

CHAPTER III

METHODOLOGY OF THE RESEARCH

This chapter presents about research method. It consists of six sub-chapters. They are (a) Research Design, (b) Variable, (c) Population and Sample, (d) Research Instrument and Data Collection Method, (e) Validity and Reliability Testing, (f) Normality Testing, (g) Data Analysis.

A. Research Design

Research design is defined as the strategy or the way how the researcher gets the valid data, analyze them, and finally come to the answers of the research problem. The research design in this study is experimental research. Ary. et. al (2010:26) states as follows:

Experimental research involves a study of the effect of the systematic manipulation of one variable(s) on another variable. The manipulated variable is called experimental treatment or the independent variable. The observed and measured variable is called the dependent variable.

In addition, experimental research is the way to look for the relation of cause and effect of two factor that created by the researcher. There are many kind of experimental research design can be used in the research. Sugiyono (2015:108) explains that “Many kinds of experimental research design. They are Pre- Experimental design, True

Experimental Design, Factorial Experimental Design and Quasi Experimental Design.

In addition, Ary et.al (2010:302) stated as follows:

Experimental designs may also be classified according to how well they provide control of the treats to internal validity: pre-experimental, true experimental, and quasi experimental design. Pre experimental designs do not have random assignment of subjects to groups or other strategies to control extraneous variables. True experimental designs (also called randomized designs) use randomization and provide maximum control of extraneous variables. Quasi experimental designs lack randomization but employ other strategies to provide some control over extraneous variables.

This study was used pre-experimental design in the form of One-Group Pretest-Posttest designs with quantitative approach. This study was classified as pre-experimental because do not have random assignment of subjects to groups or no control extraneous variables. So that why, the researcher used pre-test and post-test to see the result of the treatments in one group/class.

In One-Group Pretest-Posttest design, a single group was measured not only after getting treatments but also before treatments. In this study, the researcher took one group or a class for obtain the result of treatments. This data of the research is in the form of numeric data. The design of this research was an experimental research design by using dependent or correlated samples. It means that in applying this

design, the researcher used the same group for treatment (One-Group Pretest-Posttest). Ary (2010) explained that:

One group pre-test- post-test design usually involves three steps: (1) administering a pre-test measuring the dependent variable. (2) applying the experimental treatment X to the subjects and (3) administering a post-test, again measuring the dependent variable.

Table 3.1 shows the design of one group pre-test and post-test. The table summarized as follows:

Table 3.1 One group pre-test and post-test design

Pre test	Independent	Post test
Y_1	X	Y_2

From the table above, it can be explained that the procedures of conducting experimental research design in this study consists of pre-test (Y_1), treatment (independent variable), and post-test (dependent variable) (Y_2).

B. Variable

Ary et.al (2010:37) stated that “A variable is a construct or a characteristic that can take on different values or scores”. Based on this theory, a researcher studies a variable and the relationships that exist among variable.

Ary et.al (2010:265) explained as follows:

There are two variables of major interest are the independent variable and dependent variable. The independent variable is manipulated (changes) by the experimenter. The variable on which the effects of the changes are observed is called the dependent variable, which is observed but not manipulated by the experimenter

In this research, song lyrics as treatment which was influenced called as independent variable, while after they got treatment which was influence toward students' ability in identifying parts of speech called as dependent variable. In other words, dependent variable was measured the independent variable that influenced the students. The relationship between two variable, it can be seen by the student's score.

C. Population and Sample

1. Population

Population means the whole subjects being studied. The population of this research were all of eight grade students of SMPN 1 Sumbergempol in academic year 2015/2016 consist of 128 students. The researcher chose VIII grade students as population because they always deal with grammar components in English subject. Besides, the students always played with words to construct simple function language concerned with their daily life.

2. Sample

Sample is a part of population that is being studied. The researcher does not involve all of them because it is a big number. The researcher used non probability sampling. Ary (2010:156) stated that “In nonprobability sampling, there is no assurance that every element in the population has a chance of being included.”

In taking sample, the researcher used purposive sampling. In this research, the purpose of the researcher used purposive sampling was known the effectiveness of the use of song lyrics toward students' ability in identifying parts of speech. Ary et.al (2010: 150) stated that purposive sampling also referred to as judgment sampling sample elements judged to be typical, or representative, are chosen from the population.

