

CHAPTER IV

FINDINGS AND DISCUSSIONS

A. Findings

1. Improvement vocabulary by using multisensory technique and not using multisensory technique.

To know the improvement vocabulary by using multisensory technique and not using multisensory technique, the writer compares score of pre test and post test in experiment class and control class. Based on scores, The writer interpreted score of test by using category of score based on Sudijono.

To know the improvement vocabulary in experiment class which uses multisensory technique in teaching vocabulary. The result of pre test and in experiment class can shown as follow:

Table 4.1 The description of result pre test in experiment class

Subject Number	Test Types			Scores
	Arrange letter of words	Fill in the blank	Pronunciation	
Maimunah	3	1	2	34
Maulida	2	1	2	27
Surya	1	3	3	30

The result of post test in experiment class can shown as follow:

Table 4.2 The description of result post test in experiment class

Subject Number	Test Types			Scores
	Arrange letter of words	Fill in the blank	Pronunciation	
Maimunah	4	4	5	71
Maulida	4	3	7	70
Surya	3	3	8	66

To know improvement vocabulary before and after by using multisensory technique in experiment class. The writer counts mean score of pre test and post test in experiment class. The researcher makes table which give information about scores of pre test and post test results as follow:

Table 4.3 The description of result pre test and post test in experiment class

Subject Number	Scores	
	Pre test	Post test
Maimunah	34	71
Maulida	27	70
Surya	30	66

- a. Mean score of pre test

$$\begin{aligned}
 M_x &= \frac{\sum xi}{n} \\
 &= \frac{34+27+30}{3} \\
 &= \frac{91}{3} \\
 &= 30.3
 \end{aligned}$$

Based on the post test result, vocabulary in experiment class at the seventh grade students of *SLBN* Pelambuan can be concluded in very poor category.

- b. Mean score of post test

$$\begin{aligned}
 M_x &= \frac{\sum xi}{n} \\
 &= \frac{71+70+66}{3} \\
 &= \frac{207}{3} \\
 &= 69
 \end{aligned}$$

Based on the post test result, it can be seen that vocabulary in experiment class at the seventh grade students of *SLBN* Pelambuan can be concluded in good category.

By using category of score above, the mean of pre test result can be seen that vocabulary can be concluded in very poor category while the mean of post test result can be seen that vocabulary can be concluded in good category. By comparing pre test and post test result in experiment class, the writer can conclude that significant improvement to vocabulary mastery between before and after use multisensory technique in teaching vocabulary process which mean score of pre test is 30.3 and mean score of post test is 69.

Based interview result with teacher, using multisensory technique in teaching vocabulary to students with mild mental retardation is very helpful to students with mild mental retardation that have limited intellectual in receiving the lesson. Based on the principle of multisensory technique that included various of students' senses in teaching will be more effective because students with mild mental retardation should be given stimulus in forms: verbal, sign and physical. Example of verbal stimulus like teacher commands students to take their book, sign stimulus like teacher indicates object that will be taken by students and the last physical stimulus like teacher touch student's hand to take book.

To know the improvement vocabulary in control class which does not use multisensory technique in teaching vocabulary. The result of pre test and in control class can shown as follow:

Table 4.4 The description of result pre test in control class

Subject Number	Test Types			Scores
	Arrange letter of words	Fill in the blank	Pronunciation	
Maulidan	2	1	2	27
Nurdian	3	1	4	40
Ifan	1	2	3	30

The result of post test in control class can shown as follow:

Table 4.5 The description of result post test in control class

Subject Number	Test Types			Scores
	Arrange letter of words	Fill in the blank	Pronunciation	
Maulidan	3	3	6	58
Nurdian	3	2	7	56
Ifan	4	3	4	61

To know improvement vocabulary before and after by using multisensory technique in experiment class. The writer counts mean score of pre test and post test in experiment class. the researcher makes table which give information about scores of pre test and post test results as follow:

Table 4.6 The description of result pre test and post test in control class

Subject Number	Scores	
	Pre test	Post test
Maulidan	27	58
Nurdian	40	56
Ifan	30	61

a. Mean score of pre test

$$\begin{aligned}
 M_x &= \frac{\sum xi}{n} \\
 &= \frac{27+40+30}{3}
 \end{aligned}$$

$$= \frac{97}{3}$$

$$= 32.3$$

Based on the pre test result, vocabulary in control class at the seventh grade students of *SLBN* Pelambuan can be concluded in very poor category.

b. Mean score of post test

$$M_x = \frac{\sum xi}{n}$$

$$= \frac{58+56+61}{3}$$

$$= \frac{175}{3}$$

$$= 58.3$$

Based on the post test result, vocabulary in control class at the seventh grade students of *SLBN* Pelambuan can be concluded in fair category.

By using category of score above, vocabulary can be concluded in very poor category while students' vocabulary can be concluded in fair category. By comparing pre test and post test result in control class, the writer can conclude that significant improvement to students' vocabulary mastery between before and after without use multisensory technique in teaching vocabulary process which mean score of pre test is 32.3 and mean score of post test is 58.3.

Based on observation result about process of teaching vocabulary in control class that was observed by researcher in five meetings is shown teaching vocabulary process in control class that does not use multisensory technique as follow: the teacher wrote vocabularies and meaning of vocabularies that are taught in

whiteboard and all of students wrote those vocabularies in their book. The teacher asked students to repeat pronunciation of vocabularies that are learned after teacher pronounced the word and all of students repeat teacher's pronunciation. The last, The teacher indicated every vocabulary and then asked every student to pronounce directly.

Based on observation result in control class that without using multisensory technique by the researcher which observed activities, media and technique that is used by teacher, it can be concluded that the teacher used whiteboard and marker as media in teaching process. While, techniques that are used by teacher are translation and drilling. Translation technique is a technique teaching vocabulary that is shown when teacher wrote meaning of vocabulary in whiteboard and drilling technique is a technique teaching vocabulary that is shown when teacher asked students to pronounce words directly and correctly.

Based observation result in control class can be seen that teacher used translation and drilling technique is suitable with interview result with teacher by the researcher that teacher used translation and repetition directly because characteristic of students with mild mental retardation that are slow receiving and difficult remembering lesson.

From result of pre test and post test in both classes, the mean score of pre test is 32.3 in control class is higher than mean score of pre test is 30.3 in experiment class. While, the mean score of post test is 69 in experiment is higher than mean score of post test is 58.3 in control class. It can be concluded that using multisensory technique in experiment class is more successful than without using multisensory

technique in control class in improving vocabulary for the seventh grade students with special need of *SLBN* Pelambuan Banjarmasin.

2. The difference of vocabulary mastery by using multisensory technique and not using multisensory technique

To know the difference to vocabulary mastery after using multisensory technique and not using multisensory technique, the writer gives written and spoken test as post test in both classes on Thursday 4 February 2016 at *SLBN* Pelambuan Banjarmasin. The result of post test in both classes can shown as follow:

Table 4.7 The description of result post test in experiment class

Subject Number	Test Types			Scores
	Arrange letter of words	Fill in the blank	Pronunciation	
Maimunah	4	4	5	71
Maulida	4	3	7	70
Surya	3	3	8	66

To know the students' ability of vocabulary in experiment class after the writer applies her research at the seventh grade students of *SLBN* Pelambuan, the writer uses the accounting of mean score as follow:

$$\begin{aligned}
 M_x &= \frac{\sum xi}{n} \\
 &= \frac{71+70+66}{3} \\
 &= \frac{207}{3} \\
 &= 69
 \end{aligned}$$

Table 4.8 The description of result post test in control class

Subject Number	Test Types			Scores
	Arrange letter of words	Fill in the blank	Pronunciation	
Maulidan	3	3	6	58
Nurdian	3	2	7	56
Ifan	4	3	4	61

To know the students' ability of vocabulary in control class after the writer applies her research at the seventh grade students of *SLBN* Pelambuan, the writer uses the accounting of mean score as follow:

$$\begin{aligned}
 M_x &= \frac{\sum xi}{n} \\
 &= \frac{58+56+61}{3} \\
 &= \frac{175}{3} \\
 &= 58.3
 \end{aligned}$$

From result of post test in experiment and control class, to know the different of vocabulary between using multisensory technique and without multisensory technique, the writer uses comparative study between the experiment class by using multisensory technique and the control class without using multisensory technique, the writer uses t-test. After all the data collected, all of data have been processed, the writer analyzes the data and makes conclusion by using the "t-test" formula.

