

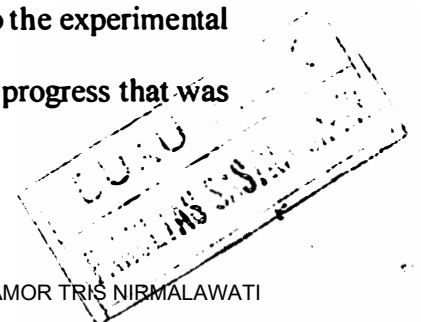
EXPERIMENTAL GROUP		CONTROL GROUP	
Respondent	Total	Respondent	Total
1	29	1	14
2	31	2	32
3	17	3	34
4	33	4	29
5	26	5	23
6	21	6	25
7	15	7	23
8	18	8	19
9	28	9	15
10	31	10	20
11	28	11	20
12	14	12	16
13	29	13	16
14	15	14	16
15	19	15	12
16	18	16	21
17	21	17	12
18	23	18	16
19	26	19	16
20	23	20	23
21	26	21	15
22	29	22	19
23	15	23	25
24	16	24	25
25	23	25	14
26	21	26	21
27	19	27	26
28	17	28	17
29	20	29	19

30	23	30	11
31	29	31	18
32	32	32	26
33	35	33	19
34	19	34	14
35	33	35	25
36	25	36	8
37	20	37	11
38	16	38	32
39	19	39	15
40	21	40	21
$\Sigma$	923	$\Sigma$	783
$\bar{x}$	23.07	$\bar{x}$	19.57

From the table 1 above, we can see that the total pre-test score of the experimental group is 923 and the total pre-test score of the control group is 783. It means, the pre-test score of the experimental group is higher than the pre-test score of the control group. Moreover, it is also obvious that the mean score of the experimental group is also higher than the mean score of the control group, which is 23.07 and 19.57 respectively.

After both groups were given pre-test, the experimental group and the control group were given treatment which ran for two weeks. Treatment refers to anything done to groups in order to measure its effect. In conducting the treatment, the writer used a different way to teach vocabulary to students. For the experimental group, in teaching vocabulary, the respondents were given pictures. Conversely, for the control group, they were not given pictures when they were learning vocabulary.

After giving treatment, the writer gave post-test to the experimental and control group. The post-test was given in order to know the progress that was



made by the students after they were given treatment. The post-test was the same as the pre-test. It consists of 50 items multiple-choice test, 25 items of nouns and 25 items of verbs. The results of post-test are presented as follows:

Table 2

The Post-Test Scores of the Experimental and the Control Group

EXPERIMENTAL		CONTROL	
Respondent	Score	Respondent	Score
1	39	1	17
2	46	2	35
3	36	3	36
4	42	4	31
5	35	5	25
6	32	6	25
7	19	7	24
8	27	8	23
9	33	9	19
10	38	10	24
11	35	11	26
12	33	12	20
13	40	13	16
14	30	14	19
15	29	15	12
16	36	16	27
17	29	17	18
18	32	18	16
19	35	19	22
20	34	20	28
21	37	21	19
22	39	22	21
23	21	23	26
24	20	24	28
25	39	25	17
26	26	26	25
27	35	27	31
28	30	28	24
29	29	29	23
30	29	30	20
31	38	31	25

32	39	32	31
33	43	33	23
34	30	34	17
35	40	35	29
36	40	36	15
37	37	37	20
38	20	38	34
39	26	39	17
40	28	40	23
$\Sigma$	1326	$\Sigma$	931
$\bar{x}$	33.15	$\bar{x}$	23.27

From table 2 above we can see that the post-test score of the experimental group is 1326 and the post-test score of the control group is 931. From those data, we can say that the post-test score of the experimental group is higher than that of the control group. Moreover, it can be seen that there is a significant difference from the mean score of the first group and that of the second group. The writer calculated that the mean score of the first group is 33.15 and the mean score of the second group is 23.27.

