CHAPTER III

RESEARCH METHODOLOGY

In this chapter, the researcher explains how this research is conducted from the beginning of gained the data until analyzing the data that have been gathered. It consist of research design, place and time, population and sampling, research variables, research instrument, technique of data collection, and technique of data collection.

3.1. Research Design

Based on the research design and purpose of the research in the first chapter, the researcher uses experimental design. In experimental design the researcher test the treatment to know whether it affects the result. Then, the researcher conducted the treatment to give to the subject of the research which that treatment experienced yet by the subject of the research. After conducted the idea, the researcher will get the information whether the subject performed better after experience the idea that given by researcher. Cresswell (2002:295) stated that in an experiment, the researcher decide the idea which will experiment to the subject, determine the individuals to do the idea and some individual do different thing, and then assign whether individual who did the idea performed better than individuals who did different thing (individual who does not get the idea).

This research use individual design that is single subject experiments. This research uses one class for the research subject. The researcher focuses on individual behavior rather than group, it concerns on individual assessment, the researcher assess on each students' performance. The students in this research do the task by their self, their own ability. The researcher determines whether the treatment affects the result. To know the impact of the treatment, the researcher records the activity before and after the treatment. This design suitable with this research, because using single subject design the researcher focuses on individual behavior. Based on Cresswell (2002:316), single subject experimental are

appropriate to learn about individual behavior. It is prefer to individual behavior rather than groups. The investigator observes the individuals behavior after get the intervention, whether the intervention affect to their behavior. This design is quasi-experimental rather than true-experimental, without random assignment. Single-subject design has advantage because only one individual observes at a time, groups are not involved.

3.2 Population and sample

3.2.1 Population

According to Creswell, population is a group of individuals who are in same characteristic (2002:142). The population of this research have same characteristic, which is they are tenth grade students of Gema 45 Senior High School. There are two classes of tenth grade; they are tenth MIA and tenth IIS.

3.2.2 Sample

A sample is a small part of the population that is selected by the researcher for the research. From the population that the researcher gets, the researcher knows the characteristics of each sample. The researcher chooses the sample from the population that is appropriate with the research.

To decide the sample of this research, the researcher uses *purposeful sampling*. John and james (2006:19), purposeful sampling is a technique for deciding the sample for the research which the researcher select those participants who are appropriate for this research, because those participants will give more information for researcher. Based on the explanation about purposeful sampling above, the researcher uses that technique for this research. The researcher gets the information about the sample by observing the population (students) of SMA GEMA 45 Surabaya. The researcher decide that tenth MIA is accepted for this research because tenth MIA have higher motivation to learn English than tenth IIS and the ability both of those classes is different, so it can not to compare. Therefore, tenth MIA is single subject and also experimental class of this research. The students of tenth MIA get

treatment from the researcher about performing their speaking by making Vlog as the media of speaking.

3.3 Research variables

There are two variables of this research; they are dependent and independent variables. Students' speaking performance is as dependent variable which cannot stands alone without independent variable that using Vlog as the media for speaking. The researcher wants the students perform their speaking by making Vlog as the media. From the students work, the researcher wants to know the effect of using Vlog toward increasing students' speaking performance.

3.4 Research Instrument

In this research, the researcher use some instruments to support the experimental research, they are:

3.4.1 Speaking Test

The researcher uses speaking test. Speaking test in this research is a speaking instruction that is given when pre-test, treatment and post-test. The instruction in each test there is little difference. The instruction on pre-test is "Please tell the story about your last holiday! Do it in front of the class". While on treatment, the instruction are completing the chart as the speaking guideline and making an individual Vlog with the theme "telling the story when you were visiting the place". The last is instruction on the post-test; the instruction is telling the story about your last holiday it in front of the class.

3.4.2 Scoring Speaking Rubric

Scoring speaking rubric used in this research to assess student's speaking performance. Elements that assess are vocabulary, fluency and clarity, gesture and mimic, pronunciation, intonation, stress. Those elements adopted from module speaking 4 modified by Ihsan. Validation scoring rubric is done by lecturer of English Department she is Armeria Wijaya, S.S., M.Pd. (See appendix1)

3.4.3 Scoring Formula

This research also uses T- Pear Test as the formula to count the student's score. This is the formula (Ravid, 2011:151):

$$t = \frac{\sum D}{\sqrt{\dfrac{n(\sum D^2) - (\sum D)^2}{n-1}}}$$

Where: $\sum D$ = Sum of the difference scores (D)

$\sum D^2$ = Sum of the squared differences (D²)

n   = Number of pairs of scores

3.5. Research Procedure

3.5.1. Data Collection Technique

Data collection technique is important in the research; the aim of data collection technique is to get the data. It is about the processes or steps to get the data. The data is needed in the research for developing the research become specific and valid. There are steps that has been completed by the researcher, they are:

1. Preparation
   a. Choosing the topic material
   b. Arranging lesson plan
   c. Preparing instrument, assessment and test
   d. Consulting the preparation to the advisor
2. Realization

   There are processes which are held on the target school to collect the data. This data uses pre-test and post- test, so in the table bellow show the processes from the beginning send permission letter till the last is conducting post-test.