- a. The writer counts mean

$$M_x = \frac{\sum x}{N}$$

$$= \frac{207}{3}$$

$$= 69$$

$$M_y = \frac{\sum y}{N}$$

$$= \frac{175}{3}$$

$$= 58.3$$

b. The writer counts standard deviation of each major by using formula

$$SD_1 = \sqrt{\frac{\sum X^2}{N}}$$

$$= \sqrt{\frac{14}{3}}$$

$$= \sqrt{4,67}$$

$$= 2,16$$

$$SD_2 = \sqrt{\frac{\sum X^2}{3}}$$

$$= \sqrt{\frac{12,67}{3}}$$

$$= \sqrt{4,22}$$

$$= 2,05$$

c. The writer counts standard error of mean from each major by using formula

$$SEM_1 = \frac{SD}{\sqrt{N-1}}$$

$$= \frac{2,16}{\sqrt{3-1}}$$

$$= \frac{2,16}{\sqrt{2}}$$

$$\begin{aligned}
&= \frac{2,16}{1,41} \\
&= 1,53 \\
SEM_2 &= \frac{SD}{\sqrt{N-1}} \\
&= \frac{2,05}{\sqrt{3-1}} \\
&= \frac{2,05}{\sqrt{2}} \\
&= \frac{2,05}{1,41} \\
&= 1,45
\end{aligned}$$

- d. The writer counts standard error from both subjects by using formula

$$\begin{aligned}
SE_{M_1 - M_2} &= \sqrt{SE_{M_1}^2 + SE_{M_2}^2} \\
&= \sqrt{1,53^2 + 1,45^2} \\
&= \sqrt{2,34 + 2,10} \\
&= \sqrt{4,44} \\
&= 2,11
\end{aligned}$$

- e. The writer counts t-test by using formula

$$\begin{aligned}
t_{\text{test}} &= \frac{M_1 - M_2}{SE_{M_1} - SE_{M_2}} \\
&= \frac{69 - 58,3}{2,11} \\
&= \frac{10,7}{2,11} \\
&= 5,07
\end{aligned}$$

- f. After having the t-test score, look at the t table by counting the degree of freedom

$$t \text{ table} = (N_1 + N_2) - 2$$

$$= (3 + 3) - 2$$

$$= 4$$

df = degree of freedom to know every position

After the writer finds the df which df is 4, the writer uses the df that is 4 in t table. That is df at the table is put in appendix.

- g. The writer makes a conclusion

Based on calculation above, the researcher can conclude that $t \text{ table } (5\% = 2,57) < t \text{ test } (5,07) > t \text{ table } (1\% = 4,00)$. Thus, H_0 (Null Hypothesis) is rejected and H_a (Alternative Hypothesis) is accepted. By this result, the researcher can be concluded that there is a significant difference between students' vocabulary in experiment class that use multisensory technique and in control class that does not use multisensory technique for the seventh grade students with special need of *SLBN* Pelambuan Banjarmasin.

B. Discussion

After the data is processed in form of description, the writer analyzed the data and described it based on data presentation in finding. It is done to know the improvement vocabulary by using multisensory technique and not using multisensory technique, and difference between vocabulary that use multisensory technique and not use multisensory technique and of seventh grade students with

special need of *SLBN* Pelambuan Banjarmasin. For further description, it can be known from analysis below:

1. Improvement vocabulary by using multisensory technique and not using multisensory technique

Based on pre test and post test result in experiment class, there is significant improvement between pre test result which mean score is 30.3 and post test result which mean score is 69. Thus, can be concluded that using multisensory technique is a successful technique to improve students' vocabulary at seventh grade students with special need of *SLBN* Pelambuan Banjarmasin

Based on pre test and post test result in control class, there is significant improvement between pre test result which mean score is 32.3 and post test result which mean score is 58.3. Thus, can be concluded that without using multisensory technique can also improve students' vocabulary at seventh grade students with special need of *SLBN* Pelambuan Banjarmasin.

