CHAPTER III

RESEARCH METHOD

In this chapter the researcher presented some points related to this research included research design, research variable, population, sample, sampling, research instrument, the validity and reliability testing, normality and homogeneity testing, formulation of the hypothesis, procedure of the test, and data analysis.

A. Research Design

The researcher used Quasi-Experimental research. Quasi-Experimental research was one of experimental research design which suggested casual relationship in result finding. This is one of quantitative research that is different from other types of research. The researcher controlled or manipulated one or more independent variables then, measure how the treatment effective each group (Lodico et al., 2006).

This study conducted in experimental research to know the effectiveness of Online Dictionaries on the tenth-grade students' pronunciation achievement. This study used quasi experimental research design because this type of design is commonly used as a cost effective way to conduct exploratory research to see if there is any evidence that warrants a full scale experimental study. In this case, the researcher determines to select two intacs group. The first was given treatment, called experimental group and the other group was not be given a treatment,

called control group. Then, both of two groups would be given pretest to know the beginning condition that was there any differences between control group and experimental group.

In this research, the researcher used design of experimental research design; Nonrandomized control group, pretest-posttest design (Ary et al., 2010). Experimental Nonrandomized control group, pretest-posttest design is conducted with two groups; experimental group and control group, which both groups is given pretest and posttest. Lodico et al., (2006) states the control group is a separate group that receives no treatment or a different treatment, while the experimental group is the group which received a treatment. The designed as follow:

Table 3.1 Nonrandomized Control Group, Pretest-Posttest Design

(Ary et al., 2010)

Group	Pretest	Independent Variable	Posttest
E	Y_1	X	Y_2
C	Y_1	-	Y_2

Note:

E   : Experimental group

C   : Control group

Y1 : Pretest in experimental group before treatment (X IPS 2)

Y1 : Pretest in control group (X IPS 4)

Y2 : Posttest in experimental group after treatment (X IPS 2)

Y2 : Posttest in control group (X IPS 4)

X   : Treatment in Experimental group (X IPS 2)

-    : The group without treatment or using conventional strategy (X IPS 4)

According to the table above, there were two groups. The first was E group, namely experimental group. The students in experimental group receive online dictionaries as the treatment of the study. The second group was C group, namely control group. In other hand, the students in control group receive a conventional strategy without treatment. It means that the researcher wants to know if there is any significant differences in students' pronunciation achievement by using Online Dictionaries and without using Online Dictionaries. The researcher used Online Dictionaries in experimental class but did not used in controlled class. Finally, both experimental and control group was given test before (pretest) and after (posttest) the treatment.

B. Population, Sampling, and Sample

This sub-chapter represents population, sample, and sampling that were used by the researcher, there were defined as follows.

1. Population

The larger group to which one hopes to apply the results is called the populations (Jack R. Frankel, et al., 1932). According to Nurhayati (2018) Population is the object / subject that have some qualities and characteristics that are chosen to be learned and to be concluded by the researcher. The population of this study is the tenth grade students of SMAN 1 Ngunut in 2018/2019 Academic year that consists of 359 students. The tenth grade of SMAN 1 Ngunut consisted of 11 classes that was divided into 2 class types based on students' interest, there were MIPA (Sains) and IPS (Social).

Table 3.2 List of Population

Class	Male	Female	Total
X MIPA 1	8	26	32
X MIPA 2	10	24	34
X MIPA 3	9	25	34
X MIPA 4	9	24	33
X MIPA 5	8	26	34
X MIPA 6	9	25	34
X IPS 1	10	25	35
X IPS 2	9	21	30
X IPS 3	10	22	32
X IPS 4	9	22	31
X IPS 5	11	19	30
Total			359

2. Sampling

Sampling was the process of taking sample. The researcher used purposive sampling. Then researcher used two class that had been researched. According to Palys T. (2008) a purposive sample is non-probability sample that is selected based on characteristics of a population and the objective of the study. Purposive sampling is also known as judgmental, selective, or subjective sampling. This type of sampling can be very useful in situations when the researcher needed to reach a targeted sample quickly, and where sampling for proportionally is not the main concern.

