

CHAPTER III

RESEARCH METHOD

This chapter is dedicated to discuss research design, population, sampling technique, sample, variable of the study, method of collecting data, treatment, research instrument, validity and reliability, data analysis covering normality and homogeneity, and hypothesis testing.

A. Research Design

Research design refers how the researcher collects the data and how she analyzes the data. This study used quantitative approach with the experimental research design. The writer chose experimental research to know the effect of independent variable to another variable or to know cause and effect relationship between/among variables. Particularly in this study, the researcher intended to know the effect of using Instagram vlog toward the students' speaking skills.

In this study, the researcher used one type of experimental study, namely pre-experimental, that is using one group pre-test and post-test. The experiment was conducted by giving a treatment to a single group, preceded by pre-test and followed up by a post-test after the treatment. Pre-test provided a measure on some attribute or characteristic that was assessed in an experiment before the group got a treatment, while in the post-test measured on some attribute or characteristic that assessed for participants in an experiment after the treatment.

The subject of the study was class VIII student Mts Imam Al Ghozali. The research interests students to have better speaking skills through Instagram vlogs. Data collection techniques in this study are in the form of tests. The data was collected during the study period of 3 weeks with 5 meetings, to collect research involving case studies by providing coordination and direction to create videos that focus on speaking skills. Researcher join the class to give instructions. Students come to the front of the class one by one to display the topic the teacher is given. Both researchers provide tips or materials and instructions for creating vlogs on Instagram, the last researcher gives final instructions to each student in front of the class one by one in text or material they have taken in the Instagram vlog in the teacher's instruction. Furthermore, the collected data was analyzed using IBM SPSS Statistics version 26.0, researchers perform a sample of pre-test and post-test steps to compare participants' scores on all three different shipments namely pre-test (time 1), post-test (time 2).

Table 3.1 the illustration of pre-experimental research design

Pre-test	Treatment	Post-test
Y ₁	X	Y ₂

Explanation:

Y₁ : Students' speaking skills achievement measured by a pre-test before treatment

X : Giving treatment by Instagram vlog application

Y2 : Students' speaking skills achievement measured by a post-test after treatment

According to table 3.1, the procedures of using one group in pre experimental study design were:

1. Administering pre-test to measure students' speaking skills achievement by a pre-test before treatment
2. Applying the treatment by Instagram application during teaching learning process.
3. Administering post-test to measure the students' speaking skills after the group received the treatment.

B. Population, Sampling, and Sample

1. Population

A population is defined as all members of any well-defined class of people, event, or object (Ary, et al. 2010: 148). It means that population is all subjects of the research. The population of this research was the eight graders students of MTs Imam Al Ghozali that consists of 25 students in the class.

2. Sampling

Sampling is the technique how to select the sample representatively. It means that sampling is the way to collect samples from the population of the same characteristics since it is not feasible to cover the entire research

object (population). Thus it only uses the part of population. Then, in deciding the sample, this study uses total sampling.

3. Sample

The sample is a portion taken from the entire object studied and is thought to represent the entire population (Notoatmojo, 2005). The sampling technique in this study is total sampling. Total sampling is a sampling technique where the number of samples is equal to the population (Sugiyono, 2007). The reason for taking total sampling is because according to Sugiyono (2007) the number of populations less than 100 of the entire population is used as a sample of all research. The sample in this study is class VIII of MTs Imam Al Ghozali that consists of 25 students in the class.

C. Variable

Ary et al (2010:37) says that variable is the constructs or the characteristics that would be studied. It means that variable is the focus of the study used in quantitative approach. In experimental study, actually the variables are classified into independent and dependent variables. Independent variable can be manipulated by experimenter. It means that independent variable could be intentionally created in order to give an effect to dependent variable. The independent variable in this current study was the use of Instagram vlog application. Different from the independent variable, dependent variable cannot be manipulated by the experimenter (Ary et al, 2010:266). This variable is affected by independent variable. In short, dependent variable could be called

as the outcome from the effect of independent variable. The dependent variable in the study was students' speaking skills.

