

## CHAPTER IV

### FINDINGS AND DISCUSSION

#### A. Findings

##### 1. Description of Data

In this chapter, researcher presents the data description of the fifth grade students of SDN Pemurus Dalam 5 Banjarmasin about the process of teaching-learning process by using snake and ladder game as pictorial media. To find out more about the students' vocabulary who use and do not use snake and ladder game as pictorial media, the researcher tested the students using test, the researcher gave the test to students and they answered the test. Here, the researcher describes about result of the research on the field that collected by techniques of data collection. English learning process at SDN Pemurus Dalam 5 Banjarmasin for fifth grade students have been done eight times in four weeks, for class V that is taught by Mrs. Widarini Febrianingrum, S.Pd.

The researcher did the research on December, 28<sup>th</sup> 2017, until January 28<sup>th</sup> 2017, then December, 21<sup>th</sup> 2016 the researcher gave the research letter from Official of Education in Banjarmasin City to Headmaster of SDN Pemurus Dalam 5 Banjarmasin.

Before researcher do the research, researcher analyze the instrument whether the instrument is valid and reliable or not by using SPSS 16 program.

**Table 4.1 Analysis of validity**

No. Item		$r_{table}$	Status
1	0.484	0.263	Valid
2	0.562	0.263	Valid
3	0.495	0.263	Valid
4	0.691	0.263	Valid
5	0.757	0.263	Valid
6	0.683	0.263	Valid
7	0.721	0.263	Valid
8	0.601	0.263	Valid
9	0.663	0.263	Valid
10	0.340	0.263	Valid
11	0.362	0.263	Valid
12	0.273	0.263	Valid
13	0.612	0.263	Valid
14	0.680	0.263	Valid
15	0.676	0.263	Valid

Based on validity test by using SPSS 16 program showed that the test is valid in this experiment test include one until fifteen questions. In the table shows  $r_{count}$  is higher than  $r_{table}$ . So that, the test can be used to measure the students' ability in the research field.

**Table 4.2 Analysis of reliability****Reliability Statistics**

Cronbach's Alpha	N of Items
.745	16

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted
item_1	23.64	38.161	.460	.740
item_2	24.12	35.966	.503	.726
item_3	23.86	36.743	.439	.732
item_4	23.79	36.062	.657	.724
item_5	23.70	36.615	.736	.727
item_6	23.93	35.449	.640	.720
item_7	23.87	35.420	.685	.719
item_8	23.79	36.499	.560	.728
item_9	23.73	36.600	.632	.728
item_10	23.77	37.818	.286	.740
item_11	23.68	38.149	.325	.741
item_12	23.66	38.592	.219	.744
item_14	23.84	36.174	.567	.726
item_15	23.73	36.527	.650	.727
item_16	23.70	36.906	.650	.730
Total	12.30	9.815	1.000	.850

T test is reliable with value of Cronbach's Alfa more than 70. The table above shows the value is 745 with high category.

Inferential analysis is aimed at testing the research questions and hypotheses. The test is normality and homogeneity tests. Those tests use to analyze whether the hypotheses using parametric or non parametric research. These are tables of analysis result by using SPSS 16 program:

**Table 4.3 Analysis of normality**

		Unstandardized Residual
N		28
Normal Parameters <sup>a</sup>	Mean	.0000000
	Std. Deviation	22.62127481
Most Extreme Differences	Absolute	.198
	Positive	.091
	Negative	-.198
Kolmogorov-Smirnov Z		1.050
Asymp. Sig. (2-tailed)		.220

Based on the result, it shows that the value of normality is higher than 0,05. So, it can be concluded that the data is normal.

**Table 4.4 Analysis of homogeneity**

**Test of Homogeneity of Variances**

Levene Statistic	df1	df2	Sig.
1.661	6	17	.191

Based on the table, it shows that the data is homogeneity because the significance value 0,191 is more than significance standard 0,05.

Then, this is result of vocabulary achievement by using snake and ladder game as pictorial media in class Vb and without using snake and ladder game in class Va, and to know the different score between pre-test and post-test.