In purposive sampling, the researcher used expert judgment to take some representative of typical cases from population. First, identify important variation

sources of population, then choose the cases that were suitable with the variation sources. Purposive sampling used the researcher based on a certain consideration and the main consideration was the chosen classes had homogeneous in pronunciation achievement. In other words, the students had same average proficiency.

3. Sample

A sample is a research study is the group on which information is obtained (Jack R. Frankel, et al., 1932). The sample of this research take two group purposively. One group as experimental group and one group as control group.

In this study, the researcher takes two classes from 11 classes. The sample class is class X IPS (IPS 2 and 4) as a sample which the samples were class X IPS 2 as experiment class and class X IPS 4 as a control class. The reason of the researcher; first, they have a same level of knowledge in learning English and the students of this class has difficulties to follow pronunciation learning in English subject based on suggestion from the English teacher who taught English in both of the class.

Table 3.3 The Research Sample by Class

No.	Class	The Number of Students
1.	X IPS 2	30
2.	X IPS 4	31

C. Research Variable

A variable is a characteristic or attribute of an individual or an organization that writers can measure or observe and varies among individuals or

organizations studied (Creswell, 2012). There were two variables in this research, there were:

1. Independent Variable

According to Creswell (1994) independent variable is called treatment conditions or factors in an experiment. These treatment conditions are under the control of the researcher and typically are manipulated in experiment. Independent variable is those that the researcher chooses to study in order to assess their possible effect(s) on one or more other variable. An independent variable is presumed to affect (at least partly cause) or somehow influence at least one other variable (Jack R. Fraenkel et al., 1932). In other words, independent variable is causes. In this research the independent variable was Online Dictionaries.

2. Dependent Variable

Creswell (1994) state that the dependent variable is the response or the criterion variable presumed to be "caused" or influenced by the independent treatment condition. According to Jack R. Fraenkel et al. (1932), dependent variable is the variable that the independent variable is presumed to affect. In others words, dependent variable is the effect variable. In this research the dependent variable was the students' pronunciation achievement.

D. Research Instrument

Instrument of the research is a tool which be used by the researcher in collecting data. It means any research needs instrument for gathering data. According to Arikunto (2010) there are many kinds of instruments such as test, questionnaire, interview, rating scale, observation, and documentation. The

instrument that is used in this research is test. Test is a set of stimuli presented to an individual in order to elicit responses on the basis of which a numerical score can be assigned (Ary, 2010). It means, from a test the teacher got quantitative score which analyzed by the tester.

In collecting the required data, the research adapted the speaking performance Scale for UCLA (University California, Los Angeles) Proficiency Test for Nonnative Tas the pronunciation part (Murcia, 1996). There were two kinds of tests in this study, they were pretest and posttest. Pretest was intended to measure students' pronunciation achievement before the treatment given. While, posttest was to measure students' pronunciation achievement using the treatment given.

The pretest and posttest were about pronunciation. Both pretest and posttest consist of some questions related to the pronunciation, the total of items were a hundred in the form of pronouncing words in isolation (20 item), pronouncing words in sentence (20 item), reading a conversation (30 item), and reading passage (30 item). Before the instrument used to collect the data, the researcher conducted try out. It was used to collect the data reliability of the instrument. Try out was administered in another class which was not involve during the research process. Try out implemented to 30 students of X IPS 5 at SMAN 1 Ngunut. The researcher chooses this subject based on the suggestion of the teacher at the school.

Table 3.4 Student's Pronunciation Score

(Brown: 2004)

2	Acceptable pronunciation
1	Comprehensible partially correct pronunciation
0	Silence seriously incorrect pronunciation

E. Validity and Reliability Testing

1. Validity

Based on Gary (2005) validity is the complement to reliability and refers to the extent to which what we measure reflects what we expected to measure. From Ary et al. (2010) statement, the process of gathering evidence to support (or fail to support) a particular interpretation of test scores is referred to as validation. We need evidence to establish that the inferences, which are made on the basis of the test results, are appropriate.

