

CHAPTER III

RESEARCH METHOD

A. Research Design

The type of study is a field research. It means that a study conducted by researcher to know the improvement of vocabulary after using multisensory technique and not using multisensory technique and examine whether any significant difference between using and not using of multisensory technique in improving vocabulary of the students with special need at seventh grade of *SLBN* Pelambuan Banjarmasin.

This research uses experiment research. According to Creswell (2013, p. 42) stated that “Experiment research seeks to determine if a specific treatment influence an outcome” In experiment research, there are two classes (experiment class and control class) that will be given different treatment based on the objective of research. Experiment class means a class is taught by using multisensory technique and control class means a class is taught like general teaching and learning activities.

B. Research Setting

The research was conducted at the seventh grade of *SLBN* Pelambuan. It is located at Barito Hulu Street RT. 47 No.20/33 Pelambuan, *Banjarmasin Barat*. This *SLB* Pelambuan is cooperated with a Government Organization. This school is a school which specialized in teaching students with special need like students with visual impairment (*SLB A*), hearing impairment (*SLB B*), mental retardation (*SLB*

C) and Autism. This school provides education from level elementary school (*SDLB*) to senior high school (*SMALB*). This research conducts on 4 February 2016 until 6 May 2016.

C. Subject and Object

1. Subject of the research

Subject in this research is six students with special need that have a mild intellectual disability level (average IQ scores about 50 until 70) at *SMPLB C* of *SLBN* Pelambuan Banjarmasin that divided two classes that is experiment class and control class where there are three students with mild mental retardation in every class.

In *SLBN* Pelambuan, there are two classes to students with special need that have a mild intellectual disability level. Therefore, the researcher takes these classes. The class that is given a new technique is *VII C1* and the class that become control class is *VII C2*. These classes are chosen by researcher after early observation and discuss with teacher there.

Table 3.1 The distribution of student with mild mental retardation at *SMPLB*

No	Classes		Total
	Experiment	Control	
1	VII C1	-	3
2	-	VII C2	3
Total of the students			6

2. Objects of the research

Objects in this research are the improvement of vocabulary after using multisensory technique in experiment class and improvement of vocabulary by not using multisensory technique in control class and whether any significant difference

vocabulary mastery after using multisensory technique and not using multisensory technique of the seventh grade students with special need at *SLBN* Pelambuan Banjarmasin.

D. Data and Source of Data

1. Kinds of data

There are two kinds of data in this research. They are primary data and secondary data as follows:

a. Primary data

The primary data in this research are:

- 1) Data that related with improvement of vocabulary after using multisensory technique in experiment class and not using multisensory technique in control class.
- 2) Data that related with difference vocabulary after using multisensory technique in experiment class and not using multisensory technique in control class.

b. Secondary data

To complete the primary data, the writer also collects the secondary data which are related to research object as follows:

- 1) Brief history of *SMPLBN* Pelambuan.
- 2) The decription about headmaster, teachers, administration staff and students of *SLBN* Pelambuan.
- 3) The application of teaching process and facilities in *SLBN* Pelambuan.

2. Source of data

There is some source of data that is used in this research, such as:

- a. Informant : headmaster, teachers, staff administrative in *SLBN* Pelambuan.
- b. Document : all data consist of data and information which support the research.
- c. All of students with special need that have mild intellectual disability level at academic year 2015/2016.

E. Research Instrument

In this research, the writer used research instrument such as test and guide of observation and interview which these instruments are in the appendices. These instruments are a tool to search information that related with problem statements.

The researcher used pre-test and post-test instrument which the researcher makes test based on result of discussion with English teacher and early observation which students with special need have difficult in remembering, pronouncing and writing the words correctly in English subject. The test is divided into written test and oral test forms. The test about vocabulary of things in class consists 20 items that is divided into three test forms, they are 5 items to arrange letters of words, 5 items to fill in blank of words, and 10 items to pronounce of words. The score per item of test form is divided into three score forms, they are arrange letters of word and fill in blank of words forms which getting score 7 to every item that is answered correctly while to pronounce of words form which getting score is 5 to every item that is answered correctly.

Table. 3.2 The description of the test

No	Test form	Total of question	Score per item	Sum score to every test form
1	Arrange letters of words	5	7	35
2	Fill in blank of words	5	7	35
3	Pronounce of words	10	3	30
Total of score				100

The students' score will be categorized into five levels as follow:

Table 3.3 The description categories of scores test

Score	Categories
80 -100	Very Good
66- <80	Good
56- <66	Fair
46- <56	Poor
0- <46	Very poor

(Sudijono, 2006, p.67)

F. Data Collection Procedure

The technique of collecting data that is used in this research including:

1. Observation

This research used observation which researcher observes teacher in control class by using field note. The data are collected of observation to know activity, media and technique in control class.

2. Test

This research used pre tes and post test to know the students' first ability in vocabulary and the students' last ability in vocabulary using multisensory technique in experiment class and not using multisensory technique in control class. This test is applied in experiment and control class to get the score of the students' achievement of vocabulary mastery.

3. Interview

In this technique, the researcher makes interview with teacher, headmaster and administration staff directly by using interview guide. The interview guide to teacher is about data that related with use of multisensory technique in teaching vocabulary process while interview guide to the headmaster and the administration staff is about data that related with school in *SLBN* Pelambuan Banjarmasin.