### 3.1.2. Data Presentation of the Students' questionnaire

After giving pre-test and post-test to both groups, the writer gave questionnaire to both groups to know how well picture can motivate the first-year elementary students of SD Hang Tuah XII Surabaya to learn English vocabulary. The students' answers of the questionnaire are presented below:

The first statement is about the students' interest in English lesson. From their responses, it can be seen that all of the students or 100% students chose the option 'agree'.

The second statement is about students' interest in the way their English teacher teaching English vocabulary and giving instruction. From their responses, 100% of students' responses fall into option 'agree'.

In the third statement, the writer stated that the first year elementary students of SD Hang Tuah XII have the English book. Their responses show that all of the students or 100% said 'agree' (and no one chose the option 'disagree').

In the fourth statement, the writer stated that in the students' English book, there are many pictures in it. On this statement, all of the students chose the option 'agree'.

The fifth statement is about their interest in English book that has many pictures in it. To this statement, all of the students' responses fall into the option 'agree'.

The sixth statement says that picture can make the students easily memorize the English words. From their responses, the greatest percentage, 97.5% of students' responses fall into option 'agree' and 2.5% students' responses fall into option 'disagree'.

The seventh statement is the advantage of picture that can make them understand the English words easier. Their responses show that the greatest percentage, that is 95%, fall into the option 'agree' and the rest, 5%, fall into the option 'disagree'.

The eighth statement is about the students' interest in learning English by using picture. From their responses, it can be seen that all students chose option 'agree' or 100% (and no one of the students chose option 'disagree').

The ninth statement says that their teacher has the creativity in bringing picture to be used in the classroom to teach English especially in teaching vocabulary. All of the students' responses fall into the option 'agree' or 100% students said that their teacher often bring picture to be used in teaching English especially in English vocabulary.

In the tenth statement, the writer stated that they are bored with the teaching and learning English process by using picture. The greatest percentage or most of the student's responses fall into the option 'disagree'. In percentage, it is 98.75%. The rest, or 1.25% students' responses fall into option 'agree'.

### **3.2. Analysis of the Data**

#### **3.2.1. Quantitative Analysis**

In this quantitative analysis, the writer uses t-test analysis. T-test is used to verify whether or not there is a significant influence of picture on children's English vocabulary. Before conducting the analysis, first, the writer will state the hypotheses, which are:

**Ho** : There is no influence of picture on children's English vocabulary development.

**H1** : There is influence of picture on children's English vocabulary development.

$H_0$  is referred to as the null hypothesis and the second hypothesis, which is assumed to be true when the null hypothesis is false, is referred to as the alternative hypothesis and is often symbolized by  $H_1$ . Hays (269) states that both the null hypothesis and the alternative hypothesis should be stated before any statistical test is attempted.

To verify the tenability of the hypotheses, the writer calculated the data of pre test and post test of both groups using the t-test. Based on the result of the pre-test and post-test of both groups, the writer calculated the increased or decreased of score obtained from these two groups one of which was taught vocabulary through picture and the other was taught vocabulary without using picture. The result is presented in the following tables:

Table 3

## The Increased or Decreased Scores of the Experimental Group

Respondent	Pre Test	Post Test	The Number of Increased Score
1	29	39	10
2	31	46	15
3	17	36	19
4	33	42	9
5	26	35	9
6	21	32	11
7	15	19	4
8	18	27	9
9	28	33	5
10	31	38	7
11	28	35	7
12	14	33	19
13	29	40	11
14	15	30	15
15	19	29	10
16	18	36	18
17	21	29	8



18	23	32	9
19	26	35	9
20	23	34	11
21	26	37	11
22	29	39	10
23	15	21	6
24	16	20	4
25	23	39	16
26	21	26	5
27	19	35	16
28	17	30	13
29	20	29	9
30	23	29	6
31	29	38	9
32	32	39	7
33	35	43	8
34	19	30	11
35	33	40	7
36	25	40	15
37	20	37	17
38	16	20	4
39	19	26	7
40	21	28	7
$\Sigma$			403