**a. Description about the students' vocabulary achievement by using snake and ladder game as pictorial media in pre-test and post-test in the class Vb.**

The researcher conducted the English vocabulary test for the fifth grade at SDN Pemurus Dalam 5 Banjarmasin 04<sup>th</sup> of January and 21<sup>th</sup> of January in class Vb. The scoring is based on objective test score. More information about the scores can be seen in appendix 6.

To know the vocabulary achievement of students who use snake and ladder game as pictorial media between pre-test and post-test at fifth grade at SDN Pemurus Dalam 5 Banjarmasin academic year 2016/2017 the researcher uses the accounting of formula as follows:

**1) Giving interpretation for “ $t_o$ ” with consulting t table (“ $t_{tabel}$ ”):**

$$Df = N - 1$$

$$= 28 - 1$$

$$= 27$$

**2) Looking for standard Deviation for Vb by using the following formula:**

$$S = \sqrt{\frac{\sum x^2 - \frac{(\sum x)^2}{n}}{n-1}}$$

$$S = \sqrt{\frac{\sum 112200 - \frac{2822400}{28}}{28-1}}$$

$$S = \sqrt{\frac{11400}{27}}$$

$$S = \sqrt{422,2222222}$$

$$S = 20,548$$

The post test using the same formula and get  $S = 15,630$

**3) looking for  $t_o$  , by using the following formula:**

$$t = \frac{x_1 - x_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2} - 2r\left(\frac{s_1}{\sqrt{n_1}}\right)\left(\frac{s_2}{\sqrt{n_2}}\right)}}$$

$x_1$ : mean of experimental group

$x_2$ : mean of controlling group

$s_1$   $s_2$ : standard deviation 1 and 2

$r$ : correlation

$N$ : Subject

$$t = \frac{60,00 - 85,36}{\sqrt{\frac{422,2222222}{28} + \frac{244,3121704}{28} - 2(0,470)\left(\frac{20,548}{\sqrt{28}}\right)\left(\frac{15,630}{\sqrt{28}}\right)}}$$

$$t = \frac{-25,36}{\sqrt{23,80479974 - 10,78197594}}$$

$$t = \frac{-25,36}{\sqrt{13,0228238}}$$

$$t = -7,0288248$$

Thus,  $t_{count} = -7,03 < T_{table\ 5\%} = -1,70$ .  $-T_{count}$  is lower than  $-T_{table}$ .  $H_o$  (Null Hypothesis) is accepted and  $H_a$  (Alternative Hypothesis) is rejected. By this result, the researcher concludes that  $H_o$  is accepted.

As a result, there is no significant difference in students who use snake and ladder game as pictorial media in class Vb between pre-test and post-test in their vocabulary achievement of body part on fifth grade at SDN Pemurus Dalam 5 Banjarmasin academic year 2016/2017.

The researcher use SPSS 16 to more conviencing the count, and the result: see appendix 3 .

**b. Description about the students' vocabulary achievement without using snake and ladder game as pictorial media in pre-test and post-test in the class Va.**

The researcher conducted the English vocabulary test for the fifth grade at SDN Pemurus Dalam 5 Banjarmasin 4<sup>th</sup> of January and 20<sup>th</sup> of January in class Va. The scoring is based on objective test score. More information about the scores can be seen in appendix 7.

To know the vocabulary achievement of students who do not use snake and ladder game as pictorial media between pre-test and post-test at fifth grade at SDN Pemurus Dalam 5 Banjarmasin academic year 2016/2017 the researcher uses the accounting of formula as follows:

