CHAPTER III

RESEARCH METHOD

This chapter discusses the research methodology applied in this study. It deals with the description of the Research Design, the subject of the Research of Subject, Data Collection Technique, Application of Socio-drama Method and Data Analysis.

3.1 Research Design

As the topic indicates, the primary aim of the research is to reveal the effectiveness of socio-drama method in teaching reading. So this research is trying to identify the application of socio-drama method in teaching reading. In other words, this research is an experimental research. It is in accordance with the process of this research namely to get the data through pre-test and post-test. Moreover, the researcher decides to choose the experimental research because it is suitable with the characteristics of this research.

According to Fraenkel and Wallen (2006:267), experimental research refers to one of the most powerful research methodologies that the researcher can use. In using this method, the purpose is to make the comparison of a treatment groups with a non-treatment and treatment groups. They added that it is the best type for testing hypotheses about cause-and-effect relationships. As well as, the researcher tries to ensure that it is the experimental treatment rather than some non-treatment variables that causes the changes in achievement. Based on the research design, the researcher uses experimental to prove the hypothesis which formulates that socio-drama method can improve student's reading ability.

3.2 Time and Location of research

Before conducting the research, there are schedule as below:

Time　　: March, 20th 2014 – May, 19th 2014

Location: at SMA Muhammadiyah 1 Surabaya

Table 1

The researcher's schedule

No.	Time	Schedule
1.	Tuesday (on March,20th 2014)	Send permission letter at SMA Muhammadiyah 1 Surabaya
2.	On April , 1st-10th 2014	Prepare lesson plan, teaching material and reading assessment rubric
3.	Saturday (on May,10th 2014)	Pre-test (XI IPA as experimental class) Make a script drama
4.	Monday(on May,13th 2014)	Pretest XI IPS as controlled class) Speech method
5.	saturday (on May, 17th 2014)	Practices Post-test
6.	Monday (on May, 19th 2014)	Discussion about short story Post-test

From schedule above, it is easy for the researcher to do experiment. Through three phases in this research, the researcher will get the data of the students, especially in English lesson.

3.3 Population

According to Arikunto, population is all of the subjects of the research (2002: 108). The population of this study was the eleventh grade students

of SMA Muhammadiyah 1 Surabaya in the years of 2013/2014. It should be clear from the above data that the population of the study consists of six classes of students from XI IPA and XI IPS.

3.4 Sample

According to Arikunto, sample is part of subject of the research (2002:109). It should be noted that quantitative research focuses on studying sample and population and attempts to generalize the result of the research to the entire population from which the sample is drawn. So, it was impossible for the researcher to manage the whole population as the subject of the research.

In this study, the sample is taken by randomly. There are 2 classes that were taken by random from all of the eleventh grade class in SMA Muhammadiyah 1 Surabaya. One class is as experimental group and the other as controlled group.

The researcher uses random sampling in this research with regard to the data.The researcher obtained the information from the English teacher that IPA and IPS class were given the same treatment and taught using the same textbook and materials with the same curriculum but both of the classes were not using same method. The researcher applied random sampling. The random sampling started from the decision to limit the amount of the students. At the first, the amount of students was 72 students, 32 students are from IPS while the other 40 students are from IPA. To make it even between those two classes, the researcher randomized the amount to 32 students in each class. The remaining 8 students in IPA class are not counted but they still took the test. From 64 students who have been taken selection, those students are divided into two classes randomly into

two groups which are exprimental group and controlled group. This design uses comparing group (class) with analyzing the treatment group (X) from pre-test (O) and post-test (O). The purpose from doing the experimental research is to know the comparison result between experimental class and controlled class of pre-test and post-test.

According to Fraenkel and Wallen (2006:273) in experimental research there are some design of the research such as the type bellow:

Research design			
Group	**Pretest**	**Treatment**	**Posttest**
A	O	X	O
A	O	C	O

Figure 1.example random of experimental and controlled group

Explanation: A   = Random class

O   = pre-test and post-test

X   = treatment class (use socio-drama method)

C   = non-treatment class

The researcher uses the design of Fraenkel and Wallen in figure 1, it is suitable in this research because this design uses comparing group (class) with analyzing the treatment group (X) from pre-test (O) and post-test (O).

3.4 Variables of the Research

This research is conducted in order to find out the relationship between two variables. Therefore, the research variables are independent variable and

dependent variable. As indicated by the topic of the research, the researcher wants to reveal that by using socio-drama, the student's reading ability is improved. The dependent variable is student's reading ability while the independent variable is socio-drama.