Table 4

## The Increased or Decreased Scores of the Control Group

Subject	Pre test	Post test	The Number of Increased Score
1	14	17	3
2	32	35	3
3	34	36	2
4	29	31	2
5	23	25	2
6	25	25	0
7	23	24	1
8	19	23	4
9	15	19	4
10	20	24	4
11	20	26	6
12	16	20	4
13	16	16	0

14	16	19	3
15	12	12	0
16	21	27	6
17	12	18	6
18	16	16	0
19	16	22	6
20	23	28	5
21	15	19	4
22	19	21	2
23	25	26	1
24	25	28	3
25	14	17	3
26	21	25	4
27	26	31	5
28	17	24	7
29	19	23	4
30	11	20	9
31	18	25	7
32	26	31	5
33	19	23	4
34	14	17	3
35	25	29	4
36	8	15	7
37	11	20	9
38	32	34	2
39	15	17	2
40	21	23	2
$\Sigma$			148

From the two tables above, it can be seen that experimental group that was taught vocabulary through picture obtained higher increasing scores than those who were taught vocabulary without using picture. The experimental group obtained significant progress where the highest increasing score reaches 19 and many of them have increasing scores more than 10. Meanwhile, the highest increasing score of control group only reaches 9 and none of them obtained more than 10 increasing score.

To make the result of the research more convincing, the writer uses the power of t-test analysis that has the following formula:

$$t = \frac{\bar{d}}{Sd/\sqrt{n}}$$

In which:

$t$  = refers to the value of  $t$  or  $t$  test score

$\bar{d}$  = refers to deviation average

$Sd$  = refers to standard deviation or variance

$N$  = refers to the total number of the respondents

Since the deviation average and standard deviation is not known yet, firstly the writer will calculate the deviation average using the formula:

$$\bar{d} = \frac{\sum d}{n}$$

In which:

$\sum d$  = refers to the total sum of  $d$

$n$  = refers to the total number of the respondents

Secondly, the writer will find out the value of standard deviation using the formula:

$$Sd = \sqrt{\frac{\sum d^2}{n - 1}}$$

Since there is no value of  $d$  and  $S_d$ , the writer will calculate it.  $d$  is obtained from the subtraction of the increasing score from the experimental group and control group. The result can be seen in the following table:

Table 5

The Value of  $d$  and  $d^2$ 

Subject	Experimental	Control	$d$	$d^2$
1	10	3	7	49
2	15	3	12	144
3	19	2	17	289
4	9	2	7	49
5	9	2	7	49
6	11	0	11	121
7	4	1	3	9
8	9	4	5	25
9	5	4	1	1
10	7	4	3	9
11	7	6	1	1
12	19	4	15	225
13	11	0	11	121
14	15	3	12	144
15	10	0	10	100
16	18	6	12	144
17	8	6	2	4
18	9	0	9	81
19	9	6	3	9
20	11	5	6	36
21	11	4	7	49
22	10	2	8	64
23	6	1	5	25
24	4	3	1	1
25	16	3	13	169
26	5	4	1	1
27	16	5	11	121
28	13	7	6	36
29	9	4	5	25
30	6	9	-3	9
31	9	7	2	4
32	6	5	1	1
33	8	4	4	16

34	11	3	8	64
35	7	4	3	9
36	15	7	8	64
37	17	9	8	64
38	4	2	2	4
39	7	2	5	25
40	7	2	5	25
$\Sigma$	403	148	254	2386

After knowing the value of  $d$  and  $d^2$ , henceforth, the writer calculates the value of  $\bar{d}$ :

$$\begin{aligned}\bar{d} &= \frac{\Sigma d}{n} \\ &= \frac{254}{40} \\ &= 6.35\end{aligned}$$

After getting the  $\bar{d}$ , the writer will calculate the standard deviation, which has the formula:

$$\begin{aligned}Sd &= \sqrt{\frac{\Sigma d^2}{n - 1}} \\ &= \sqrt{\frac{2386}{39}} \\ &= \sqrt{61.17} \\ &= 7.82\end{aligned}$$