1) Giving interpretation for “ $t_o$ ” with consulting t table (“ $t_{tabel}$ ”):

$$Df = N - 1$$

$$= 28 - 1$$

$$= 27$$

2) Looking for standard Deviation for  $V_a$  by using the following formula:

$$S = \sqrt{\frac{\sum x^2 - \frac{(\sum x)^2}{n}}{n - 1}}$$

$$S = \frac{\sum 8415 - \frac{2131600}{28}}{28 - 1}$$

$$S = \sqrt{297,089947}$$

$$S = 17,236$$

The post test using the same formula and get  $S = 24,389$

3) Looking for  $t_o$ , by using the following formula:

$$t = \frac{x_1 - x_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2} - 2r\left(\frac{s_1}{\sqrt{n_1}}\right)\left(\frac{s_2}{\sqrt{n_2}}\right)}}$$



$$t = \frac{52,14 - 81,79}{\sqrt{\frac{17,236^2}{28} + \frac{24,389^2}{28} - 2(0,374)\left(\frac{17,236}{\sqrt{28}}\right)\left(\frac{24,389}{\sqrt{28}}\right)}}$$

$$t = \frac{-29,65}{\sqrt{10,60998914 + 21,24369004 - 0,748(3,257)(4,609)}}$$

$$t = \frac{-29,65}{\sqrt{20,62506746}}$$

$$t = \frac{-29,65}{4,5414829582}$$

$$t = -6,526$$

Thus,  $t_{count} = -6,526 < -T_{table} 5\% = -1,70$ .  $T_{count}$  is lower than  $t_{table}$ .  **$H_o$**

**(Null Hypothesis) is accepted and  $H_a$  (Alternative Hypothesis) is rejected.** By this result, the researcher concludes that  **$H_o$  is accepted.**

As a result, there is no significant difference in students who do not use snake and ladder game as pictorial media in class Vb between pre-test and post-test in their vocabulary achievement of body part on fifth grade at SDN Pemurus Dalam 5 Banjarmasin academic year 2016/2017.

The researcher use SPSS 16 to more convincing the count, and the result see appendix 4

This is result of vocabulary achievement using snake and ladder game as pictorial media and without snake and ladder game as pictorial media in class Vb and Va to know the different score in post-test.

**c. Description about the students' vocabulary achievement using snake and ladder game as pictorial media and without using snake and ladder game as pictorial media in the class Vb and Va.**

The researcher conducted the English vocabulary test for the fifth grade at SDN Pemurus Dalam 5 Banjarmasin 4<sup>th</sup> of January, 13<sup>th</sup> of January, 14<sup>st</sup> January, 18<sup>th</sup> of January, 20<sup>th</sup> of January, and 21<sup>th</sup> January in class Va and Vb. The scoring is based on objective test score.

The total score of every students counted by Brown's formula so that the maximum score is 100. So, based on the table above, it shows that the highest score of students who use snake and ladder game as pictorial media is 100 and then, the lowest score is 40, and accumulate score is 2390. More information can be seen in appendix 8.

Based on the result of the test, it is found that the categories of the vocabulary acheivement of students who use snake and ladder game as pictorial media of fifth grade at SDN Pemurus Dalam 5 Banjarmasin academic year 2016/2017 are categorized in:

- a. Excellent category, 21 students (75%) with score 80-100
- b. Good category, 3 students (10,71%) with score 70-79
- c. Fair category, 3 students (10,71%) with score 60-69
- d. Low category, 0 student (0%) with score 50-59
- e. Poor category, 1 student (3,58%) with score 0-49

**Table 4.5 The frequency distribution of the vocabulary achievement paragraph and category of students who use snake and ladder game**

No	Score	Frequency	Percentage	Categories
1	80-100	21	75%	Excellent
2	70-79	3	10,71%	Good
3	60-69	3	10,71%	Fair
4	50-59	0	0%	Low
5	0-49	1	3,58%	Poor
		28	100%	

To know the vocabulary achievement of students who use snake and ladder game on fifth grade at SDN Pemurus Dalam 5 Banjarmasin academic year 2016/2017 the researcher uses the accounting of Mean formula as follows:

$$M_x = \frac{\sum f \times}{N}$$

$$M_x = \frac{2390}{28}$$

$$M_x = 85,357 \rightarrow 85,36$$

Thus the students' vocabulary achievement who use snake and ladder game as pictorial media on fifth grade at SDN Pemurus Dalam 5 Banjarmasin academic year 2016/2017 can be concluded in excellent category. For the result of students' vocabulary achievement without using snake and ladder game as pictorial media in class Vb can be seen in appendix 7.