According to Lodico et al., (2006) validity is generally divided into two concepts: internal validity and external validity. Internal validity is the degree or extent to which the differences in the dependent variable are due to the experimental manipulation and not some extraneous variable therefore, external validity is the degree to which the results are generalizable beyond the sample used for a study. There were four types of validity, such as content validity, criterion-related validity, construct validity and face validity. The researcher used content validity, construct validity and face validity in analyze the test. The aim is to measure whether the test has a good validity.

a. Content Validity

Content validity is the test that the content is relevant with the purpose of the test. According to Ary et al. (2010) the question on a test is representative of some defined universe or domain of content. It means the researcher must seek evidence that the test to be used represents a balanced and adequate sampling of all the relevant knowledge, skills, and dimensions making up the content domain. Content validity is the test that if has a good content is looked at from the content of test. It means a test has valid if the content of test is a representative among lesson given. The researcher combines both between the content of test and the material of test to know the test is valid or not. In this research. The test was designed based on Curriculum of 2013 as the school has implemented it. The content validity can be seen in the Table 3.5

Table 3.5 Content Validity

Kompetensi Inti	Kompetensi Dasar
4.Mengolah, menalar, dan menyaji dalam ranah konkret dan ranah abstrak terkait dengan pengembangan dari yang dipelajarinya di sekolah secara mandiri, bertindak secara efektif dan kreatif, serta mampu menggunakan metode sesuai kaidah keilmuan.	4.7.1 Menangkap makna secara kontekstual terkait fungsi sosial, structur teks, dan unsur kebahasaan teks recount lisan dan tulis terkait peristiwa bersejarah.

Table 3.6 Content Validity of Test

Competence Indicators	Instrument Test Items	
	Pretest	Posttest
Students are able to create spoken recount text about historical events by pronunciation correctly.	Speaking test (pronunciation)	Speaking test (pronunciation)

From the table above, the test has a content validity because there is appropriateness between the test and the indicator. It is appropriate with course objectives based on syllabus of the tenth grade of senior high school. In addition, the teacher in the school said that pronunciation learning always gives in the first lesson before going to the main of the lesson with the purpose to correct their pronunciation before the students reading and or retelling recount text.

b. Construct Validity

Construct validity shows how far the tests are suitable with the theory in composing those tests. According to Muijs (2004) construct validity is a slightly more complex issue relating to the internal. The instrument is constructed concerning aspects that measured. In this research, the researcher administered a writing test and the technique of scoring the students' pronunciation is based on the three aspects of pronunciation they were vowel, diphthong, and consonant. To measure the construct validity, the researcher was consulted to the expert. The expert who was chosen by researcher was advisor of this research a lecturer of IAIN Tulungagung, he was Mr. Dr. Susanto, SS., M.Pd. the expert would give

their opinion about the instrument which researcher made. In addition, the researcher also consulted with the teacher of English lesson of SMAN 1 Ngunut. After got the judgment from expert, the instrument could be tried out to the tenth grade students' of SMAN 1 Ngunut which consisted 30 students to find out the validity of the test.

c. Face Validity

Face validity is a term sometimes used in connection with a test's content (Ary, 2010). Face validity refers to a test can look what is supposed to measure. It means that the test should look clear or the instruction must be understandable for the students. The test in this research was designed to measure students' pronunciation achievement. Thus, to achieve face validity, the researcher provides the instructions on the paper test to ask students to pronounce.

In this study, the face validity was done through validator by the expert. The purpose of face validity which is used in this research is to check some aspects that are consideration in the test, they are:

1) To check that the instruction must be clear and understandable for the students.

2) The test is suitable with syllabus and the aims of learning.

3) Time allocation must be given clearly.

The test in this research was designed to measure the students' pronunciation achievement. To achieved face validity, the researcher provided a hundred items test to ask students to speak. the test items were pronouncing

words in isolation, pronouncing words in sentence, reading a conversation, and reading passage.

2. Reliability Testing

After having tested the validity of the instrument, the next step was to examine the reliability. A test considered reliable if the same test was given to the same subjects or matched subjects in two different occasions, the test should yield similar result (Brown, 2004). Wiersman and Jurs (2009) added that reliability is the consistency of the instrument in measuring whatever it measures. It means that if the instrument has a consistent result in the second chances or more, the instrument is reliable. The researcher used test-retest reliability to get the validity of the test that was measure for 30 students by *Pearson Product Moment*. The output of the try out test can be seen in the table below.