In this research, the researcher took one class as sample that consists of 32 students. It consists of 15 students are male and 17 students are female. The researcher was given advice by the teacher to take VIII B class which were consist of homogeneous students or have same average of English achievement. The teacher also said that the students of VIII B class were able to absorb the material quickly rather than another class. Another reason is because of the limitation of time. The students were going to get final examination. The researcher had to be limited time.

D. Research Instrument and Data Collection Method

Research instrument is a tool for collecting data that should be valid and reliable. For getting the data about the students' achievement, the researcher used instrument of test. In this research, the researcher used test. Tests were about the identifying parts of speech for measuring the students' ability in identifying parts of speech in the form of filling the blank. The test were pre-test and post-test. Each test consists of 20 items. These tests used for collecting the data of students' score before and after teaching by using song lyrics. The test items were taken from *Section One Parts of Speech book* by John Wiley & Sons, Inc. (2007:43) because the researcher conveys that the items test were appropriate or relevant for measuring the students' ability in identifying parts of speech and the researcher also constructed the test items by herself for revising the invalid test items after trying out the items test. The researcher tried out the instrument of test in level of test difficulty in three times. It can be seen in Appendix 2. In this research, the items of pre-test and post-test were the same test items (measure aspect of students' ability in identifying parts of speech) for knowing easily the result of test before and after conducting the treatments by using song lyrics. The items test and key answer can be seen in Appendix 3.

There were two kinds of tests that used in this research by the researcher:

1. Pre-test

Before the researcher gave the treatment about song lyrics toward students' ability in identifying parts of speech, the researcher administered pre-test to the students about identifying parts of speech which consist of 20 items test in the form of filling the blank. The researcher gave pre-test on April, 22nd 2016. It needed to know how far the students' ability in identifying parts of speech.

2. Post-test

A post-test was given to the students after getting the treatment. As the pre-test, it consists of 20 items test in form of filling the blank. The researcher administered post-test on April, 29th 2016. It needed to know whether there was improvement toward students' ability in identifying parts of speech after getting treatment.

E. Validity and Reliability Testing

1. Validity

Ary et. al (2010:201) stated that "Validity is the extent to which a test measures what it claims to measure".

Martens and McLaughlin (2004: 173) stated as follows:

Validity of a test is the extent to which it measures what it was constructed to measure. There are four specific sources of evidence can be used to establish validity (content, concurrent, predictive and construct validity).

Based on theory above, validity is to which a test measures what it wants to measure. In this research, the researcher checked content and construct validities

a.) Content validity

Martens and McLaughlin (2004:174) stated as follows:

If the purpose of test is to measure the effect of a s specific teaching strategy or curriculum, then the researcher can establish content validity by determining if the knowledge, skill or attitude measured by test matches the information included in the lessons actually taught. A specification matrix, which crosses the items of the measurement device and the objectives of the lesson or curriculum, can be helpful in establishing content validity.

So, content validity is the correspondence between curriculum objectives and objectives being assessed. The instrument of this research had content validity since the test as designed based on the KI-KD in Curriculum 2013. It can be seen in Appendix 4.

In this research, the researcher also learned and consulted with the English teacher about the content validity of the test. Based on the standard competent in syllabus of Curriculum 2013, it is mentioned that eight students of Junior High School

should be able to understand social function and language feature in song. In this case, the researcher only focus on students' ability in identifying towards language feature that concerned towards parts of speech in songs. Therefore, this test is valid in term of content validity.

In this research, the items test of parts of speech and parts of speech material that which is included in song were also suitable for eight grade students of SMPN 1 Sumbergempol Tulungagung because it easily understands and accepted for them.

b) Construct validity

Martens and McLaughlin (2004:175) stated as follows:

The researcher who wants to measure some attribute, such as intelligence or anxiety, must establish construct validity, that is provide that the test actually measures the intended construct and not some other characteristic, such as lack of access to information because of bias based on gender, class or disability.

Based on theory above, in this test, the researcher asked the students to answer the items test about filling the blank of identifying parts of speech to measure students' ability in identifying parts of speech and this fulfill the construct of parts of speech test and therefore valid in term of construct validity.

