CHAPTER III

RESEARCH METHOD

This chapter discussed about the Research Design and Method, Subject of the Study, Variable of the Study, Data Collecting Method, Research Instrument, Validity and Reliability Testing, and Technique of Data Analysis.

A. Research Design

In this research, the researcher conducts quantitative research through pre-experimental design with one group pretest posttest. The writer conducts pre-experimental design because pre-experimental design has little or no control of extraneous variable. According to Ary,et al (2010:303) This design involves only one group as its subject and it involves three steps: pretest, treatments, and posttest. The design of this research can be seen at the table below:

Table 3.1 The design of one-group pretest posttest

Pretest	Independent Variable	Posttest
Y1	X (Treatments)	Y2

The design involves only one group as its subject and it involves three steps: pretest, treatments, and posttest (McMillan, 1992: 174). The procedures of pre-experimental research that use one-group pretest posttest design:

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1. Administering a pretest before applying strategy media with a purpose of measuring on the students' reading comprehension of narrative text of eleventh grade at MAN 3 Tulungagung.

2. Applying the experimental treatment teaching reading by using comic strips on the narrative text as a strategy media to the subject of eleventh grade at MAN 3 Tulungagung.

3. Administering a posttest after applying strategy media with a purpose of measuring on the students' reading comprehension.

This research is intended to investigate the effectiveness of using comic strip on the students' reading comprehension of eleventh grade at MAN 3 Tulungagung in academic year 2017/2018. The use of treatment is aimed at proving whether the better scores possibly got by the researcher. Thus, the effectiveness of that treatment will be known the significant score when the students taught using comic strip.

B. Population, Sample and Sampling

The section discusses the population of the study, the sample which was drawn from the population, the sampling technique.

1. Population

A population is a group of elements or case, whether individuals, objects, or events, which according to certain criteria and where research result are common, in this case, the population of this research is the eleventh grade of MAN 3 Tulungagung in academic

year 2017/2018 which consists of one classes, and the total member of student is 25 students.

2. Sample and Sampling

    A sample is a group in research study on which information is obtain. Because the population of the study is big and in other that students undisturbed, the researcher chooses the cluster random sampling in determining the sample of the study. This technique is similar to simple random sampling, but simple random sampling used individual selected, cluster random sampling used class selected. In it, the subjects were regarded that each of them has the equal chance to be chosen as the sample. This is the effective way of determining the sample of the study. The researcher will use one class to conduct this research, that is class XI MIA 2 that has total 25, 8 male and 17 female.

C. **Research Instrument**

    According to Arikunto (2006: 126) Instrument is the device the researcher uses to collect data is called instrument. The instrument in this research is test. The writer uses two kinds of test pre-test and post-test. The first is pre-test, which is given before students are taught by using comic books. The second is post-test, which is given after students are taught by using comic books. Before the writer conducts pre-test and post-test, researcher develops the instrument. Here are the several steps:

1. Review RPP and material

The first step in developing the instrument is reviewing literature which consists of syllabus and instructional material. The purpose of reviewing literature is to get data on the materials used for pre-test and post-test, so that the instrument of test would test what should be tested, hence the instrument meet the criteria of content validity.

In addition, the researcher review RPP to know the materials and basic competence which should be mastered by the students of the eleventh grade of MAN 3 Tulungagung. Moreover, the RPP also tells some information, such time allotment, classroom activities, basic competence, material, source study and etc. The result of reviewing literature is used to write draft of test.

2. Validity

To strengthen this instrument, the writer needs to test its validity including content validity. In design quantitative, validity is important point because the main component to collect data is test. If test do not have validity it's also researcher do not have valid data. To do validity, the writer is going to meet expert validity, to advisor and English Teacher.

3. Try Out

Beside the researcher checks the validity of the test. The researcher also conducts a try-out. The purpose of try out is to know the validity and reliability of instrument. The researcher does tryout of the test to

the same students of another class. The researcher chooses class XI MIA 2.

4. Final Drafting

The last step is final drafting. It is rewrite instrument after researcher checked the validity and reliability of the test. The final drafting is used by the researcher as the instrument to conduct pre-test and post-test.

The test of this study is taken from 20 questions. To score the objective tests the writer treats them without any difference. Means, there was only one correct answer for each items. The scoring guide is as the formula follow:

$$\text{Score} = \frac{\text{number of correct items}}{20} \times 100$$

This test uses to measure the students achievement in reading comprehension before and after taught by using comic books in MAN 3 Tulungagung.

D. **Variable of the study**

All experiments have one fundamental idea behind them, to test the effect of one or more independent variables on a dependent variable. This research, that used comic strip as method in teaching reading, had two variables. Those variables were:

1. The Independent Variable (X)

The independent variable is the major variable which the researcher hopes to investigate. It is the variable which is selected,

manipulated, and measured by the researcher. The independent variable of this research was the using comic strips.

2. The Dependent Variable (Y)

The dependent variable, on the other hand, is the variable which the researcher observe and measure to determine the effect of the independent variable. The dependent variable of this research was improvement students' reading comprehension.

