

## **CHAPTER III**

### **RESEARCH METHOD**

In this chapter, the researcher discuss about the research design, the subject of the research, research instrument, variable of research, validity and reliability testing, normality and homogeneity testing, data collecting method, data analysis, and hypothesis testing.

#### **A. Research Design**

In conducting this research, the researcher used quantitative research approach. According to Gay and Airasian (2000:11), quantitative research is the approach is applied to describe current conditions, investigate relations, and study cause-effect phenomena. Creswell (2014:32) states that quantitative research is an approach for testing objective theories by examining the relationship among variables. These variables, in turn, can be measured, typically on instruments, so that numbered data can be analyzed using statistical procedure. The quantitative method involve the process of collecting, analyzing, interpreting, and writing research result. So, quantitative research is research method that studying phenomena by collecting numeric data, then analyzed it by using statistic program.

This type of research is experimental quantitative research. Experimental research is intended to determine whether there are consequences of something that is imposed on the subject of students, the way is to compare one or more experimental groups that are treated with one or more comparison group that did

not receive treatment. Creswell (2012:294), states that experimental research design is the traditional approach to conducting quantitative research. Experimental design is to test the impact of the treatment (or an intervention) on an outcome. Meanwhile, according to Gay (2012:250), experimental research is the only type of research that get test hypothesises to establish cause-effect.

The experimental design in this study used pre-experimental design. Pre-experimental design focus only one group or class that is given pre and post-test. This one group pretest and posttest design was carried out on one group without a control or comparison group. Researcher use analytical techniques to analyze the data obtained from research results. It aims to obtain accurate data in accordance with the objectives of the study and to find out the improvement of student's speaking skills by using Find Someone Who game.

As for the design research pattern, one group pre-test and post-test design according to Campbell and Stanley (1963:7), as follows:

<b>O1</b>	<b>X</b>	<b>O2</b>
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Note:

O1 : Pre-test score (before treatment)

X : Treatment

O2 : Post-test score (after treatment)

Pre-experimental procedure that used one group pre-test post-test design:

- a. Administering the pre-test before applying the treatment to measure the speaking ability of the seventh grade at UPT SMPN 2 Kademangan.
- b. Applying the treatment in the form of Find Someone Who Game in class seven at UPT SMPN 2 Kademangan.
- c. Giving a post-test to students with the aim of measuring students' speaking ability after being given treatment in grade seven at UPT SMPN 2 Kademangan.

In this study, the researcher wants to know the effectiveness of Find Someone Who Game in teaching speaking by doing pre-experimental research. By giving pre-test and post-test aims to obtain a score of students' speaking ability before and after being given treatment. Thus, the effectiveness of treatment it will be known that there is a significant difference in students' speaking ability before and after being taught using Find Someone Who Game.

## **B. Variables of Research**

According to Creswell (2012:112) research variable is a characteristic or attribute of an individual or an organization that researchers can measure or observe and varies among individual or organization studied. There are two kinds of variables named independent variable and dependent variable. An independent variable is the cause while a dependent variable is the effect in a causal research study. The independent variable of this research was the use of Find Someone Who game. The dependent variable was seventh grade student's speaking skill.

### **C. Population**

The population is the entire research subject. According to Creswell (2012). Research subject is the population under study. Meanwhile Lind et al. (2017), stated that population is the amount of individual or object that have similiar characteristic. Research subjects are also sources of data that includes the properties or characteristics of a group of subjects, symptoms, or objects. It can said that population is a region generalizations consisting of objects/subjects that have qualities and characteristics specified by the researcher to be studied and then withdrawn the conclusion. The researcher conducted research on seventh grade students of UPT SMPN 2 Kademangan as research subjects who were the population in this study. The total population is 240 students consisting of seventh graders at UPT SMPN 2 Kademangan.

### **D. Sample and Sampling**

According to Creswell (2012:142), a sample is a subgroup of the target population that researcher plans to study for generalizing about the target population. So, sample is part of the number and characteristics possessed by population. In this study, the researcher uses one of the techniques of taking the sample is a purposive sampling technique. Kelly (2010: 317) states that purposive sampling is used to select respondents that are most likely to yield appropriate and useful information .The goal is that the researcher in taking samples not based on strata, random, or regions, but based on the research objectives. Besides that, the limited access to sampling for seventh grade students at UPT SMPN 2

Kademangan was also a factor for the researcher using purposive sampling in this study. So, the sample of this study is one class on seventh grade of UPT SMPN 2 Kademangan. The number of samples is 31 students from class VII B at UPT SMPN 2 Kademangan.

### **E. Research Instrument**

The research instrument was used to measure the value of the variables studied. The research instrument relates to the validity and reliability of the instrument and the quality of data collection. Instrument Research is a tool used by researchers to make work easier. In collecting research data, the research instrument used by the researcher in this study is tests.

