

CHAPTER III

RESEARCH METHODOLOGY

In this chapter, they are to elaborate research design involving research method, the time and place of the research, population and sampling, research variable, technique collecting the data, basic competence, lesson plan, research instrument, data analysis technique, validity and reliability, the research procedure.

3.1 Research Design

This study aims to determine the effectiveness of the used INKredible handwriting note application as media in writing learning because it used quantitative methods. Research method is quantitative that emphasize objective aspects of measurement of social phenomena, besides that to be able make measurements every social phenomena is described into several components of the problem, and variables.

This research is used pre experimental design, it is a kind of research that is conducted in the classroom by a teacher. The researcher used quantitative data to answer the research questions. It was a one group pretest posttest design. It is one single group which was measured or observed not only after conducted the treatment, but also before treatment (Fraenkel,et.al 2012:269).

Table 3.1 the one group pretest posttest design (Fraenkel,et.al 2012:269).

<i>O</i>	<i>X</i>	<i>O</i>
Pretest	Treatment	Posttest

3.2 The Time and Place of the Research

The setting of research was in SMA MUHAMMADIYAH 10 Surabaya, it is located at Jl. Genteng Muhammadiyah of Surabaya, academic year at 2018/2019. The time of the research is was 23rd April 2018, 30 April 2018, 14th May 2018.

3.3 Population and Sampling

3.3.1 Population

Best (1981:8) says that “population is any group of individuals that have one or more characteristics in common that are of interest to the researcher”. In this research, the researcher took the students of tenth grade in SMA Muhammadiyah 10 Surabaya which located Jl. Genteng Muhammadiyah No 45.

3.3.2 Sample

According to Best (1981:8) “sample is small of population selected for observation and analysis”. In this research, the sample of the study was one class MIA 1 as the pre-experimental design. Furthermore in this research, the researcher used purposive sampling. Tankonyvtar mention that this sampling method is selected on the basic that members conform to certain stipulated criteria. The student is not the purposive sample because they are dislike to learn about English especially in writing skill, the students very lazy to learn about announcement text but after giving the treatment using *INKredible Handwriting Note Applications* as instructional media to make announcement text and the student can easier understand to make announcement text. The sample of this research was tenth grade students from SMA Muhammadiyah 10 Surabaya, which consists of 22 students in classes X MIA 1.

3.4 Research Variable

There are two variables related to the research. There are dependent variable and independent variable. This study wants to explain about teaching writing.

3.4.1 Dependent variable

According to Creswell (2012:115) dependent variable is a characteristic that influenced by Independent variable .Dependent variable is a variable that cannot stand alone. In this research, the dependent variable is student writing skill

3.4.2 Independent variable

According to Creswell (2012:116) Independent variable an attribute or characteristic that influences or affects an outcome or dependent variable. Independent variable is the variable that can stand alone without dependent on the other. In this research, the independent is *INKredible Handwriting Note Applications*.

3.5 Research Instrument

Research instruments use to collect data validated by validator Armeria Wijaya, S.S.,M.Pd. and the lesson plan validated by validator Sofi Yuniarti, S.S, M.Pd. and Gta Febriani teacher of senior high school Muhammadiyah 10 Surabaya to all show that the instrument are valid.

3.5.1 Test

This purpose of test first the media is an effective tool to facilitated the learning process. The lesson material that the teacher explained verbally was made clearer by used the media. Second learning used media have many functions to focus students' attention on the subject matter being discussed. If used the media can attracts students' attention, it is likely that student understand. Third the use of media in teaching is an effective effort to stimulate student's leaning spirit. And the last the use of media in teaching can bring students closer to learning individually or classically. The goal is that students'' achievement can get reached in pass the passing grade.

There are several types of test given to students for this study, namely students are given a diagnostic test to determine the ability of students in English after that students are given a pre-test about the material of the announcement text with the theme in the paper then students can choose one of them. On the other hand, test was used as a monitoring instrument which could show the improvement of students writing ability in announcement text. The test was pre-test and post-test was used to know the students ability in learning writing before given the implemented. The result of this test was used to support the data of the class condition during teaching and learning process, students' response award to *INKredible* handwriting note application.

3.5.1.1 Diagnostic Test

Before the researcher gave the pre-test to the students, this research wanted to students' general knowledge about English lesson. So, that the research knew how far student knowledge of English. According to Brown (2003:46) said that a diagnostic test is designed to diagnose specified aspects of a language. On the other hand, this purpose diagnostic test is a test that helps the teacher and learners identify problems that they have with the language.

3.5.1.2 Pre-test

Pre- test were undertaken for the first step in a form of writing test. It was given before the students were given the treatment. The aim of the pre- test was to know the basic or prior knowledge and student skill in writing announcement text. According to Creswell (2012:297) A pre-test provides a measure on some attribute or characteristic that you assess for participants in an experiment before they receive a treatment.

3.5.1.3 Post Test

Post test conducted after the students given the treatment. It was in the same from like pre- test, in form of writing test. The aim of post -test was to measure the student skill in writing announcement text after they got the treatment. According to Creswell (2012:297) A post-test is a measure on some attribute or characteristic that is assessed for participants in an experiment after a treatment. It means that after give treatment to student the teacher hope can get higher score especially in writing announcement text because the student can create announcement text by using INKredible handwriting note application as media in teaching writing.

3.5.2. Observation Checklist

An observation checklist held in the classroom when the learning process beginning. This activity held to find out how the teacher implementation guided writing strategy in teaching writing announcement text. Observation Checklist consists of several important information activities that need to be observed during the learning process. The observation checklist was followed by field note. Field note appropriate the activity in the class. The writers make a note during the

learning process. This observe held in the ten grades of SMA Muhammadiyah 10 Surabaya.