The total score of every students was counted by using on Azwar's theory. So that the maximum score is 100. So, based on the table above, it shows that the

highest score of students who does not use snake and ladder game as pictorial media is 100 and then, the lowest score is 10, and accumulate score is 2290. More information can be seen in Appendix 9.

Based on the result of the test, it is found that the categories of the vocabulary achievement of students who do not use snake and ladder game as pictorial media of fifth grade at SDN Pemurus Dalam 5 Banjarmasin academic year 2016/2017 are categorized in:

- a. Excellent category, 22 students (78,58%) with score 80-100
- b. Good category, 0 students (0%) with score 70-79
- c. Fair category, 2 students (7,14%) with score 60-69
- d. Low category, 1 student (3,57%) with score 50-59
- e. Poor category, 3 student (10,71%) with score 0-49

**Table 4.6 The frequency distribution of the vocabulary achievement and category of students who does not use snake and ladder game as pictorial media.**

No	Score	Frequency	Percentage	Categories
1	80-100	22	78,58%	Excellent
2	70-79	0	0%	Good
3	60-69	2	7,14%	Fair
4	50-59	1	3,57%	Low
5	0-49	3	10,71%	Poor
		28	100%	

To know the vocabulary achievement of students who do not use snake and ladder game as pictorial media on fifth grade at SDN Pemurus Dalam 5 Banjarmasin academic year 2016/2017 the researcher uses the accounting of Mean formula as follows:

$$M_x = \frac{\sum f \times}{N}$$

$$M_x = \frac{2290}{28}$$

$$M_x = 81,785 \rightarrow 81,79$$

Thus the students' vocabulary achievement who do not use snake and ladder game as pictorial media on fifth grade at SDN Pemurus Dalam 5 Banjarmasin academic year 2016/2017 can be concluded in good category.

Then researcher counting the comparison between using snake and ladder game as pictorial media and without snake and ladder game as pictorial media.

To know the comparison of the writing skill between students who use and do not use snake and ladder game as pictorial media, the researcher uses "  $t_{test}$  ". After that the collected data have been processed, the researcher analysis them make conclusion by using  $t_o$  formula:  $t_o = \frac{M_1 - M_2}{SE_{M_1 - M_2}}$

## 2. Data Analysis

The researcher calculates the mean formula of each class. To keep the subject identity, the researcher just uses number of identifying the subject.

### a. Looking for Mean Variable I by using the following formula:

$$M_x \text{ Or } M_1 = \frac{\sum fx}{N_1}$$

$$M_x \text{ Or } M_1 = \frac{2390}{28}$$

$$M_x \text{ Or } M_1 = 85,36$$

**b. Looking for Mean variable II by using the following formula:**

$$M_y \text{ Or } M_2 = \frac{\sum fy}{N_2}$$

$$M_y \text{ Or } M_2 = \frac{2290}{28}$$

$$M_y \text{ Or } M_2 = 81,79$$

**c. Looking for standard Deviation for variable I by using the following formula:**

The result of  $\sum fx^2$  of variable I can be seen in appendix 3.

$$s = \sqrt{\frac{n \sum_{i=1}^n x_i^2 - (\sum_{i=1}^n x_i)^2}{n(n-1)}}$$

$$s = \sqrt{\frac{28(210600) - (5712100)}{28(28-1)}}$$

$$s = \sqrt{\frac{5896800 - 5712100}{28(27)}}$$

$$s = \sqrt{\frac{184700}{756}}$$

$$s = \sqrt{244,31}$$

$$s = 15,630$$

**d. Looking for standard Deviation for Variable II by using the following formula:**

The result of  $\sum fy$  of variable II can be seen in appendix 4.

$$s = \sqrt{\frac{n \sum_{i=1}^n x_i^2 - (\sum_{i=1}^n x_i)^2}{n(n-1)}}$$

$$s = \sqrt{\frac{28(203350) - (5244100)}{28(28-1)}}$$

$$s = \sqrt{\frac{5693800 - 5244100}{28(27)}}$$

$$s = \sqrt{\frac{449700}{756}}$$

$$s = \sqrt{594,841}$$

$$s = 24,389$$

**e. Looking for Standard Error for Mean Variable I by using the following formula:**

The result of standard error for mean variable I can be seen in appendix 3.

