

CHAPTER IV

FINDING And DISCUSSION

In this chapter, researcher presents the data description of the fourth grade students of SDN Kebun Bunga 6 Banjarmasin about the process of teaching-learning process by using spelling bee game. To find out more about the students' vocabulary who use and did not use spelling bee game, 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 Kebun Bunga 6 Banjarmasin for fourth grade students have been done eight time four weeks. for class IV that is taught by Miss. Lily Nur Izatti, S.Pd.

The researcher did the research on August, 7th 2017, until September, 13th 2017, then August, 1st 2017 the researcher gave the research letter from official of education in Banjarmasin city to headmaster of SDN Kebun Bunga 6 Banjarmasin.

Inferential analysis is aimed at testing the research question and hypothesis. The test is normality and homogeneity tests. Those tests used to analyze whether the hypothesis was parametric and nonparametric research. These are table analysis of normality result by using SPSS 22 program:

Table 4.1 Analysis of normality

One-Sample Kolmogorov-Smirnov Test

		X
N		33
Normal Parameters ^{a,b}	Mean	82.4242
	Std. Deviation	12.41730
	Most Extreme Differences	
	Absolute	.123
	Positive	.078
	Negative	-.123
Test Statistic		.123
Asymp. Sig. (2-tailed)		.200

a. Test distribution is Normal.

b. Calculated from data.

Based in the result, it shows that the value of normality is higher than 0.05.

So, it can be conclude that the data is normal.

Table 4.2 Analysis of homogeneity

Test of Homogeneity of Variances

Result of study

Levene Statistic	df1	df2	Sig.
.078	1	67	.781

Based on the table, it shows that the data is homogeny because the significance value 0,781 is more than significance standard 0.05.

Then, this is result of vocabulary achievement by using spelling bee game in class IV b and without using spelling bee game in class IVa and to know the different score between pre-test and post-test.

a. Description about the students' vocabulary achievement by using spelling bee game in pre-test and post-test in class IV b.

The research conducted the English vocabulary test for the fourth grade at SDN Kebun Bunga 6 Banjarmasin 7th of August, and 13th of September in class IVb. The scoring based on objective test score more information about the scores could be seen in appendix 2.

To know the vocabulary achievement of the students who use spelling bee game between pre-test and post-test at fourth grade at SDN Kebun Bunga 6 Banjarmasin the researcher used the accounting of formula as follows;

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

$$\begin{aligned} Df &= N-1 \\ &= 33-1 \\ &= 32 \end{aligned}$$

- 2) Looking for standard deviation for IVb by using the following formula:

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

$$S = \frac{92500 - \frac{2924100}{33}}{33-1}$$

$$S = \frac{\sqrt{92500-88609,09}}{32}$$

$$S = \frac{\sqrt{3890,9}}{32}$$

$$S = \sqrt{121.590625} = 11.026$$

The post-test using the same formula and get $S = 12.417$

3) Looking for “ t_c ” by using the following formula:

$$T = \frac{x_1 - x_2}{\sqrt{\frac{s_1^2}{N_1} + \frac{s_2^2}{N_2}}} - 2y \left(\frac{s_1}{N_1} \right) \cdot \left(\frac{s_2}{N_2} \right)$$

X_1 =mean of experiment class

X_2 = mean of control class

S_1, s_2 = standard deviation 1 dan 2

R = correlation

N = subject

$$T = \frac{82.42 - 51.81}{\sqrt{\frac{121.5906 + 154.1875}{33}}} - 2.0.314 \left(\frac{11.026}{5.744} \right) \cdot \left(\frac{12.417}{5.744} \right)$$

$$T = \frac{30.61}{\sqrt{3,684 + 4.673 - 0.628(1919) \cdot (2161)}}$$

$$T = \frac{30.61}{\sqrt{5.794}}$$

$$T = \frac{30.61}{2.408}$$

$$T = 12.760$$

Thus, $t_{count} = 12.760 < t_{table, 0.05\%} = 1.697$. T_{count} is lowest than t_{table} H_0 (Null hypothesis) was rejected and H_1 (Alternative Hypothesis) **was accepted**. By this result, the researcher concluded that H_1 **was accepted**.