E. Validity and Reliability Testing

According to Donald Ary (1985:213) research is always dependent upon measurement. There are two important characteristic that every measuring instrument should passes: validity and reliability. Before using these test, a try out to 25 students to find out the validity and reliability of the test.

1. Validity

The most complex criterion of an effective test and the most important principle of language testing is validity. It is the extent to which inference made from assessment result is appropriate, meaningful, and useful in term of the purpose of the assessment. It states by Groundlund in Brown (2004:22). According to Heaton (1988:159) validity of the test is the extent to which it measures what it is supposed to measures and nothing else.

In this test, the researcher asked the students to answer the multiple choice and true false test to measure the students' reading

comprehension of narrative text. The researcher made this test based on the course objectives in the syllabus of eleventh grade of MAN 3 Tulungagung. Therefore this test is valid in term of content validity. The content validity in this research can be showed as follow:

Table 3.2 Content Validity

No.	Competence Indicators
1.	Students are able to answer general illustration of narrative text.
2.	Students are able to answer the implicit meaning of the text.
3.	Students are able to answer kind of narrative text.
4.	Students are able to answer the explicit meaning of the text.
5.	Students are able to answer generic structure of narrative text.
6.	Students are able to answer tenses of the text

2. Reliability

Reliability refers to the nation that an instrument can be trusted enough to be used as data collection tool for instrument which has been already good (Arikunto, 2010: 221). To measure that reliability of test item, the researcher firstly gains Try-out. It is to know whether the instrument suitable or not. In this research, the researcher uses SPSS 16.0 for windows to know the reliability of test instruments. The criteria of reliability instrument can be divided into 5 classes as follows :

a. If the *alpha Cronbach* scores 0.00-0.20: less reliable

b. If the *alpha Cronbach* scores 0.211-0.40: rather reliable

c. If the *alpha Cronbach* scores 0.41-0.60: enough reliable

d. If the *alpha Cronbach* scores 0.61-0.80: reliable

e. If the *alpha Cronbach* scores 0.81-1.00: very reliable

To know the reliability of the test, we should know: (a) the mean score, (b) the standard deviation of the test, and (c) Cronbach's Alpha. From the answer of students' response in try-out test the researcher then analyze using reliability test based on Cronbach's Alpha.

F. Normality and Homogeneity Test

Normality test are used to determine whether a data set is well-modeled by a normal distribution or not, or to compute how likely an underlying random variable is to be normally distributed. Normality test is intended to show that the sample data come from a normally distributed population. Critic area is in which Ho is rejected when the significance value is lower than 0.05 ($\alpha = 5\%$). The analysis is as follows :

Table 3.3 The Tests of Normality

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
pretest	.188	25	.023	.950	25	.246
posttest	.246	25	.000	.907	25	.026

a. Lilliefors Significance Correction

Relying on the output from SPSS 16.00 is known that the significance value from pretest 0.246 and from the posttest is 0.026. both of the value are bigger than 0.05. The significant value on pretest is 0.246 and it is bigger than 0.05. Then, for posttest score the value of significant

is 0.026 and that is bigger than 0.05. So, it can be interpreted that both of data (pretest and posttest score) are normal distribution.

G. Data Collection Method

Data collection method is a systematical and standard procedure used to collect data (Tanzeh 2011:57). In this research, data collecting method is administering test that consists of pretest and posttest. The procedure of administering test was clarified as follows :

1. Pre-test

At the first meeting, the writer gives a pretest to the students. There are 20 questions, 15 questions are in the form of multiple choice and 5 forms of true false items. It is conducted to know the scores of the students reading before being taught by using comic.

2. Post-test

The posttest is given to students after conducting the treatment of using comic books in improving students' reading comprehension of narrative text. Similar to pretest, the writer asks students to answer 20 questions, 15 questions are in the form of multiple choice and 5 forms of true false items.

H. Data Analysis

The researcher uses a quantitative analysis technique using statistical method. The researcher uses the application SPSS Statistics 16 for windows to analyzed Paired-Sample T-test. There are some steps in analyzing data in SPSS 16. Firstly, the researcher input the data in SPSS

Statistics to know the frequency of pretest and post test score. After that, by using this application the researcher know the mean, median, mode and standard deviation. Then, from the compare of data the researcher know the pair sample statistics and finally the researcher find pair sample correlation from two kinds of test. The researcher can analysis about the result of significant one tails and degree of freedom.

After the researcher knows the result of significant one tails from SPSS Statistics, the researcher can give the conclusion about the effectiveness or not about using comic books in improving students' reading comprehension in narrative text. This technique is used to find the significant different on the students reading narrative text using comic books. If the significant one tails is bigger than the level of significant (0,05), the alternative hypothesis (H_a) is accepted. It means that, there is different score of students' achievement before and after taught using comic books. On the other hand, if the significant one tails is smaller than the level of significant (0,05) the null hypothesis (H_o) is rejected. Indicating that, there is no different score of students' achievement before and after taught using comic books.