$$SE_{M_x} \text{ Or } SE_{M_1} = \frac{SD_1}{\sqrt{n}}$$

$$SE_{M_x} \text{ Or } SE_{M_1} = \frac{15,630}{\sqrt{28}} = \frac{15,630}{5,291} = 2,954$$

- f. Looking for Standard Error for Mean Variable II by using the following formula:

The result of standard error for mean variable I can be seen in appendix 4.

$$SE_y \text{ Or } SE_{M_2} = \frac{SD_2}{\sqrt{n}}$$

$$SE_{M_y} \text{ Or } SE_{M_2} = \frac{24,389}{\sqrt{28}} = \frac{24,389}{5,291} = 4,609$$

- g. Looking for standard Error for comparative Mean Variable I and Mean variable II by using the following formula:

$$SE_{M_1} - M_2 = \sqrt{SE_{M_1}^2 + SE_{M_2}^2}$$

$$SE_{M_1} - M_2 = \sqrt{2,954^2 + 4,609^2}$$

$$SE_{M_1} - M_2 = \sqrt{8,726116 + 21,24288}$$

$$SE_{M_1} - M_2 = \sqrt{29,968997} = 5,4743$$

- h. looking for  $t_o$ , by using the following formula:

$$t_o = \frac{M_1 - M_2}{SE_{M_1} - M_2}$$

$$t_o = \frac{85,36 - 81,79}{5,47}$$

$$t_o = \frac{3,57}{5,47} = 0,652$$

- i. Giving interpretation for " $t_o$ " with consulting t table (" $t_{tabel}$ "):

- Looking for Degree of Freedom

$$\frac{df}{db} = (N_1 + N_2 - 2)$$



$$\frac{df}{db} = (28 + 28 - 2) = 54$$

After the researcher found the df (degrees of freedom), which is 54, and then consult with  $t_{tabel}$ , can be seen in appendix 10.

**j. The researcher makes a conclusion.**

1) To know the students' vocabulary between students who use and do not use snake and ladder game as pictorial media with the analysis below

a)  $H_a$ : Students' vocabulary who use snake and ladder game as pictorial media better than student's vocabulary achievement who do not use snake and ladder game as pictorial media ( $M_{x_1} > M_{x_2}$ )

b) Mean students' vocabulary who use snake and ladder game as pictorial media:

$$M_{x_1} = 85,36$$

Mean students' vocabulary who do not use snake and ladder game as pictorial media:

$$M_{x_2} = 81,79$$

c) So, students' vocabulary who use snake and ladder game as pictorial media is better than student's vocabulary achievement who do not use snake and ladder game as pictorial media.

2) After that to know the differences students' vocabulary between students who use and do not use snake and ladder game as pictorial

media of fifth grade at SDN PEMURUS DALAM 5 BANJARMASIN.

- Consulting score of “db/df” with “ $t_{tabel}$ ”

$t_{tabel}$  = Value of critic “t”

- In significant degrees t table 5% = 1,67
- In significant degrees t table 1% = 2,39

- Making hypothesis interpretation:

- $H_o$  (Null Hypothesis): there is no significant difference.
- $H_a$  (Alternative Hypothesis): there is any significant difference.
- Consulting “ $t_o$ ” with “ $t_{table}$ ”

$$0,652 < 1,67$$

$$\frac{df}{db} = (N_1 + N_2 - 2)$$

$$\frac{df}{db} = (28 + 28 - 2) = 54$$

Thus,  $t_{count} = 0,652 < t_{table} 5\% = 1,67$ .  $T_{count}$  is lower than  $t_{table}$ .  $H_o$  (Null Hypothesis) is accepted and  $H_a$  (Alternative Hypothesis) is rejected. By this result, the researcher concludes that  **$H_o$  is accepted.**

As a result, there is no significant difference in students who use and do not use snake and ladder game as pictorial media in their vocabulary of fifth grade at SDN Pemurus Dalam 5 Banjarmasin academic year 2016/2017.