As a result, there was significant different in students who used spelling bee game in class IV b between pre-test and post-test in their vocabulary achievement of fourth grade at SDN Kebun Bunga 6 Banjarmasin. The researcher used SPSS 22 to more convincingly count, and the result is described in appendix 2.

b. Description about the students' vocabulary achievement without using spelling bee game in pre-test and post-test in class IV a.

The researcher conducted the English vocabulary test for fourth grade at SDN Kebun Bunga 6 Banjarmasin 7th of August and 13th of September in class IV a. The scoring is based on objective test scores. Further information about the scores can be seen in appendix 3.

To know the vocabulary achievement of students who did not use spelling bee game between pre-test and post-test at fourth grade at SDN Kebun Bunga 6 Banjarmasin the researcher used the accounting formula as follows:

- 1) Giving interpretation for " t_o " with consulting t table (t_{table}):

$$\begin{aligned} Df &= N-1 \\ &= 36-1 \\ &= 35 \end{aligned}$$

2) Looking for standard deviation for IVa by using the following formula:

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

$$S = \frac{89784 - \frac{3104644}{36}}{36-1}$$

$$S = \frac{\sqrt{89784 - 86240,7}}{35}$$

$$S = \sqrt{\frac{3543,3}{35}}$$

$$S = \sqrt{101.2371} \quad S = 10.062$$

The post-test using the same formula and get $S = 12.747$

Looking for “ t_c ” by using the following formula:

$$T = \frac{x_1 - x_2}{\sqrt{\frac{S_1^2}{N_1} + \frac{S_2^2}{N_2}}} - 2y \left(\frac{S_1}{N_1} \right) \cdot \left(\frac{S_2}{N_2} \right)$$

$$T = \frac{48.94 - 72.31}{\sqrt{\frac{101.237142 + 162.502857}{36}}} - 2.0 \cdot 285 \left(\frac{10.062}{6} \right) \cdot \left(\frac{12.747}{6} \right)$$

$$T = \frac{-23.37}{\sqrt{2.812 + 4.513 - 0.57(1677) \cdot (21245)}}$$

$$T = \frac{-23.37}{\sqrt{5.158}}$$

$$T = \frac{-29.65}{2.2711}$$

$$T = -10.149$$

Thus, $t_{count} = -10.14 > t_{table, 0.05\%} = -1.69$. T_{count} is high than t_{table} H_0 (Null hypothesis) was **rejected** and H_1 (Alternative Hypothesis) **was accepted**. By this result, the researcher concluded that H_0 **was accepted**.

As a result, there was no significant different in students who did not use spelling bee game in class IVa between pre-test and post-test in their vocabulary achievement of fourth grade at SDN Kebun Bunga 6 Banjarmasin. The researcher used SPSS 22 to more convincing the count, and the result described in appendix 3.

c. Description about the students' vocabulary achievement using spelling bee game and without using spelling bee game in class IV b and IV a.

The researcher conducted the English vocabulary test for fourth grade at SDN Kebun Bunga 6 Banjarmasin 7th of August, 30th of August, 7th of September 13th of September in class IVb and IVa. The scoring based on objective test score.

In this study, the writer took 69 students of the fourth grade students at SDN kebun Bunga 6 Banjarmasin. As the sample consist of 33 students as the experiment class and 36 students as the control class.

Before giving the treatment, the writer conducted a pre-test for two groups on Wednesday, 7th August 2017. The teacher studies as usual, but same material with experiment form Wednesday, 7th August 2017 until 13th September 2017 the test measure first students' ability in vocabulary. The teacher used writer. The test about vocabulary consist 10 items that is test form, they are 10 items to spell words. The

researcher makes written test of fourth grade students based on their condition which have difficult in remembering, pronouncing and writing words correctly.

After conducting the pre-test. The writer gave a treatment to students in experiment class from Wednesday, 30th August 2017 until 13 September 2017, 33 students as experiment class and 36 students as the control class. After giving the treatment. The researcher taught vocabulary to students in experiment class by using spelling bee game in two meetings and the teacher taught vocabulary to students in control class not using spelling bee game from 30th August 2017 until 13th September 2017 two meeting too. The vocabulary learned in both classes was same but the technique used was different in teaching vocabulary. The vocabulary related spell thing alphabet), part of body (nose, mouth and eyes), in the classroom (table, blackboard).