Table 3.7 The Score of Try Out Post Test

No.	Students	Test	Retest
1.	AFR	47	53
2.	ADP	51	52
3.	ANPD	35	38
4.	AB	43	64
5.	ADP	41	45
6.	BFRJ	43	45
7.	DATP	58	60
8.	ENM	36	42
9.	ENM	47	49
10.	FPS	60	59
11.	FN	59	59
12.	IAA	43	44
13.	IF	47	48
14.	KMFH	50	49
15.	KMP	56	50
16.	LH	60	56

17.	MCI	41	41
18.	MDN	47	52
19.	MIS	67	60
20.	MAAN	59	63
21.	MYM	65	71
22.	NAA	67	71
23.	NNA	45	63
24.	PZP	55	49
25.	PND	79	74
26.	RA	64	64
27.	RKJ	51	47
28.	SUPA	65	58
29.	TAT	68	57
30.	YPP	61	66

Based on the Table 3.7 above, the researcher used X IPS 5 twice in the different days to get data in the form of score to get the reliability of the test that measured in experimental class and control class. The researcher concluded that the score of the students were same in the difficulties level test. The statistical of the reliability test by using *Pearson Product Moment* can be seen below.

Table 3.8 The Statistical of *Pearson Product Moment* from IBM SPSS

Statistical 16.0

		test	retest
test	Pearson Correlation	1	.791**
	Sig. (2-tailed)		.000
	N	30	30
retest	Pearson Correlation	.791**	1
	Sig. (2-tailed)	.000	
	N	30	30

**. Correlation is significant at the 0.01 level (2-tailed).

Based on the table above, can be seen that test-retest reliability value was 0.791. If the result of Pearson Product Moment under 0.050 test was not reliable.

But, if the result of Pearson Product Moment more than 0.050 test was reliable. In other words, to get reliability of the instrument, the result of Pearson Product Moment must be more than 0.050. It means that the instrument which used of the researcher was reliable.

F. Normality and Homogeneity Testing

1. Normality Testing

Normality testing is conducted to determine whether the data are normal distribution or not. The researcher used SPSS.16 One-Sample Kolmogorov Smirnov test by the value of significance (α) = 0.050. Basic decisions making in normality testing are as follows:

a. If the significance value > 0.050, then the data has normal distribution.

b. If the significance value < 0.050, then the data does not have normal distribution.

2. Homogeneity Testing

Homogeneity testing is conducted to know whether the data has a homogeneous variance or not. To know the homogeneity, the researcher used Homogeneity of Variances Test by using SPSS 16.0 version the value of significance (α) = 0.050. Basic decisions making in homogeneity testing are as follows:

a. If the significance value > 0.050, then the data distribution is homogeneous.

b. If the significance value < 0.050, then the data distribution is not homogeneous.

G. Procedures of the Test

The data collecting methods and instrument were needed to obtain the research data. The method of collecting data used in this research was administering test. According to Ary et al. (2010) the tests were valuable measuring instruments for educational research. Then, he defined test as a set of stimuli presented to individual in order to elicit responses on the basis of which a numerical score can be assigned. It means that by conducting the test, the researcher would get numerical score to collect the data.

The function of pretest was to know students' pronunciation achievement before getting the different treatment. Whereas the function of posttest was to know the result of the experiment after the treatment had been given. The procedures in collecting the data were:

a. Pretest

Pretest refers to a measure or test given to the subject prior to the experimental treatment. This aims to know the basic competence and their earlier knowledge before they get the treatment in pronunciation. In the testing process, the students pronounce some words of the pretest. This result of the test became the evaluation before using Online dictionaries in teaching pronunciation is applied in the class. The test consists of a hundred number item and the material about historical recount text from syllabus. The time for the students is 7 minutes. The time allocation is 90 minutes to test.

b. Treatment

Treatment here meant that the researcher used Online Dictionaries as a media in teaching process. To know the schedule of the research can be seen in Table 3.9 below:

Table 3.9 The Schedule of the Research

No.	Group	Meeting	Date	Activity	Time
1.	Control (X IPS 4)	I	Tuesday, January 29th 2019	Pretest and Treatment 1	3 – 4
2.	Experimental (X IPS 2)		Monday, February 4th 2019	Pretest and Treatment 1	5 – 6
3.	Control (X IPS 4)	II	Tuesday, February 12th 2019	Treatment 1 conventional	3 – 4
4.	Experimental (X IPS 2)		Monday, February 11th 2019	Treatment 2 by using Online Dictionaries	5 – 6
5.	Control (X IPS 4)	III	Tuesday, February 19th 2019	Treatment 3 conventional	3 – 4
6.	Experimental (X IPS 2)		Monday, February 18th 2019	Treatment 3 by using Online Dictionaries	5 – 6
7.	Control (X IPS 4)	IV	Tuesday, February 26th 2019	Treatment 4 conventional	3 – 4
8.	Experimental (X IPS 2)		Monday, February 25th 2019	Treatment 4 by using Online Dictionaries	5– 6

The test was given by conducted pretest and posttest which consisted with pronunciation test. Those tests done on first meeting and the last meeting. While

the treatment was given after pretest and before the posttest. In this study, the group was got the treatment by using Online Dictionaries is experimental group only. Thus, the researcher would explain more about those treatment. The procedures of treatment can be seen as follows,

First, treatment was conducted on February 4th 2019. Before beginning applied the Online Dictionaries as a media, the researcher conducted a pretest. Then, the researcher introduced the Online Dictionaries used in treatment for teaching pronunciation by hearing sound from Online Dictionaries (dictionary.cambridge.org). Then, the researcher asked students' to prepared their own smartphone which was connected by WI-FI in their class. By listen at time, the researcher explained two kinds sound in that Online Dictionaries. Then, the researcher was giving the exercise to the students' after five minutes was listened. The exercise to match the words with their meaning for 10 questions. The students had to listened the words which got from the first exercise and practiced at that time. In the last time for the first treatment the researcher gives the opportunities to ask about the lesson that they do not understand then the researcher asked the students to learn more by using Online Dictionaries at home.

Second, treatment was conducted on February 11th 2019. In the second meeting, the researcher asked students to prepared their own smartphone which was connected by WI-FI in their class and opened their Online Dictionaries. After five minutes prepared, the researcher was giving the text entitled "The Battle of Surabaya" and text no title to the students. The students had to listened the words which they got from the first text and the students let practiced at that time. Then,

the students given the time to fill blank word in the text. the students asked to get some strange word from the text then checked the meaning and sound in Online Dictionaries. In the end of the second meeting, the researcher gives the opportunities to ask about the lesson that they do not understand then the researcher asked the students to learn more by using Online Dictionaries at home.

Third, treatment was conducted on February 18th 2019. In the third meeting, the treatment was same with the second meeting. The students got the third text from their book which also fill in the blank. After the students' practiced some words in the text, the researcher asked the student to attention for words that given by dictation from the researcher. Then, the students write down on their own book. In the end of the meeting the researcher asked the students to answer the questions from the text "Tambora Volcano". The last minutes from the treatment, the researcher asked the students to learn more by using Online Dictionaries.

Fourth, treatment was conducted on February 25th 2019. In the fourth meeting, the students given the treatment was same with the second meeting. The students' continued to read "Tambora Volcano" and find out the strange words and checked in Online Dictionaries. After they checked in Online Dictionaries, the students given the time to practice, at the end of meeting the researcher conducted a posttest to get the result of treatment that has been done in the form of score.

c. Posttest

Posttest is one kind of test which given after treatment. A posttest was a measure on some attribute or characteristic that is assessed for participants after a

treatment, Creswell (2008). Posttest was given in the last meeting of learning process. It was used to measure student's achievement after given treatment. In this study, the posttest was conducted in the last meeting using treatment in experimental class and without treatment in control class process. The test consists of a hundred number item and the material about historical recount text from syllabus. The time for the students is 7 minutes. The time allocation is 90 minutes to test. After the researcher knew about score of the test, the researcher compared both of the score.

H. Data Analysis

According to Marshall and Rossman in Vosloo (2014), describe data analysis as the process of bringing order, structure and meaning to the mass of collected data. It is described as messy, ambiguous and time-consuming, but also as a creative and fascinating process. The researcher used quantitative data analysis by using statistical computation. The data collected was processed by comparing students' pretest and the posttest score to see whether there significant different after given by treatments. To know the significant differences researcher used SPSS 16.0 version. The output of T-test showed in the chapter 4.