3.5 Data Collection Technique

The researcher uses instrument in the reseach that is in the form of test (pre-test and post-test). The instrument is used to measure the result of students.

3.5.1 Try out

Try out to test someone to see what they are like or whether they are suitable or effective (Merriam, 2014). Try out was given to the other students of eleventh grade. (See appendix 17)

3.5.2 Pre-test

According to Dorn pre-test is the measure before training (2004:183). The researcher uses pre-test to know the ability of the students before giving explanation to students. Before giving the pre-test, the researcher prepares the material or sheets of test.

3.5.3 The application of socio-drama in reading class

There are directions to use this method which is shown in the instruction details. The principle of the instructionsinapplying this application are some instructions about how the steps in applying the socio- drama method are. According to Baile and Walters (2012:3-4), there are some steps in applying the method, that is:

a. **Preparing**

After reading the passage of Rapunzel, the students make some groups which is divided by the researcher. After making the groups, the students will prepare drama and also perfom in front of class. There are steps of preparing drama as below:

b. Making the scenario

The student will make the scenario based on what the reseacher has given to discuss, the student's scenario is the total form of the charaters in short story to member group. The students will make the scenario around 10 to 45 minutes to discuss.

c. Creating the characters

After making the scenario, the students decide each character for their group, group members to play characters in that scenario. The students may decline but usually they do not. When the group agrees to take a role, the students do or practice in sort of stage.

d. Briefing

This is the last steps in preparing before the implementation. The students will discuss about how to move the dialogue forward. This is assisted by another narrator of scenario, the student as hidden volunteer, before the presentation, the function of the narrator isas a key communication strategy such as when and how to make an empathic response to feelings, as an assistant in helping the learner move the conversation forward.

e. Implementing

After preparing all of the steps above, the students will perfom in front of the class.

a. Practicing

The purpose of the practice session is to reinforce communication skills and their potential in art, and also in practicing from the warm-ups and can imagine in real-life scenario that could require the same. They perform the scenario which was made in the last meeting. So, students can perform not only based on the scenario but also the student can improve.

f. Evaluating

The last steps is evalution. It is a process which usesto critic each other and also it has purpose to make judgments about another group. In making evalution as below:

a. Discussing

At the end of the performance, each group member was given the opportunity to give statement to the other members group. The function of this discussion is correcting and criticizing. So, in the next performance the students can improve their ability.

3.5.4 Post-test

According to Dorn, post-test is the measure after the training is represented through the improvement (2004:183). The material for test is passsage from reading text as questions in pre-test and post-test which is often used in measuring the students' achievement of the teaching learning process.

The material of post-test isthe same which is used in pre-test, the researcher uses both of the tests to consider whether there will be an improvement of students after giving the material. It is often used to measure the students ability and the teaching learning process.

3.6 Research procedures

This research contains three steps: (1) preparation, (2) implementation, (3) data analysis. Then, the activities are done with these following steps:

3.6.1 preparation

    a. Observing the school where the research takes place.

    b. Arranging and diciding the material which is used in this research.

    c. Arranging the lesson plan which has been consulted to the advisors.

    d. Arranging the instrument of research.

    e. Testing the instrument of research.

    f. Analyzing the instrument.

    g. Choosing the experimental and controlled class randomly.

3.6.2 Implementation

    a. Giving pre-test to measure the student's ability.

    b. Implementing the socio-drama method in the experimental class, the steps have been explained above.

c. Giving post-test to measure the student's ability

3.7 **Data analysis**

a. Firstly, the researcher as the teacher found the problem in teaching learning process which isfocused in reading

b. Secondly, before teaching the researcher selected some of short stories but the researcher only chooses one short story for material and giving the pre-test to students.

c. Thirdly, the reseacheruses socio-drama method in experimental class but in controlled class the researcher do not use the method.

d. The researcher analyzes the data step by step starting from pre-test to post-test. After giving the test, the researcher will count the data and compare them in order to measure the comparison between these different classes.