Thus, after obtaining the  $\bar{d}$  and  $Sd$  value, the writer calculates the t-test score:

$$\begin{aligned}
 t &= \frac{\bar{d}}{Sd/\sqrt{n}} \\
 &= \frac{6.35}{7.82/\sqrt{40}} \\
 &= \frac{6.35}{7.82/6.32} \\
 &= \frac{6.35}{1.23} \\
 &= 5.16
 \end{aligned}$$

In order to know the accepted hypothesis, the writer compares the t-value with the t-critical table. To see the value in t-table, the writer takes the level of significance 95% since the writer can not guarantee that this study is 100% correct. It means the level of significance that is denoted by the Greek letter  $\alpha = 100\% - 95\% = 5\%$  or the writer states the significance level is 0.05. From the t-critical table, the writer gets:

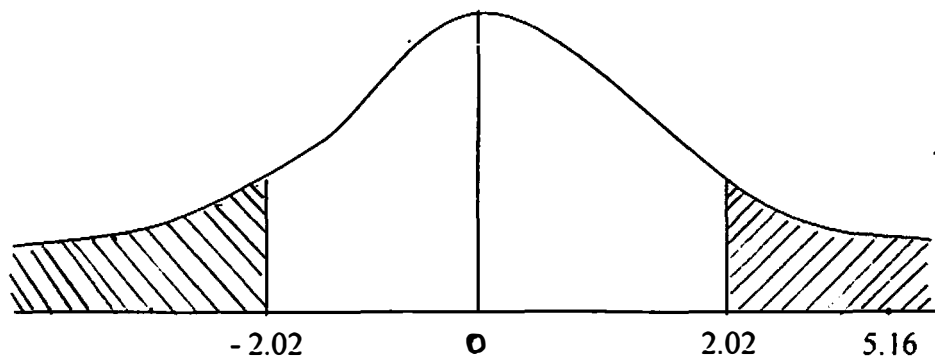
$$\begin{aligned}
 &t(n - 1; \alpha / 2) \\
 &t(40 - 1; 5\% / 2) \\
 &t(39; 2.5\%) = 2.02
 \end{aligned}$$

In obtaining the accepted hypothesis, the writer draws the diagram of sample space. Hamburg (191) states that sample space is the set of possible values of the

sample statistic. It is divided into two parts called the acceptance region and the rejection region. Hereafter, the result of t-test is presented in the following diagram:

Figure 1

The Diagram of Acceptance and Rejection Region



The diagram above, shows that the t-value which is 5.16 does not lie between the negative value (- 2.02) and the positive value (2.02); thus, the t-value is outside the acceptance region. It means that statistically  $H_0$  is rejected and the alternative hypothesis ( $H_1$ ) is accepted, therefore, it is verified that picture influences the children's English vocabulary development. As Wallerstein (30) says, teaching with picture provides endless possibilities in learning vocabulary, holding a discussion, creating dialogue, and stories or writing exercises.

### 3.2.2. The Students' Questionnaire Analysis

In analyzing the students' questionnaire, the writer begins with the first statement. From their responses, it can be seen that all of the first year students of SD Hang Tuah XII like the English lesson very much. English has been known as the international language, therefore, in these recent years English is considered as an important subject to be learned since in this globalization era, the use of English is needed in the technology, knowledge, and information. English is also a new subject for the first year elementary school of SD Hang Tuah XII, that is why, they are interested in and curious about the subject.

The result of the students' second responses shows that all of the students like the technique of their teacher in giving instruction and in teaching English. From the responses, we can see that that the English teacher at SD Hang Tuah XII can create a good atmosphere when teaching English to the first year elementary students of SD Hang Tuah XII. The way the English teacher gives explanation and instruction to the first year students of elementary school plays an important role because English is a new subject that they have never known before. Another reason is that they are still in the first year of elementary school, therefore, when she introduces a new subject, they need an extra work to get the students' attention. If the teacher's teaching technique is interesting, it will trigger the students' curiosity about the subject.