Table 3.1 The Process of Data Collection

No.	Time	Schedule
1.	Thursday, 23rd February 2017	Send permission letter at SMA GEMA 45 Surabaya
2.	Wednesday, 17th 2017	Experimental Class
		First step
		a. Determining material about recount speaking and the topic for learning activities of the research. b.Arranging and making lesson plan during the activities of the research c. Determining the instrument of the research. d. Analyzing the instrument of the research. e. Giving Pre-Test
3.	Monday, 5th June 2017	Second step
		a.Introducing and Explaining about material, what use in learning activities of the research c.Giving students treatment by using speaking on Vlog d.The researcher ask the students to analyze the example of speaking on Vlog e.The students create individual Vlog
4.	Monday, 19th June 2017	Last step
		a.Giving Post-Test to measure experimental class. b.The researcher analyze the data between pre-test and post-test c.the researcher will count the data and compare between pre-test and post test to know the effect of this method .

3. The last step

   a. Collecting the data

   b. Analyzing the data

   c. Assessing the data

3.6. Validity and Reliability

Validity and reliability are important in the research; those are the way for measuring the instrument that use for the research. According to Creswell (2001:159) "Reliability and validity are bound together in complex ways. These two terms sometimes overlap and at other times are mutually exclusive". In this research both of them have correlation. Which is validity is measuring the instrument; like lesson plan, instruction and rubric scoring. While, reliability is measuring the consistency of student's score between pre-test and post-test. So, the consistency of student's score is depends on the instrument, the clarity and validity of the instrument.

3.6.1. Validity

Validity is important to do in the research. The validity will use to measure the instrument, whether it is valid or not to apply in the research. In this research the researcher did instrument validation aimed to provide the real instrument. Valid instrument will use in recount speaking for tenth grade. The data of validity was adopted from standard competency and basic competency (see appendix).

3.6.2. Reliability

This research refers to student's speaking performance. Student's performance assessed by using speaking scoring rubric and creativity check list, the instrument is used twice; on pre test and post test, and still use same measure. The researcher wants to know the result of student's performance by their score on both tests. The reliability uses inter rater, rater I is the English teacher of the school and rater II is the researcher. Their performance is affected by some things like mood, nervous, pressure, anxiety. From some factors that affected their performance will determine whether the score of both tests stable or not. According to Cresswell (2011:192) stated that reliability is assign to the level of consistency of a student's score from the same instrument which tested twice and also with the same individuals.

According to Surapranata (2004:99) it offers the formula for measuring the reliability.

$$r_{x1x2} = \frac{N\Sigma x \quad x^2 - (\Sigma \times^1)(\Sigma \times^2)}{\sqrt{(N\Sigma \times_1{}^2 - (\Sigma \times_1)^2(N\times_2{}^2 - (\Sigma \times_2)^2}}$$

Where:

X_1 = Rater 1

X_2 = Rater 2

n = Member of test

3.7. Data Analysis Technique

The researcher analyzing the data after the data was collected. John and James (2006: 351) stated that data analysis technique is conducted aim to organizing the data that have been gathered and also to give information about the research to the reader. Analyzing commonly do by using hand (computing manually) or assistance of computer. This activity also aims to answer the research questions of this research, by grouping the data based on variable.

3.7.1. T- Paired Test

T- Paired test is used when the two data being compared and both of them must related by each other. The score are paired easy to see when the study use pretest-posttest and the score are from the same individuals. As for the formula:

$$t = \frac{\Sigma D}{\sqrt{\dfrac{n(\Sigma D2) - (\Sigma D)^2}{n-1}}}$$

Where: Σ D = Sum of the difference scores (D)

Σ D² = Sum of the squared differences (D²)

n   = Number of pairs of scores

3.7.2. Mean

John and James (2006: 359) stated that computing mean is the basic measurement of the research. This is the most useful of all measurement that will be use in it. The formula:

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

Where: $\bar{x}$ = Mean

Σx = The sum of the x scores

n = The number of the subject

3.7.3. Standard Deviation

Determining the standard deviation used for the score of both pre-test and post-test.

$$S = \sqrt{\frac{\Sigma x^2}{n}} - x^{-2}$$

S = Standard Deviation

$\Sigma \times^2$ = The sum of the x squared scores

x^{-2} = The mean of distribution

n = The number of students