After conducting the treatment, the writer gave a post-test both of two groups on Wednesday, 13th September 2017. The writer compares result pre-test and post-test of experiment class and control class. From this result, the writer could be know how in improving vocabulary mastery by used spelling bee game and did not use spelling bee game and examine whether there was significant difference between used and did not use of spelling bee game in improving vocabulary mastery of the fourth grade students at SDN Kebn Bunga 6 Banjarmasin.

The total score of every students was counted by Brown's formula. So, that the maximum score is 100. Based on the table, the Highest score of students who did not used spelling bee game is 100, the lowest score is 50 ,and accumulate score is 2720. further information can be seen in appendix 4.

Based on the result of the test, it was found that the categories of the vocabulary achievement of students who used spelling bee game of fourth grade at SDN Kebun Bunga 6 Banjarmasin could be categories in:

- a. Excellent category, 20 students (60.60%) with score 80-100
- b. Good category, 9 students (27.27%) with score 70-79
- c. Fair category, 3 students (9.09%) with score 60-69
- d. low category, 1 students (3.03%) with score 50-59
- e. poor category, 0 students (0%) with score 0-49

Table 4.3 The frequency distribution of the vocabulary achievement and category of students who use spelling bee game.

No	Score	Frequency	Percentage	Categories
1	80-100	20	60.60%	Excellent
2	70-79	9	27.27%	Good
3	60-69	3	9.09%	Fair
4	50-59	1	3.03%	Low
5	0-49	0	0%	Poor
Jumlah		33	100%	

To find out the vocabulary achievement of students who used spelling bee game on fourth grade at SDN Kebun Bunga 6 Banjarasin the researcher used the accounting of mean formula as follows:

$$M_1 = \frac{\sum fx}{N}$$

$$M_1 = \frac{2720}{33}$$

$$M_1 = 82.42$$

Thus, the students' vocabulary achievement who used spelling bee game on fourth grade at SDN Kebun Bunga 6 Banjarmasin could be concluded in excellent categories. For the result of students' vocabulary achievement without using spelling bee game in class IVb can be seen appendix 5.

The total score of every student was counted by using Azwar's theory. So, that the maximum score is 100. So, based on the table above is. It show that the Highest score of students who did not used spelling bee game is 100 and then, the lowest score is 20 , and accumulate score is 2603. Further information could be seen appendix 6.

Based on the result of the test, it ware found that the categories of the vocabulary achievement of students who used spelling bee game of fourth grade at SDN Kebun Bunga 6 Banjarmasin could be categories in:

- a. Excellent category, 12 students (33.33%) with score 80-100
- b. Good category, 13 students (36.11%) with score 70-79
- c. Fair category, 7 students (19.44%) with score 60-69
- d. *low* category, 2 students (5.56%) with score 50-59
- e. *poor* category, 2 students (5.56%) with score 0-49

Table 4.4 The frequency distribution of the vocabulary achievement and category of students who does not use spelling bee game.

No	Score	Frequency	Percentage	Categories
1	80-100	12	33.33%	excellent
2	70-79	13	36.11%	good
3	60-69	7	19.44%	Fair
4	50-59	2	05.56%	Low
5	0-49	2	05.56%	poor
Jumlah		36	100%	

To know the vocabulary achievement of students who did not spelling bee game on fourth grade at SDN Kebun Bunga 6 Banjarmasin the researcher used the accounting of mean formula as follows:

$$M_1 = \frac{\sum fy}{N}$$

$$M_1 = \frac{2603}{36}$$

$$M_1 = 72.31$$

Thus, the students' vocabulary achievement who did not use spelling bee game on fourth grade at SDN Kebun Bunga 6 Banjarmasin could be concluded in good category.

Then researcher counting the comparison between using spelling bee game and without spelling bee game.

To know the comparison of the writing skill between students who used and did not use spelling bee game, the researcher uses "t-test" after that the collected data have been processed, the researcher analysis them make conclusion by using

$$t_t \text{ formula } t_t = \frac{N_1 - N_2}{SE_{N_1 - N_2}}$$

2. Data analysis

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

- a. Looking for mean variable I by using following formula:

$$M_1 \text{ Or } M_2 = \frac{\sum fx}{N_1}$$

$$M_1 \text{ Or } M_2 = \frac{2720}{33}$$

$$M_1 \text{ Or } M_2 = 82.42$$

- b. Looking for mean variable II by using the following formula:

$$M_1 \text{ Or } M_2 = \frac{\sum fy}{N_1}$$

$$M_1 \text{ Or } M_2 = \frac{2603}{36}$$

$$M_1 \text{ Or } M_2 = 72.31$$

- 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 appendix 2.