Besides that, the researcher tried to check the empirical construct validity by using SPSS 16.0 for windows after trying out the instrument of test (pre-test and post-test). In this research, the researcher used SPSS 16.0 for windows to know the validity of test instruments. It can be seen in Appendix 5.

Sugiyono (2015:179) states as follows:

Every test item can be seen valid or invalid by corrected item-total correlation. If the correlation under 0.30, it can be concluded that the test item invalid and it should be revised.

3. Reliability

Arikunto (2013:101) explained that “A reliable measure is one that provides consistent and stable indication of the characteristic being investigated”.

Another explanation is given by Ary et.al (2010:201) stated that “Reliability is the extent to which a test measures accurately and consistency”.

In this study, the researcher used SPSS 16.0 for windows to know the reliability of test instruments with reliability analysis. The researcher used Alpha Cronbach formulation. According to Triton as cited by Ningsih thesis (2015: 40) the value of

Cronbach's Alpha. Table 3.2 shows the interpretation of Cronbach's Alpha be interpreted as follows:

Table 3.2 Cronbach's Alpha Interpretation based on Triton

Cronbach's Alpha	Interpretation
0.00-0.20	Less reliable
0.21-0.40	Rather reliable
0.41-0.60	Quite reliable
0.61-0.80	Reliable
0.81-1.00	Very reliable

To get the reliability of test instrument, the researcher used SPSS 16.0 for windows to check. The result shown that Cronbach Alpha was 0.924. Based on Table 3.2 Cronbach's Alpha Interpretation based on Triton, it can be categorized was very reliable. The result of Cronbach Alpha computation by SPSS 16.0 for windows can be seen in Appendix 6.

F. Normality Testing

Normality testing is conducted to know whether the gotten data is normal or not. In this research, normality test is done toward the result score tests (pre-test and post-test) towards students' ability in identifying parts of speech. To know normality, the researcher used

One Sample Kolmogorov-Smirnov Test by using SPSS 16.0 for windows. Table 3.3 show the output of normality testing, as follow:

Table. 3.3 One Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		31
Normal Parameters ^a	Mean	.0000000
	Std. Deviation	7.35501939
Most Extreme Differences	Absolute	.173
	Positive	.173
	Negative	-.160
Kolmogorov-Smirnov Z		.966
Asymp. Sig. (2-tailed)		.309
a. Test distribution is Normal.		

Based the table above, it knows that the Asymp. Sig. (2-tailed) is 0.309. Sujarweni (2014:55) stated that “If sig.> 0.05 then the data is normal distribution, while if sig.< 0.05 then the data is not normal distribution.” In this research, based on the result table above is 0.387 > 0.05. Hence, it can be concluded that the data is normal.

Mertens and McLaughlin (2004:226) said that:

T-test, inferential statistical tests are used when you have two groups to compare. If the groups are independent, the t-test for independent sample is used. If two sets of scores are available for the same people, the t-test for correlated sample is used.

In this research, the researcher used t- test for correlated sample because same students or people result two score. Because the data is normal distribution, then, the researcher analyzed the data by t-test which is classified in parametric statistics. Mertens and McLaughlin (2004:226) said that “Parametric statistics is statistical technique is used when the data is normally is distributed in the population”.

In this research, the data obtained is normal distribution, then the researcher analyzed the data by using Paired Sample T-test through SPSS 16.0 for windows. It also was pointed out by Sujarweni (2014:62)

G. Data Analysis

The data are obtained from this research in the form of scores and the data analyzed quantitatively by using statistical analysis. This technique used to find the significant difference score on students' ability in identifying parts of speech after being taught by using song lyrics.

In this research, the researcher used SPSS 16.0, the researcher analyzed the data using paired or correlated sample T- test (Sujarweni, 2014:100). Sujarweni (2014) stated that “Paired Sample-T-test is used to determine whether there is or not the different mean of two samples. Two samples here mean that the same sample but have two data”. The researcher used this SPSS 16.0 for windows to know whether using of

song lyrics as the treatment can influence / effective or not to the students' ability in identifying parts of speech. It used for measuring the students' ability in identifying parts of speech achievement after given some treatments. Then, it can be concluded by testing the hypothesis.