CHAPTER III

RESEARCH METHOD

This chapter presented some points related to the research design, population and sample, research instrument, validity and reliability testing, data collecting method, and data analysis.

A. Research Design

Research is an activity to observe again about something which is done by researcher. Based on Creswell (2012), Research is a process of steps used to collect and analyze information to increase our understanding of a topic or issue. The research may be conducted because the researcher's curiosity, the researcher wants to find a novelty about the phenomenon which they find in the world.

The research approach used in this research is Quantitative approach. This purpose of the quantitative research design is to make generalization from te sample to the population, to make prediction, to testing the effectiveness of certain method or media teaching. In this research, the researcher tried to research how the Voice of America (VOA) News is effective for student's vocabulary achievement. According to Arifin (2012) states that experimental design is the plan which consists of the steps and action that will be done in the activity of experimental research. The purpose of this research is to know the effectiveness of using Voice of America (VOA) News to increase student's vocabulary

achievement in the first of senior high school at MAN 1 Trenggalek. So the researcher chose experimental research design.

The experimental researcher design involves into three classifications, those are Pre-experimental, Quasi-experimental, and True-experimental. The researcher used Quasi experimental research design which used two groups. Quasi experimental is one of experiment research design which the researcher used two groups to do the research. Technique sampling in quasi experimental research design is choosing the subject of research randomly. The first group was Experiment group, the group which given the treatment. The second group is the control group, the group which is not given the treatment. The research gave the pre-test and post-test in two groups.

Variable is the characteristic of something that will be researched. According to Sugiyono (2014) variable of study are every things that studied by researcher. So that, there are two variables in this study:

a. Independent variable

Independent variable is the one affecting another variable or the variable which influence dependent variable. In this research, voice of America (VOA) News is independent variable to teach vocabulary.

b. Dependent variable

Dependent variable is the one affected by another variable. In this research, the dependent variable is the students' score in the vocabulary.

B. Population and Sample

a. Population

A population is the subject which used in this research. According to Ary *et. Al.,* 2010) the population is defined as all members of any well-defined class of people, event, or objects. Arikunto (2006) said that population is whole of research subject. Meanwhile Usman and Akbar (2008) explain that population is all of value whether calculation or measurement, quantitative or qualitative from certain characteristic of a group of complete and settled object. The population which used by the researcher in this research is students of senior high school in MAN 1 Trenggalek which consists of 11 classes.

b. Sampling

Sampling is the way that used by researcher to select the number of individuals as a sample in the study. According to Ary, Donald et. Al., (2010), sampling is indispensible to researcher. In this research, the researcher took two groups randomly. The random sampling is a sampling technique in which each subject has a chance to be selected because of chance methods or random number. The researcher writes the class in four papers, thus papers will be written the class name. The researcher will take two papers from four papers randomly. Two papers which taken by the researcher will be the experiment group in the first taken and the second taken will be the control group.

c. Sample

Sample is part of the total number and characteristic belong to population. Based on Arikunto (2006) sample is part of population which is researched. According to Ary (2002) a sample is a person of population. Two classes which have taken randomly by the researcher are IIK 2 and IIS 2. The experiment group was IIK 2 (Agama class). The experiment class consists of 35 students. The control group was IIS 2 (Social class). The control group consists of 36 students.

C. Research instruments

Instrument of research is a tool which used to collect data in a research. According to Sugiyono (2011) instrument of research are the tools to measure something that we observe in order to obtain the data and the answer the research problems. The instrument used in this research is a test. According to Ary et. al., (2010) a test is a set of stimuli presented to an individual in order to elicit responses on the basis of which are numerical score can be assigned.

The researcher gave two tests to experiment and control group. The test was conducted into pre-test and post test. The pre test was given before taught using Voice of America (VOA) News in the experiment and control group. According to Creswell (2008) A pre-test provides a measure on some attribute or characteristics that assess for participant in an experiment before receive a treatment. The purpose is to know the student's vocabulary achievement before taught using Voice of America (VOA) News. Pre-test consists of some questions

in the form of multiple-choices (15 questions) and matching word (5 questions). The total of the questions were 20 questions and the topic about the news in the word which is the third material teaching in the senior high school.