The responses of the third statement show that the first year elementary students have the English book. It means that SD Hang Tuah XII considers that the English book is very important for the process of English



vocabulary learning and teaching especially for those students who are still in the first year of elementary school. Therefore, the school tries to give the students enough English material and clear instruction to be taught in the classroom. In this case, the school gives the English book as the handbook in the classroom. Since they are still in the first year of elementary school, the content of the book must be interesting.

The fourth responses show that there are many pictures in the students' English book. It means, picture now is considered as an aid that can make the class more effective and interesting. The use of pictures in their English book can stimulate them in learning English vocabulary because English is a new subject for them. Since they are new learners and still in the first year of elementary school, the material that is given must be as interesting as possible.

In the fifth responses, it can be seen that all of the students like the English book that has many pictures in it. It means that picture can make the first year elementary students of SD Hang Tuah XII interested in learning English vocabulary. Picture can give a meaningful contribution to learning English vocabulary. It can also make the process of learning vocabulary more lively because students can see the real objects directly. As the writer explained before, the English book that contains many interesting things, in this case pictures can arouse their curiosity in learning the English book. Thus, if they are interested in the content of the English book, the process of learning English vocabulary will be more pleasing and easier to be understood.

From the sixth responses, it can be seen that picture can make the first year students of SD Hang Tuah XII memorize the English words easier. Through picture, students can see the real object. For example, they want to memorize the word 'car' by seeing the picture of 'car'. Later, they will not find any difficulty in remembering the word 'car' because they have seen the real object of 'car' and they do not need to wonder about the shape of the car.

The students' seventh responses show that most of the students can understand the English vocabulary easier through a picture. It means that if a teacher teaches vocabulary by using pictures, the pictures itself can help the students digest the world into their mind easier because they have seen the real situation and the real object directly.

The students' responses of number eight show that all of the students are interested in learning English through pictures. It means that picture can really motivate the students in learning English vocabulary because if children learn a new subject (in this case, English vocabulary), first, they have to have an interest in that subject. Henceforth, from their interest, a motivation will emerge to learn English vocabulary.

From the ninth students' responses, it can be seen that all of the students agree with the statement that their teacher often bring pictures to school that is made by herself to be used in the process of teaching and learning English vocabulary. It indicates that the English teacher of SD Hang Tuah XII especially the teacher of the first year students of elementary school has realized that teaching English, especially vocabulary, needs creativity to make the process of

teaching and learning more interesting and easier to be understood. In this case, the use of picture is an effective way. The English teacher is required to bring pictures made by herself to the classroom and the pictures are adjusted to the class's need.

In the tenth statement, the writer stated about the students' boredom in learning English vocabulary by using pictures. From their answer, it can be seen that most of the students are not feel tired when they are learning English vocabulary by using pictures. It means that most of the students will feel happier and more pleased if they are using picture while learning English vocabulary since picture can bring a real situation and can brighten up the classroom activity.

Based on the students' responses, most of them are motivated in learning English vocabulary through picture since picture can represent the real objects and situation. Picture also can brighten the teaching and learning process of English vocabulary. Based on the writer's experience when teaching vocabulary to the first year elementary students of SD Hang Tuah XII, the students that were taught vocabulary through picture seemed to have interest in learning English vocabulary; moreover, they are motivated in remembering and understanding the English words. On the contrary, the responses of the students who were taught vocabulary without using picture were quite different. It seemed that they feel bored and have a little interest in the vocabulary learning process.

According to Wright (10), picture can contribute to the interest and motivation, a sense of the context of the language and a specific reference point or

stimulus. By using picture, students can be more interested in learning a language especially vocabulary. Wright's position is supported by the finding of this study since the group that was taught vocabulary through picture obtained higher post test scores than the other group.

## **CHAPTER IV**

# **CONCLUSION AND SUGGESTIONS**