3.5.3 Questionnaire

A questionnaire is one of a research instruments consists of questions given to respondent and designed to extract specific information. This questionnaire research used LIKERT SCALE (Rating Scales) as the scale used to measure perceptions, attitudes or opinions of a person or group about a social event or phenomenon, based on the operational definition set by the diagnostic test, pre-test, treatment, post-test and rubric score.

According to Siniscalco and Autriat (2005: 55) said that attitude scales usually consist of a number of attitude statements which are presented to respondents with a request that they should indicate whether they agree or disagree. Beside that the questionnaire before giving treatment consists of fifth questions to find which students were unfamiliar and familiar INKredible handwriting note application and after given treatment consists of eleventh question in form checklist by using media is better because it helps students understand the material with the real picture not just concepts or writing.

3.6 Criteria Of The Test

After all the quantitative data from quantitative research should be measured in validity and reliability. These two measurements should be done in order to check the validity and reliability the data of post-test.

3.6.1 Validity

Validity is used to know the assessment which is given by teacher is valid or not, before given assessment writing for students. According to Gronlund (1988:226) in Brown (2004:22) says that by the far the most complex criterion of an effective test and arguably the most important principle is validity, “ the extent to which inference made form assessment results are appropriate, meaningful, and useful in terms of the purpose of the assessment.”

Table 3.3 Validity of The Test

No	Name	Validity of the test		Date of the validation
		Yes	No	
1	Sofi Yunianti, S.S, M.Pd.	√		6 April 2018

3.6.2 Reliability

Reliability is the researcher should be connected the material like announcement text in learning process. According to Brown (2004:20) said that a reliable test is consistent and dependable. If you give the same test to the same students or matched students on two different occasions, the test should yield similar result. He said that there are fourth kinds of namely, student related reliability, rater reliability, test administration reliability, test reliability. On the other hand, the reliability of the research was obtained by giving genuine data, such as the field notes, observation checklist and other records.

3.6.3 Basic Competence Of Writing Skill For Senior High School Students At Tenth Grade Adopted By SMA Muhammadiyah 10 Surabaya (2018)

- To analyze social function, structure text, and element of language of announcement text that related to context.
- To catching the meaning of announcement text
- Arrange the announcement written text, shorten and simple with pay attention social function, structure text, and element of language which right and related to context (Febrina: 2011)

3.6.4 Lesson Plan

Lesson plan is as device for teacher before they teach. It is important one in leaning. Before the researcher conducted the research this lesson plan was validity by Sofi Yunianti, SS,M.Pd. The lecturer who expert in writing skill as validator 1 and Gita Febriani S.Pd. the English teacher in SMA Muhammadiyah 10 Surabaya as validator.

3.7 Data Analysis Technique

After setting the data the researcher want to calculate all of the data. The data gained from normality test using SPSS 17.0 software, the observation checklist, questionnaire, and *t*-test to analyzed using Microsoft Excel 2010 and paired

sample of test using SPSS 17.0 software. The researcher used normality test and *t*-test.

3.7.1 Normality Test

Normality test is being used to find out the data distribution are normal or not. In this case, the researcher will use SPSS 17.0 software based on formula of One Sample Kolmogorov-Smirnov to measure the normality of the test. The purpose of normality test is to know the data normal or not. To check this data, the criteria testing normality of standardization is 0.95%.

H_0 : The data is normal distribution

H_1 : The data is not normal distribution

H_0 push away, if $P_{(value)} > \alpha 0.05$, so the data is normal distribution

H_1 push away, if $P_{(value)} < \alpha 0.05$, so the data is not normal distribution

3.7.2 T-Test

The purpose of t-test is to analyze the difference of the students writing announcement text before and after treatment used INKredible handwriting note

The criteria of the test based on

H_0 push away, if $P_{(value)} < \alpha 0.05$, so the data is effective

H_1 push away, if $P_{(value)} > \alpha 0.05$, so the data is not effective

application as media to teach English lesson especially in writing announcement text. T-test to know is there significance or not implementation of the treatment. On standardization 0.95 with formula hypothesis.

H_0 = There is effectiveness of teaching writing announcement text by using INKredible Handwriting Note application at SMA Muhammadiyah 10 Surabaya

H_1 = There is not effectiveness of teaching writing announcement text by using INKredible Handwriting Note application at SMA Muhammadiyah 10 Surabaya

$$t = \frac{md}{\sqrt{\frac{\sum xd^2}{n(df)}}}$$

Explanation:

Md = Meant from derivation (d) between pre-test and post-test

T = t count

Xd = Deviation difference with deviation mean

Df = or db (n-1)

N = Size of the sample

3.8 Research Schedule

Research schedule is a plan for carrying out a process or procedure giving list of intended and times it means that research schedule very important to know activity in their school before taking our research data.

Table 3.4 Research Schedule

No	Schedule	Time
1	Met the headmaster to ask permission	20 January 2018
2	Meeting with the English teacher	31 January 2018
3	Diagnostic test for pre-experimental one group class	23 rd April 2018
4	Pre-test for pre-experimental one group class	23 rd April 2018
5	Treatment of writing announcement text using <i>INKredible handwriting note applications</i> in pre-experimental one group class	30 April 2018
6	Post-test for pre-experimental one group class with same material announcement text	14 th May 2018
7	Giving questionnaire for pre-experimental	14 th May 2018