D. Method of Collecting Data

The technique of collecting in research is important. According to Ary (2010) the test is valuable as a measuring tool for educational research. Data collection in this study was done by conducting pre-tests and post-tests. Later it was able to be used to find out the effectiveness of using Instagram vlog toward students' speaking skill of the eight graders at Mts Imam Al Ghozali. The technique of collecting the data was clarified as follows:

1. Pre-test

Refers to the test given to the subject before the experimental class treatment. It aims to determine their previous abilities, before they are given treatment. Pretest become held on January, 22nd 2022. This test is used to test students' speaking skills. Students were asked to make a vlog of their daily activities. They are free to tell about their daily activities and then students have to upload their vlog results on Instagram using their respective accounts. Vlogs are at least one minute long. When uploading vlogs on Instagram students must include their full names and must also mark the researcher's Instagram. After that, researcher rated their speech in four aspects: grammar, vocabulary, pronunciation, and fluency. Then the researcher gave feedback to the students through the comments column on Instagram.

2. Post-Test

After treatment, then given a post-test to students. The form of post test given to students is the same as when pre-tested. Pretest become held on January, 5th 2022. The test is used to check whether there is a significant influence of Instagram vlogs on students' confidence in speaking or not. In this study, the authors used the T-test to determine the difference in grades drawn from pre-test and post-test scores. Before performing the T-test calculation, the author first performs a normality test and a homogeneity test.

E. Treatment

Treatments are the step that must be conducted well and specific in experimental study. The purpose of treatment in this study is to help the students to more easily improve their speaking skills. Here, the students were guided to watch the videos in Instagram vlog.

The first meeting was held on 22nd January 2022, the researcher conducted a pre-test for 40 minutes. This test is used to test students' speaking skills. Students were asked to narrate daily activities via video and researchers rated their speech in four aspects: grammar, vocabulary, pronunciation, and fluency. After that, researcher introduced a special Instagram application to teach speaking skills. Then, researcher asked students to set up their own smartphones by downloading the Instagram app and having to log in with their own accounts. Here students are guided to watch vlogs on Instagram.

At the second to fourth meeting are for treatment. Researcher guide students to create Instagram vlogs. The second meeting was held on 26th January 2022, the researcher explained to the students about the simple present tense to pronounce sentences that occur everyday. Then the students were asked to follow the teacher talking. At the third meeting on 29th January 2022, the researcher asked students to practice speaking daily activity, then the researcher tried to give an assessment of whether the students had understood or not. At the fourth meeting on 2nd January 2022, the researcher gave another speaking test but with a different theme, namely school activities. Researcher also guide students to make vlogs and upload them to Instagram, after that the researcher give an assessment to see the progress of students.

At the last meeting on 5th February 2022, the researcher conducted a post-test. The test is performance test. The test is used to check whether there is a significant influence of Instagram vlogs on students' confidence in speaking or not. The schedules of this research are in the tables below.

Table 3.2 The schedules of Pre-Experimental Class

No	Date	Activities
1.	January, 22 nd 2022	Pre-Test
2.	January, 26 th 2022	Treatment 1 (Explained simple present tense)
3.	January, 29 th 2022	Treatment 2 (Practice make vlog daily activity)
4.	February, 2 nd 2022	Treatment 3 (Practice make vlog school activity)
5.	February, 5 th 2022	Post-Test

F. Research Instrument

In principle researching is to take measurements of social and natural phenomena. Researching with existing data is more appropriate if it is called making a report than doing research. However, in the lowest scale the report can also be expressed as a form of research (Emory, 1985). Because in principle researching is doing measurements, then there must be a good measuring instrument. Measuring instruments in research are usually called research instruments. So a research instrument is a tool used to measure observed natural and social phenomena. Specifically all these phenomena are called research variables.