Based on Creswell (2008), a post-test is a measure on some attribute or characteristic that is assessed for participants in an experiment after a treatment. The researcher gave post-test to the experiment and control group after the experiment group got the treatment. In this research, the post-test consists of some questions in the form of multiple-choice and matching word. The questions consists 20 questions.

D. Validity and Reliability testing

In this research, the instrument which used is test. To measure the instrument of research, the researcher should understand two concepts when the researcher measuring the instrument. Those are validity and reliability.

1. Validity

A test called valid when the test was appropriate with the items which used in the learning process. According to Brown (2000) Validity is the degree to which the test actually measures what it is intended to measure. Brown also explained about three types of validation, those are

a. Content validity

Base on Gay (1992) explained Content validity is a degree which a test measures an intended content area. The content validity is test which only representative or not all subject to be measure. The test is called

have content validity if its contents constitutes a representative sample of the language skill, structures which being tested. The validity should require with the item validity which it measured intended the content area and sampling validity which was used to know how well the test samples total content relevant with the purpose. The researcher convinced that the test items are valid of the content validity because the test was made based on the curriculum 2013, syllabus and the topic which is discussed.

b. Face validity

Face validity is a term which used to connection with test content. The face validity refers to which examinees believe that the instrument is measuring what it is supposed to measure. In this study, the researcher assures that the test items are valid in the term of face validity, because the test is in the form of objective test which was consulted by English Lecture and English teacher of MAN 1 Trenggalek.

c. Construct validity

According to Gay (1992), construct validity is the degree to which a test measures an intended hypothetical construct. The construct validity is measure about the degree of student's behavior. The test can be called construct validity if the test measures the ability which wants to be measured. The researcher was given the students some questions which content of multiple-choice based on the video which was played

by the researcher. The questions were consisted of 15 questions about the video which the researcher played. The researcher asks to the lecture and the English teacher of MAN 1 Trenggalek about their opinion about the instrument. After the researcher fixes it, the researcher conducted try out to the student.

The purpose of the test validity is to measure the research instrument, after making the research instrument which contained of 5 matching the text of the word and the definition of the word and 15 multiple choices. The researcher asked to English teacher of MAN 1 Trenggalek, to make the validity of the instruments. The English teacher gave the validity of the instrument based on the table validity testing.

Based on the validity instrument testing, there are 4 points, which are tested on the instrument before the instruments are played in the classroom. Those are

A. Validasi Ahli Terhadap Instrument Penelitian

Nama Validator : Deti Sulaibah S.Pd

Keahlian   : Guru Bahasa Inggris

Petunjuk pengisian tabel penilaian instrument

1. Berdasarkan pendapat bapak/ibu berilah tanda centang (√) pada kotak yang tersedia sesuai kriteria penilaian sebagai berikut:

4. Sangat Baik   2. Kurang Baik

3. Baik   1. Tidak Baik

2. Jika perlu ada yang dikomentari atau disarankan, mohon tulis pada bagian komentar atau saran atau langsung pada lembar instrument penelitian

SKOR VALIDASI

No	KriteriaValiditas	SkalaPenilaian			
		1	2	3	4
1.	Kesesuaian test dengan indicator			√	
2.	Ketetapan penggunaan kata/Bahasa			√	
3.	Tes tidak menimbulkan penafsiran ganda			√	
4.	Kejelasan yang diketahui dan yang ditanyakan dalam test			√	

Figure 3.1 validity testing

From the data above and the theory of the criteria of validity of the instrument the researcher can make the conclusion that the research instrument is enough valid to measure the research instrument.