3.8 **The Technique of Examination**

The data that are obtained from the research is test (pre-test and post-test). The data will be arranged, as below:

1. **Quantative data analysis**

Steps which are done to process the data of pre-test are using software SPSS version 16.It is as below:

a. Test of normalitas distribution of experimental and controlled class in pre-test. The purpose is to measure whether the pre-test is taken from the same population.

b. Doing the homogenity test of pre-test to measure whether the relationship between both classes is from the same variant.

c. The last test is T-test.The purpose of T-test is to measure average score of both classes

2. **Test of normalitas distribution**

   Normalitas distribution is the basic test.It is important to do another test. To dothe test of normalitas distribution in experimental and controlled class, the researcher use statistic.

   In this research, test of hypotheses is used to measure the normalitas distribution by using software SPSS version 16 for windows. Pairing the hypotheses that will be tested by:

   H_0 = sample of data is normal distribution

   H_1 = sample of data is not normal distribution

   The criteria of test based on *p-value* is as below*:*

H_0 push away, if $p_{(value)} < \alpha$, so there are influence

H_1 Push away, if $p_{(value)} > \alpha$, so there is no influence

3. **Test of varians homogeneity**

   To measure similarity between some of variant in population which is used to test the homogenity. It uses biggest variant formulation than smallest variant homogenity.

   $H_0 : \sigma_1^2 = \sigma_2^2$ there is no differences variant between experimental and controled class.

   $H_1 : \sigma_1^2 \neq \sigma_2^2$ there is difference bertween experimental and controled class.

   The criteria make decision : H_0 accept, if $F_{count} < F_{table}$

$$F_{count} = \frac{S_1^2}{S_2^2}$$

Explanation   : S_1^2 =biggest varians

S_2^2 =smallest varians

dk_1 = dk of denominator

dk_2 = dk of numerator

varians formula by Sudjana (2005:95) :

$$S_1^2 = \frac{n\sum f_1.x_i^2 - (\sum f_i.x_i)^2}{n(n-1)}$$

4. T- test

A test is needed to know if there are differences or not in the average of test between experimental class and controlled class. The pair of hypothesis will be tested as below:

$H_0 : \mu_1 = \mu_2$ or $H_0 : \mu_1 - \mu_2 = 0$, that's mean the average of pre-test between experimental and controlled class is same

$H_0 : \mu_1 \neq \mu_2$ or $H_0 : \mu_1 - \mu_2 \neq 0$, that's mean the average of pre-test between experimental and controlled class is not same or different.

The criteria of test accepts,

H₀accept for t_{count}<t_{table}

$$T_{test} = \frac{\overline{X}_1 - \overline{X}_2}{S_{gab}\sqrt{\dfrac{1}{n_1} + \dfrac{1}{n_2}}}, t_{tabel} = t$$

(formula by Sudjana 2005:239)

explanation : $\overline{X}_1$ = average pre-test of experimental group

$\overline{X}_2$ = average pre-test of controlled group

n_1 = numbers of experiment group

n_2 = numbers of of controlled group

5. **Validity point**

Validity point is used to validate the points which will be tested to the students. Validation of points has been validated by the expert that help spss version 16.0 to count reability and validition of points, the researcher uses formulates:

$$r_{XY} = \frac{N\sum XY - (\sum X)(\sum Y)}{\sqrt{\{N\sum X^2 - (\sum X)^2\}\{N\sum Y^2 - (Y)^2\}}}$$

Explantions:

r_{XY} = correlations coeffesient

$\sum XY$ = total of result times value X and Y

$\sum X$ = total value X

$\sum Y$ = total value Y

$\sum X^2$ = total quadrate value X

$\sum Y^2$ = total quadrate value Y

N = number of student

(Arikunto, 2009 : 78)

According to Arikunto (2010 : 319) correlation coeffesient are :

Between 0.800 until 1.00 = very high

between 0.600 until 0.800 = high

between 0.400 until 0.600 = enough

between 0.200 until 0.400 = low

between 0.00 until 0.200 = very low

if the correlation coefficient (r_{count}) is more than (r_{table}) so the points is valid.

6. **Reliability**

Reliability is tools tomeasure or evaluation the result to give consistant. The researcher uses alpha formulate to measure the answering point, it is are:

$$r_{nn} = \left(\frac{n}{n-1}\right)\left(1 - \frac{\sum \sigma_1^2}{\sigma_1^2}\right)$$

explantions:

r_{nn} = reability to find

$\sum \sigma_1^2$ = total varians every item

σ_1^2 = total Varians

Arikunto, 2009 : 108)

Use software spss versions 16.0 will get the result and to know the result which is counted see at appendix 11-13.