In this research, the researcher used test. Test is method of measuring a person's ability, knowledge, or performance in a given domain. In this research, the test was used to test speaking skill. The researcher chose the test by conducting performance test. There are four indicators to be assessing in speaking skill test, such as the students are able to use appropriate grammar and vocabulary, students are able to speak fluently and good pronunciation.

G. Validity and Reliability

The quantitative research always depends on measurement and verify. These measurements are validity and reliability through the instrument of research. Based on explanation before the instrument of this research is test. The validity and reliability test is needed to verify the valid and reliable of scores that obtain from test.

1. Validity

Validity is the most important consideration in developing and evaluating measuring instruments. It means that validity is concerned with what a test measures and for whom it is appropriate, because a test that is valid in one situation may not be valid in another situation. Validity presupposes that the researcher can be explicit about what is to be tested and takes steps to ensure that the test reflects realistic use of particular ability to be measured (Weir, 1993: 19). Based on this research, the researcher used content and construct validity to know the validity of the test.

a. Face Validity

According to Ary et al (2010) face validity refers to the degree to which the test taker believes that the instrument is measuring the object to be measured. The researcher used face validity by consulting with supervisor and English teacher at MTs Imam Al Ghazali. The test in this research was designed to measure the students' vocabulary achievement. In this research there are some aspects that must be considered from this test to make a good test based on face validity. They were (1) compatibility with KI and KD, (2) pre-test and post-test are in accordance with the students' ability, (3) activities are systematically presented, (4) clarity of test speaking instructions, (5) clarity of intent of test speaking, (6) possible test speaking can be completed. In this test, the time given was about 40 minutes.

b. Content Validity

Content validity means that the instruments of the research should match with the curriculum. Moreover, content validity is a kind of validity which depends on careful analysis of the language being tested and of the particular test. In the context of this study, the content validity refers to the 2013 National Curriculum Indonesia. The researcher conducted consultation with the expert as the way to validate the test that has been set up. In this research the content of items in testing used test performance. It was suitable for the 8th graders of MTs Imam Al Ghozali because the tests were based on the basic competence in English syllabus of Junior High School.

Table 3.3 Basic Competence

KI.	Kompetensi Dasar	Indikator Pencapaian Kompetensi
3.	3.7 Menerapkan fungsi sosial, struktur teks, dan unsure kebahasaan teks interaksi transaksional lisan dan tulis yang melibatkan tindakan memberi dan meminta informasi terkait keadaan/ tindakan/ kegiatan/ kejadian yang dilakukan/terjadi secara rutin atau merupakan kebenaran umum, sesuai dengan konteks penggunaannya.	Mengidentifikasi teks lisan/tulis memberi dan meminta informasi terkait keadaan/ tindakan/ kegiatan/ kejadian yang dilakukan/terjadi secara rutin atau merupakan kebenaran umum, sesuai dengan konteks penggunaannya

	(Perhatikan unsure kebahasaan <i>simple present tense</i>) .	
4.	4.7 Menyusun teks interaksi transaksional lisan dan tulis sangat pendek dan sederhana yang melibatkan tindakan memberi dan meminta informasi terkait keadaan/tindakan/kegiatan/kejadian yang dilakukan/terjadi secara rutin atau merupakan kebenaran umum dengan memperhatikan fungsi social, struktur teks, dan unsure kebahasaan yang benar dan sesuai konteks.	Menyusun teks lisan/tulis memberi dan meminta informasi terkait keadaan/ tindakan/ kegiatan/ kejadian yang dilakukan/terjadi secara rutin atau merupakan kebenaran umum, sesuai dengan konteks penggunaannya

c. Construct Validity

Johnson (2001: 303) stated that construct validity deals with the relationship between a test and a particular view of language and language learning. It could be interpreted that the test should be appropriate with the theory of skills and language components that being measured. For measuring students' speaking skills by using Instagram vlog, first student should watch the video in Instagram, then they were asked to make their own video about daily activity. Then the video was uploaded on Instagram.