2. Reliability

Based on the Ary (2002) Reliables concerned with the effect such random errors of measurement on the consistency of score. The reliability shows a measure of consistency in measuring the same phenomenon. The ideal test should be valid and reliable. In this research, the researcher used SPSS 23 know the

reliability of the test instruments. According to Ridwan (2004) explained that the criteria of reliability instrument can be divided into 5 classes as follows:

a. If the *alpha cronbach* score 0.00-0.20: less reliable

b. If the *alpha cronbach* score 0.21-0.40: rather reliable

c. If the *alpha cronbach* score 0.41-0.60: enough reliable

d. If the *alpha cronbach* score 0.61-0.80: reliable

e. If the *alpha cronbach* score 0.81-1.00: very reliable

After getting the validity from the teacher, the researcher tried to try out the research instrument to get the reliability. The researcher used the analysis system that is using SPSS 23. The research instrument was tried to 5 students of the tenth grade of the senior high school. The researcher got the score based on the table:

Reliability Statistics

Cronbach's Alpha	N of Items
.557	20

Table 3.1 Reliability Testing

From the table above the researcher got the cronbach's Alpha was 0.557, the result means that the research instrument is reliable enough to measure of consistency in the measuring the same phenomenon.

To make the research instrument reliable, the researcher made a revision on the 5 questions are not reliable enough. After making revision, the researcher

tried out the instrument to 5 students of Senior high school the first grade. The result of the second tryout, the researcher got the cronbach's Alpha was 0.756, and the conclusion that the research instruments are reliable for the first grade of senior high school in testing vocabulary.

E. Data Collecting Method

In this research, the researcher used test to collect the data. According to Arikunto (2013), he explained that to measure how far the ability of object, the researcher must use test. The instrument of test which was chosen is Multiple-choice. The test gave twice to control group and experiment group. The technique of collecting data was clarified as follows:

a. Pre-test

The control and experiment group were given the pre-test before the experiment group got the treatment by using Voice of America (VOA) News. The purpose of the test is to know the students score before the experiment group got the treatment by using Voice of America (VOA) News. The test followed by 81 students which is 36 students from experimental group and 35 students from control group. The test included multiple-choice. The test consists of 5 matching word questions and 15 multiple-choice questions. The pre test did on the Friday, 23th of March 2019 for control class, the pre test did in the XIIS 2 classroom at 11 o'clock and the experimental group was 22th of March 2019 at 10 o'clock. The place which used for pre test he

experiment group was on the XIIK 2 classroom. The question can be seen on the appendix 2 on pages 62.

b. Post-test

The control and experiment group were given post test after the experimental group got the treatment by using Voice of America (VOA). The purpose is to know the student's score after the experiment group got the treatment by using Voice of America (VOA) News. The test did on 19th of April 2019, at 10 o'clock for experimental group, the place which used to do post test was XIIK 2 classroom and 20th of April 2019 at 11 o'clock for control class, the place which used to do post test for control group was XIIS 2 classroom. The test followed by 81 students which is 36 students from experimental group and 35 students from control group. The test included matching word and multiple-choice. The test consists of 5 questions of matching and 15 multiple-choice questions. The question can be seen in appendix 3 on pages 67.

c. Procedure of treatment

The procedure of treatment is the way to do or to apply the media. The treatment in this research was playing Voice of America (VOA) News in the classroom. The video was taken from voice of America broadcaster media from America. The researcher chose the video was related to the material of senior high school. The researcher applied the media in the classroom. The video duration was 2 seconds. The

researcher played the video three times and asked the student to write what they hear, look or get from the video.

F. Data Analysis

In this research, the researcher used T-test using statistical program to ensure the effectiveness of the treatment. Based on Suprayoga (2014) Data analysis is a review of a series of activities, grouping, systematization, interpretation and verification of data that phenomenon has social value, academic and scientific. The data got from the research result of students test which were analyzed quantitatively. The data result were process by comparing the mean of the pre-test and post test of two groups which were control and experimental group to see the differences of the mean score. The researcher used SPSS 23 to analysis the data.