$$S = \frac{\sqrt{n \sum_{1}^x n_1 n_1^2 - n \sum_{1}^x n_1 n_1^2}}{n - (n - 1)}$$

$$S = \frac{\sqrt{33(2924100) - (7398400)}}{33(33 - 1)}$$

$$S = \frac{\sqrt{96495300 - (7398400)}}{33(32)}$$

$$S = \frac{\sqrt{89096900}}{1056}$$

$$S = 12.417$$

- d. Looking for standard deviation for variable II by using the following formula:

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

$$S = \frac{\sqrt{n \sum_{1}^x n_1 n_1^2 - n \sum_{1}^x n_1 n_1^2}}{n - (n - 1)}$$

$$S = \frac{\sqrt{33(3104644) - 36(6775609)}}{36(36 - 1)}$$

$$S = \frac{\sqrt{111767184 - (6775609)}}{36(35)}$$

$$S = \frac{\sqrt{104991575}}{1260}$$

$$S = \sqrt{594841}$$

$$S = 12.747$$

- 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 appendix 2.

$$SEn_1 \text{ Or } SEn_2 = \frac{SD_1}{\sqrt{N}}$$

$$SEn_1 \text{ Or } SEn_2 = \frac{12.41730}{\sqrt{5.744}} = 2.398$$

- f. Looking for standard error for mean variable II by using the following formula:

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

$$SEn_1 \text{ Or } SEn_2 = \frac{SD_1}{\sqrt{N}}$$

$$SEn_1 \text{ Or } SEn_2 = \frac{12.74770}{\sqrt{6}} = 2.301$$

- g. Looking for standard error for comparative mean variable I and mean variable II by using the following formula:

$$SE_{n_1 - M_2} = \sqrt{SEM_1^2 - SEM_2^2}$$

$$SE_{n_1 - M_2} = \sqrt{2.398^2 + 2.301^2}$$

$$SE_{n_1 - M_2} = \sqrt{5.750404 + 5.294601}$$

$$SE_{n_1 - M_2} = \sqrt{11.045005} = 3.265$$

- h. Looking for t_c by using the following formula:

$$t_c = \frac{M_1 - M_2}{SE_{n_1 - M_2}}$$

$$t_c = \frac{8242 - 7231}{326}$$

$$t_c = \frac{1011}{326} = 3.335$$

- i. Giving interpretation for “ t_c ” with consulting t_{table} (“ t_{table} ”):

- a) Looking for degree of freedom

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

$$\frac{df}{db} = (33 + 36 - 2) = 67$$

After the researcher found the df (degree of freedom), which is 67, and then consult with t_{table} , can be seen appendix 9.

- i. The researcher makes a conclusion
- 1) To know the students' vocabulary achievement between students who use and did not use spelling bee with the analysis below.
 - a) H_a students' vocabulary who used spelling bee game was not better than students' vocabulary achievement who did not use spelling bee game ($M_1 > M_2$).
 - b) Mean students' vocabulary who used spelling bee game:
 $M_1 = 82.42$
 Mean students' vocabulary who did not use spelling bee game:
 $M_2 = 72.31$
 - c) So, students' vocabulary who used spelling bee game was not better than students' vocabulary achievement who did not use spelling bee game.

After that to know differences students' vocabulary between students who used and did not use spelling bee game of fourth grade at SDN Kebun Bunga 6 Banjarmasin. That could be seen from consulting score of "df/db" with " T_{table} ".

- 1) T_{table} = value of critic "t"
 - a) In significant degrees t table 5% = 1.667
 - b) In significant degrees t table 1% = 2.389
- 2) Making hypothesis interpretation;
 - a) H_0 = (null hypothesis) there is no significant difference

b) H_a = (alternative hypothesis) there is any significant difference

c) Consulting t_c with t_{table}

$$3.269 > 1.667$$

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

$$\frac{df}{db} = (33 + 36 - 2) = 67$$

Thus, $t_{count} = 3.335 < t_{table}, 0.05\% = 1.667$. T_{count} is high than t_{table} H_0 (Null hypothesis) was rejected and H_a (Alternative Hypothesis) **was accepted**. By this result, the researcher conclude than H_a **was accepted**.