Table 3.4 Blue print of Speaking test

No	Indicators	Competency
1.	Students are able to introduce themselves <ul style="list-style-type: none"> • Greeting • Introducing 	Speaking
2.	Students are able to describe their daily activity	Speaking
3.	Students are able to correct sentence accurately <ul style="list-style-type: none"> • Grammar • Pronunciation • Fluency • Vocabulary 	Speaking

2. Reliability

Reliability is necessary characteristic of any good test for it to be valid at all. Reliability means the stability of test scores, a test cannot measure anything well unless it measures consistently (Harris, 1969:14). In addition, reliability measures accuracy, consistency, and dependability of fairness of scores resulting from administration of particular examination. The result of a language skill assessment has high reliability if the result precisely represents the true level of the skill being assessed (Brown, 2003: 20). To know the reliability of instrument in this research, the researcher give try out the instruments before conducting them into the pre-test and post-test.

This current study the test's reliability was identified by tryout and the resulted scores were analyzed to see its reliability coefficient. The researcher firstly did a try-out test in different class of the same grade as the experimental group. Try out was done on January 8th, 2022 in the eight graders at MTs PSM

Tanen. Students who participated in the try out as many as 20 students. The test given when trying out is test speaking. Students were asked to create a vlog recounting their daily activities and then uploaded it on their personal Instagram, then researchers gave a score.

In finding out the reliability of the test, the researcher used Cronbach's Alpha. And the result can be seen below.

Table 3.5 The result of reliability testing

Case Processing Summary		
	N	%
Cases		
Valid	20	100.0
Excluded ^a	0	.0
Total	20	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.822	5

According to Sujianto (2009:97), the criteria of reliability degree were as follow:

Table 3.6 the criteria of reliability

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

Since the reliability coefficient was 0.822, it means it was positively correlated and its strength was very reliable.

H. Data Analysis

To identify the effectiveness of using Instagram vlog toward students' speaking skills, this research using paired sample t-test by computing data from pre-test and post test. Descriptive statistic also used to identify the mean score and the frequency of students' score.

However before applying the t-test, some prerequisite statistical analyses were carried out. The use of t-test was preceded by Normality and Homogeneity Testing in order to see if the data obtained were normally distributed or not, in order to satisfy the statistical assumptions of using t-test.

1. Normality Testing

Normality test is used to test whether a variable is normal or not. Normal here means if the data have normal distribution. The main reason of conducting normality testing in a research that it is necessary for the researcher to know that the population or data involved in the research in normal distribution.

In this research to measure the normality testing, the researcher used SPSS 25 version One Sample Kolmogorov – Smirnov method by the value of significance (α) = 0.05.

Basic decisions in making normality testing were as follows:

- a. If the significance value > 0.05 , the data had normal distribution.
- b. If the significance value < 0.05 , the data did not have normal distribution.

2. Homogeneity testing

Homogeneity testing is used to know the similarity of the two conditions or population. Homogeneity testing is conducted to know whether the gotten data has a homogeneous variance or not. To identify the homogeneity of variance, this research used a Levene's Test. This test aimed to verify the equal variances between two data.

The value of significance (α) was 0.05. Basic decisions making in homogeneity testing were as follows:

- a. If the significance value > 0.05 , the data distribution was have equal variances (homogeneous).
- b. If the significance value < 0.05 , the data distribution was not equal variances (not homogeneous).

I. Hypothesis Testing

After conducting paired sample t-test by using SPSS 25 for windows program and determining that the significance level (α) is 0,05 or 5% (it has been programmed on the application) the final step of data analysis is testing the hypothesis, either rejecting or accepting the null hypothesis. The base of rejecting or not rejecting the null hypothesis is: If P-value (denoted by Sig) $\leq \alpha$ (5 %), H_0 is rejected and thus H_a is accepted. But, if P-value $> \alpha$ (5 %), H_0 is not rejected, or accepted and thus H_a is rejected.