The researcher conducted the English writing test for the fifth grade at SDN PEMURUS DALAM 5 BANJARMASIN. The researcher concluded from the results that have been obtained, that the experimental class almost as same increased as the control class in the vocabulary. So that, Based on Cohens' Effect Size Category, using snake and ladder game as pictorial media in learning English vocabulary is low category. It is mean that the media is not effective.

## B. Discussion

From the statistical measurement above shows that  $H_0$  (Null Hypothesis) is accepted;  $H_a$  (Alternative Hypothesis) is rejected, because value of  $t_{count}$  is lower than of  $t_{table}$  (value of critic "t"). It means:

- "there is no significant difference in students' vocabulary achievement by using snake and ladder game as pictorial media between pre-test and post-test in class Vb".
- "there is no significant difference in students' vocabulary using and without using snake and ladder game as pictorial media of fifth grade at SDN PEMURUS DALAM 5 BANJARMASIN academic year 2016/2017".
- "there is not effective in using snake and ladder game as pictorial media, with low category of Cohen's D Effect Size Category. Because both of class experiment and control have the same increasing in significance value".

Based on result of the test there are different highest and lowest scores of the test. The highest score of students who use snake and ladder game as pictorial

media is 100 and the highest score of students who do not use snake and ladder game as pictorial media is 100. While the lowest score of the students who use snake and ladder game as pictorial media is 40 and the lowest score of the students who do not use snake and ladder game as pictorial media is 10.

Based on the table 4.5, vocabulary of students who use snake and ladder game as pictorial media with objective test score. This evidence supports the claims of Yumarlin (2013, p.83) snake and ladder game as pictorial media can help students to develop their vocabulary easier.

Based on the table 4.6, vocabulary of students who do not use snake and ladder game as pictorial media with objective test score.

Based on the result of the test, there are significance differences between the highest and lower score. The highest score of the tests students' vocabulary who use snake and ladder game as pictorial media total score is 100. The highest score of the test of the vocabulary students who do not use snake and ladder game as pictorial media total score is 100. And then the lowest score of the vocabulary of students who use snake and ladder game as pictorial media total score is 40. The lowest score of vocabulary students who do not use snake and ladder game as pictorial media total score is 10.

The researcher also finds a difference mean score between the students who use and do not use snake and ladder game as pictorial media. The mean score of the students who use snake and ladder game as pictorial media is 85,36, it means the vocabulary of students who use snake and ladder game as pictorial media is in excellent category. In other hand, the mean score of students who do

not use snake and ladder game as pictorial media is 81,79 it means the vocabulary achievement of students who do not use snake and ladder game as pictorial media is in good category. Then, it is related with the collecting numerical data that are analyzed using mathematically. The researcher found the result of the test from the subjects or  $t_{count}$  is lower than  $t_{table}$ . In conclusion, there is not significant different in vocabulary between students who use and do not use snake and ladder game as pictorial media.

According to the result of the research, the students who use snake and ladder game as pictorial media can increase their vocabulary development besides the students who do not use snake and ladder game as pictorial media also increased. It is because students who use snake and ladder game was not focus the objective of the study, but they are just have fun with the game. According to Sadiman (2009, p.81), playing game has weaknesses they are: 1. because of fun, the students just play and do not pay attention to the rules. 2. In simulating social game, almost of all students get the wrong impression. 3. Many games are only involved few students, besides the involvement of all students is important to make the learning process can be more effective and efficient.

Based on the result of the research, the researcher gives the interpretation that snake and ladder game as pictorial media is not effective to the students' vocabulary, with low category of Cohens'D Effect Size category. There was a marked improvement in vocabulary of using snake and ladder game as pictorial media in both of the class. it is because snake and ladder as a media is not suitable with the theme on learning process. Finding that is in line with Smaldino et al

(2008, p.7) each media has different strength and limitation in terms of the types of messages that can be recorded and displayed. It means that when selecting media formats, teachers have to give attention to the instructional situation or setting, learner variable and the nature of the objective as well as the presentational capabilities of each of the media formats.