The improvement vocabulary in experiment class is higher than improvement vocabulary in control class. Therefore, the writer can conclude that using multisensory technique is better than without using multisensory technique. Based on interview result, the teacher said that using various of senses will be more successful in teaching English especially to students with mild mental retardation that need special education because multisensory technique is suitable with characteristic of students with mild mental retardation which they are slow in receiving the lesson.

The result of research by Yeni (2012) indicates that the effectiveness of multisensory method to improve the ability to recognize the numbers in autism children which autism children can have ability in numbers after using multisensory method. After using multisensory method, the autism children can mention, write, and match total of things with things' numbers. The score of test result in first cycle is 20 while score of test result in second cycle is 90. Therefore, using multisensory method is very effective to improve ability in numbers to autism children.

The result of the previous research by Dini, et al that has similarity with result in this research indicates that visual, auditory, kinesthetic and tactile method can improve mentally retarded students' vocabulary mastery which criteria of pre test result before using visual, auditory, kinesthetic and tactile method is poor criteria and post test result after using visual, auditory, kinesthetic and tactile method is good criteria.

The other research that do support result in this research is reseach by Kamala (2014) that shown using multisensory approach can improve reading skills of dyslexia students. The dyslexia students often confuses with the similar letters (d and b), this confusion can be easily solved by making the students use all of their learning modalities (visual, auditory, tactile and kinesthetic). The letters should be presented visually, then the letters should be traced (kinetic and tactile) in their hands and the letters name and sounds are orally (auditory) presented to the students. The dyslexia students who faced difficulty such as spelling, writing and pronouncing words to can be taught successfully after using multisensory approach.

2. The difference of vocabulary mastery by using multisensory technique and not using multisensory technique

Based on post test result which after use multisensory technique in experiment, it can be known that there are got score 70 is 1 student, score 71 is 1 student and score 66 is 1 student. The mean of post test in experiment class is 69. It means that students' vocabulary after using multisensory technique at seventh grade students with special need of *SLBN* Pelambuan Banjarmasin can conclude in good category.

Based on post test result in control class, it can be known that score 58 is 1 student, score 56 is 1 student and score 61 is 1 student. The mean of post test in experiment class is 58.3. It means that students' vocabulary after without using multisensory technique at seventh grade students with special need of *SLBN* Pelambuan Banjarmasin can conclude in fair category.

The writer used t-test to compare between the experiment class by using multisensory technique and the control class without using multisensory technique. From t-test result is shown that t table (5% = 2,57) is lower than t test (5,07), t test (5,07) is higher than t table (1% = 4,00). It can be conclude that H_0 (Zero Hypothesis) is rejected and H_a (Alternative Hypothesis) is accepted. this result is shown that there is a significant difference between students' vocabulary in experiment class using multisensory technique and control class without using multisensory technique at the seventh grade students with special need of *SLBN* Pelambuan Banjarmasin.

The researcher finds a research by Jubran that has similar result with this research. Based on research result by Jubran that also use experiment method which experiment class uses multisensory approach that get mean score is 85,77 while control class does not use multisensory approach that get mean score is 77,85. From research result by Jubran can be indicated that there is significant difference students' achievement in English skill between using multisensory approach in experiment class and without using multisensory approach in control class.

Obaid's research uses two classes which the experiment group was taught using multisensory approach while the control group was taught using current approach. The result of Obaid's research can indicate that there is significant difference achievement of students with learning disabilities in English between using multisensory approach in experiment class which get mean score is 85,58 and without using multisensory approach which get mean score is 76,15 in control class.