4. Documentary

This technique is aimed to search for all written reports or documents that keep some detailed data. Documentary is used by researcher to complete data research such as school profile data, the data of students and employees.

Futher information about data, source data and data collection procedure can be observed in this matrix below.

Table 3.4 The description of data, source data and data collection procedure

No	Data	Source of Data	Data Collection Procedure
1	The primary data		
	a. Improvement vocabulary after using multisensory technique and not using multisensory technique	Students Teacher	Test Observation and interview
	b. Difference vocabulary mastery after using multisensory technique and not using multisensory technique	Students Teacher	Test Observation and interview
2	The secondary data		
	a. General description about the brief history of <i>SLBN</i> Pelambuan	Headmaster	Interview
	b. Description about employees, students, administrative staff and facilities	Administrative staff	Interview Documentary

G. Technique of Data Processing

1. Editing

This technique is used to reexamine all of the collected data to make sure that they are already complete or not. The researcher arranged all of data systematically by following correct role in writing of research.

2. Scoring

The researcher counts the scores based on the correct answer in the sheets of test. The students' scores are arranged on the table based on name of students and completed with using category of score based on Sudjiono.

3. Tabulating

Tabulating is to create tables that contain data that has been scoring in accordance with the analysis required. Result data on the table to be easy in interpretation data in this research.

4. Interpretating

Data that have been edited and scored will be interpreted by the researcher. Data of test results are interpreted by using category of score based on Sudijono. The interpretation of the researcher does not change the authenticity of data that is gotten in field.

H. Data Analysis

1. Data from observation

This research used two observations for teacher which researcher observes teacher in control class by using field note. The researcher observes detaily how is the activities, media and technique that are used by teacher in

control class by using field note. From this observation result, the researcher analyzed descriptively all data of observation in control class.

2. Data from test

Data from test, this data test was gain to compare students' ability in vocabulary by using multisensory technique and not using multisensory technique in instructional activities of vocabulary, the researcher used a quantitative data which are related to the numerals and they are analyzed by statistics. The researcher used t-test formula to calculate the data. The analysis has concerned between experiment class and controlled class. The researcher calculates mean, deviation and T-test, The formulas as follows: (Murdan, 2012, p. 45-50)

- a. Looking for mean variable I as follows the formula

$$M_x = \frac{\sum x}{N_1}$$

M_x : mean of the experiment class

$\sum x$: accumulative of total score of the experiment class

N_1 : number of subject of the experiment class

- b. Looking for mean variable II as follows the formul

$$M_y = \frac{\sum y}{N_1}$$

M_y : mean of the control class

$\sum y$: accumulative of total score of the control class

N_1 : number of subject of the control class

- c. Looking standard deviation for variable I as follows the formula

$$SD_1 = \sqrt{\frac{\sum x^2}{(N-1)}}$$

SD_1 : standard deviation of experiment class

$\sum x^2$: accumulative of the quadrant of deviation of the experiment class

- d. Looking standard deviation for variable II as follows the formula

$$SD_1 = \sqrt{\frac{\sum y^2}{(N-1)}}$$

SD_1 : standard deviation of control class

$\sum y^2$: accumulative of the quadrant of deviation of the control class

- e. Looking standard error of mean variable I as follows the formula

$$SE M_x = \frac{SD}{\sqrt{N-1}}$$

$SE M_x$: standard error of the experiment class

1 : value of constant

- f. Looking standard error of mean variable II as follows the formula

$$SE M_y = \frac{SD}{\sqrt{N-1}}$$

$SE M_y$: standard error of the control class

1 : value of constant

- g. Looking for standard error for comparative mean variable I and mean variable II as follows the formula

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

$SE_{M_1 - M_2}$: standard error for comparative mean of experiment class and control class

$SE M_1^2$: quadrant result of standard error of mean of the experiment class

$SE M_2^2$: quadrant result of standard error of mean of the control class

- h. Looking for t, as follows the formula

$$t_{\text{test}} = \frac{M_1 - M_2}{SE_{M_1} - SE_{M_2}}$$

t_{test} : value of t observation

- i. Giving interpretation for t with consulting t table

- 1) Looking for degree of freedom

$$Df/db = (N_1 + N_2) - 2$$

N_1 : number of subject the students in experiment class

N_2 : number of subject the students in control class

2 : value of degree of freedom for two variables

- 2) Consulting score of df/db with t table

t_{table} : value of critic "t"

in significant degrees t_{table} 5% and in significant degrees t_{table} 1%

- 3) Making hypothesis interpretation

H_o (Zero Hypothesis) : there is no significant difference

H_a (Alternative Hypothesis) : there is significant difference

If " t_{test} is higher than the value of t_{table} " so H_o is rejected, H_a is accepted and if " t_{test} is lower than the value of t_{table} " so H_o is accepted, H_a is rejected.

3. Data from interview

The researcher makes interview with teacher, headmaster and administrative staff. After data is gotten, the researcher analyzed data that

is needed in this research. The researcher used data of interview as ekstra informant to strengthen data in this research. The researcher analyzed descriptively and arranged all of data systematically.

4. Data from documentary

The researcher searches all written reports or documents that keep some detailed data in *SLBN* Pelambuan. The data is used to complete the information about the *SLBN* Pelambuan Banjarmasin.