As a result, there was a significant different in students who used spelling bee game in class IV b between pre-test and post-test in there vocabulary achievement of fourth grade at SDN Kebun Bunga 6 Banjarmasin.

The researcher conducted the English vocabulary test for the fourth grade at SDN KEBUN BUNGA 6 BANJARMASIN. The researcher concluded from the result that have been obtained, that the experimental class was not better increased as the control class in the spell. So, that, using spelling bee game in learning English vocabulary is high category, or in other word it could be concluded that the game was effective.

A. Discussion

From the statistic measurements above shows that H_0 (null hypothesis) **was rejected** and H_a (alternative hypothesis) **was accepted**. Because value of T_{count} is high than of T_{table} (value of critic "t"). it can be concluded:

1. There was a significant difference in students' vocabulary achievement by using spelling bee game between pre-test and post-test in class IVb.
2. "There was significant difference in students' vocabulary using and without using spelling bee game of fourth grade at SDN Kebun Bunga 6 Banjarasin".

There was effective in using spelling bee game with high category of Cohen's D Effect Size Category. Because without using spelling bee in control class was not better than using spelling bee in experiment class.

Based on the result of the test there were different highest and lowest score of the test. The highest test score of students who used spelling bee game was 100 and the highest score of the students who did not use spelling bee game was 100. While the lowest score of the students who used spelling bee game was 50 and the lowest score of the students who did not use spelling bee game was 20. It could be concluded that Spelling Bee helps students in improving their vocabulary. In addition, games are highly motivating activity because of amusing and also challenging (Ersoz, 2000, p.11). Usually, games provide the meaningful and useful

language in real context. It gives a chance to students learning vocabulary not only from the textbook but also from an interesting activity such as Spelling Bee game

Based on the result of the test, there are significant differences between the highest and lowest score. The highest score of the test students' vocabulary who used spelling bee game total score was 100. The highest score of the test of the vocabulary students who did not use spelling bee game total score was 100. And then the lowest score of the vocabulary of students who used spelling bee game total score was 50. The lowest score of vocabulary students who did not use spelling bee game total score was 20.

The researcher also found a difference mean score between the students who used and did not use spelling bee game. The mean score of the students who used spelling bee game is 82.42 it means the vocabulary of students who used spelling bee game is in excellent category. In other hand, the mean score of students who did not use spelling bee game is 72.31 it means the vocabulary achievement of students who did not use spelling bee game 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 subject or T_{count} is high than T_{table} . In conclusion, there was significant different in vocabulary between students who used and did not use spelling bee game.

In improving vocabulary mastery for experiment class higher than control class. Therefore, the writer could be concluded that using spelling bee game is better than without using spelling bee game. Based on English teacher at SDN Kebun Bunga 6 Banjarmasin, the teacher said in teaching and learning by using spelling bee game, spelling bee game could help the teacher to answer the students problem in learning English, especially in vocabulary and also can proof this study, that spelling bee could enrich and developing the students' vocabulary beside facilitate the students to memorize the word in the students' course.

According to the result of the research, the students who used spelling bee game can increase their vocabulary development besides the students who did not use spelling bee game also increased. It was because students who used spelling bee was focused the objective of the study, but they were just have fun with the game. It supported by the argumentation of (Wright, Betteridge, Buckby (2006, p.12) notes that games help students experience the language rather than study it merely. Another positive impact to students is that Spelling Bee brings a fun and relaxing atmosphere. Students learn the language without any stressful.

Based result research by Ovaningtyas (2016) indicated that Spelling bee game as a technique in teaching English vocabulary to the fourth graders of elementary school. Other research by Ningsih (2013), the result of research showed that using spelling bee game to improve students' vocabulary.

Based on the result of the research, the research gives the interpretation that spelling bee game is effective to the students' vocabulary, with high category of Cohens' effect size category. There was a market improvement in vocabulary of using spelling bee game is suitable with the theme on learning process. Finding that is in line with Another positive impact to students is that Spelling Bee brings a fun and relaxing atmosphere. Huyen and Nga (2003, p.90-105) who stated that games bring relaxation and fun atmosphere to the classroom and help students to gain new words easily. By using games in learning vocabulary, students get a chance to practice and to learn new words by their own.

From the explanation above, it can be concluded that Spelling Bee is one of an effective games to improve vocabulary mastery for elementary school students, and also Spelling Bee give positive impacts to the students.