To know the effectiveness of Find Someone Who game on student's speaking skill, the researcher used speaking test as the instrument in collecting the data. Test was a devise used to measure the skill, intelligence, ability and talent of an individual or a group. Test was given to the students focused on speaking test. The aim of this test was to measure the student's skill in speaking. The test that used in this research was pre-test and post-test in one group.

#### **1. Pre-test**

The pre-test is used to collect data about students' speaking abilities before getting treatment. This test is given to students in seventh grade at UPT SMPN 2 Kademangan. Researchers give pretest to students in the form of 5 oral questions related to hobbies. Students are asked to answer questions within 10-15 minutes

orally. The score obtained is based on an assessment rubric which contains assessments of grammar, vocabulary, fluency, and comprehension.

#### b. Post-test

Post-test is used to collect data about students' speaking ability after receiving treatment. The test was given to students in the seventh grade at UPT SMPN 2 Kademangan. The post-test was given after all treatments were carried out by giving 5 oral questions to students. The test consists of five questions that students must answer within 10-15 minutes. The assessment of the post test is based on an assessment rubric which includes pronunciation, grammar, vocabulary, fluency, and comprehension.

### **F. Validity and Reliability Testing**

#### 1. Validity

An instrument was considered valid if it was able to test what should be tested. It could explain the data from the variables which were accurately researched. To know the validity of the instrument, the researcher used content validity, construct validity, and face validity. The explanation of the content validity and construct validity, as follows:

##### a. Content Validity

The test is said to have content validity if the content is a representative sample of the language skills, structure, etc., being tested. In addition, the contents of the instrument must be relevant to the objectives from the test. In this case,

content validity refers to "Kurikulum Merdeka". Based on competency standards in the syllabus of the Kurikulum Merdeka are stated as achievements of seventh grade student in speaking activities is expected to be able use English to interact and each other exchange ideas, experiences, interests, and opinions with teachers, peers and other people in various ways. With repetition and vocabulary replacement, participants students understand the main idea and relevant details from the discussion or presentations on various familiar topics and in the context of life in school and at home. They engage in discussion, for example give opinion, make comparison and deliver preference. they explained and clarify their answers use sentence structure and simple verbs. So, the researcher can conclude that the test are valid in content validity because the materials are tested have been taught to the students.

The researcher made this test based on the course objective in the syllabus of second semester of UPT SMPN 2 Kademangan. Therefore, this is valid in term of content validity.

**Table 3.1**

*Content Validity of Talking About Hobbies*

Main Competence	<b>4.</b> Processing, presenting, and reasoning in the concrete realm (using, parsing, composing, modifying, and creating) and the abstract realm (writing, reading, counting, drawing, and composing) according to what is learned in school and other sources from the same point of view/theory.
Basic Competence	<b>4.2</b> Compose very short and simple spoken and written transactional interaction texts that involve the act of giving and asking for information related to identity, short and simple, taking into account social functions, text structure, and linguistic elements that are correct and in context

Indicator	<ul style="list-style-type: none"> <li>- Students are able to compose very short and simple oral and written transactional interaction texts that involve the act of giving and asking for information related to identity, short and simple, taking into account social functions, text structure, and linguistic elements that are correct and in context.</li> <li>- Students are able to make very short and simple spoken and written transactional interaction texts that involve the act of giving and asking for information related to identity, short and simple, taking into account social functions, text structure, and linguistic elements that are correct and in context.</li> <li>- Students are able to present very short and simple oral and written transactional interaction texts that involve the act of giving and asking for information related to identity, short and simple, taking into account social functions, text structure, and linguistic elements that are correct and in context.</li> </ul>
Technique	Oral Test
Instrument of Test	Pre-test and Post-test

#### b. Construct Validity

A test is said to have construct validity if it can be demonstrated that it only measures the abilities it is supposed to measure. Aspects of speaking consists of five items, namely grammar, vocabulary, comprehension, fluency, and pronunciation. These five aspects must be used as criteria speak well. In this study, the speaking test also uses five aspects the above as criteria of good speaking.

In this study the researcher adapted Browns' assessment (2004: 172-173) which included assessments of pronunciation, grammar, vocabulary, fluency, and comprehension. Here below:

**Table 3.2***Scoring Rubric of Speaking*

No	Criteria	Score	Description
1	Pronunciation	5	Equivalent to and fully accepted by educated native speakers.
		4	Errors in pronunciation are quite rare
		3	Errors never interfere with understanding and rarely disturb the native speaker. An accent may be obviously foreign.
		2	An accent is intelligible though often quite faulty.
		1	Errors in pronunciation are frequent but can be understood by a native speaker used to dealing with foreigners attempting to speak his language.
2	Grammar	5	Equivalent to that of an educated native speaker
		4	Able to use the language accurately on all levels normally pertinent to professional needs. Errors in grammar are quite rare
		3	Control of grammar is good, able to speak the language with sufficient structural accuracy to participate effectively in most formal and informal conversations on practical, social, and professional topics.
		2	Can usually handle elementary constructions quite accurately but does not have thorough or confident control of the grammar.
		1	Errors in grammar are frequent, but the speaker can be understood by a native speaker used to dealing with foreigners attempting to speak his language.
3	Fluency	5	Has complete fluency in the language such that his speech is fully accepted by educated native speakers.
		4	Able to use the language fluently on all levels normally pertinent to professional needs. Can participate in any conversation within the range of this experience with a high degree of fluency.
		3	Can discuss the particular interest of competence with reasonable ease. Rarely has to grope for words.
		2	Can handle with confidence but not with facility most social situations, including introductions and casual conversations about current events, as well as work, family and autobiographical information.
		1	No specific fluency description refer to other four language areas for an implied level of fluency
4	Vocabulary	5	Speech on all levels is fully accepted by educated native speakers in all its features including

			breadth of vocabulary and idioms, colloquialisms, and pertinent cultural references.
		4	Can understand and participate in any conversation within the range of his experience with a high degree of precision of vocabulary
		3	Able to speak the language with sufficient vocabulary to participate effectively in most formal and informal conversations on practical, social and professional topics. Vocabulary is broad enough that he rarely has to grope for a word.
		2	Has speaking vocabulary sufficient to express himself simply with some circumlocutions.
		1	Speaking vocabulary inadequate to express anything but the most elementary needs.
5	Comprehension	5	Equivalent to that of an educated native speaker.
		4	Can understand any conversation within the range of his experience.
		3	Comprehension is quite complete at a normal rate of speech.
		2	Can get the gist of most conversations of non-technical subjects (i.e., topics that require no specialized knowledge)
		1	Within the scope of his very limited language experience, can understand simple questions and statements if delivered with slowed speech, repetition, or paraphrase.

### c. Face Validity

Face validity is based on the researcher's and evaluator's subjective judgment. A test which does not have face validity may not be acceptable by test-takers, teachers, education authorities, and employers. The researcher used face validity by consulting with the advisor to validate the test (*see appendix 12*). Validity test includes research instrument tests in the form of pre-test and post-test based on blueprints of speaking test (*see appendix 2*). And from these results the instrument was declared valid so that it could be used in research.

## 2. Reliability

A test was 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. Wiersma and Jurs (2009:355) state that reliability is the consistency of the instrument in measuring whatever it measures. It means that if the instrument had a consistent result in the second chances or more, the instrument was reliable. In this study, reliability testing was carried out by using the test internal consistency, that is with how to try the instrument just once on the research subject. The researcher used the Alpha Cronbach technique through SPSS 26.0 to calculated the test reliabelity. The value of Alpha Cronbach states as follow:

**Table 3.3**

*Cronbach's Alpha Interpretation*

<b>Cronbach's alpha</b>	<b>Internal consistency</b>
$\alpha \geq 0.9$	Excellent
$0.9 > \alpha \geq 0.8$	Good
$0.8 > \alpha \geq 0.7$	Acceptable
$0.7 > \alpha \geq 0.6$	Questionable
$0.6 > \alpha \geq 0.5$	Poor
$0.5 > \alpha$	Unacceptable

In this study, the researcher tested the reliability of the instrument through SPSS 26.0 using the Cronbach's Alpha technique. The results of the reliability test are stated as below

**Table 3.4***Reliability Test Result***Reliability Statistics**

Cronbach's Alpha	N of Items
,788	5

The test is reliable if the Cronbach alpha value is  $>0.600$ . Meanwhile, the result of the calculations in SPSS show that Cronbach alpha is 0.788 which means greater than 0.600. So that 5 questions in the test are valid and reliable.

**G. Normality and Homogeneity Testing**

## 1. Normality

Normality test are used to determine whether a data set is well-modeled by a normal distribution or not. To know the normality, the researcher used Shapiro-Wilk test with using SPSS 26.0 by the value of significance ( $\alpha$ ) = 0.050 rules as follow:

- a.  $H_0$  : If the value of significance  $> 0.050$ , means data is normal distribution
- b.  $H_a$  : If the value of significance  $< 0.050$ , means the distribution data is not normal distribution

The result analysis for normality testing can be seen as follows:

Tabel 3.3

Tests of Normality						
	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
PRETEST	,179	31	,013	,942	31	,093
POSTTEST	,173	31	,019	,949	31	,151

a. Lilliefors Significance Correction

Based on the output above, the significant value of pre-test was 0.093 and the significant value of post-test was 0,151. It means the test is normal, because both significant values are more than 0.05.

## 2. Homogeneity

Homogeneity testing is conducted to know whether the gotten data has a homogeneous variance or not. The computation of homogeneity testing using SPSS Statistics 26.0 is Lavenes' Test by the value of significance ( $\alpha$ ) = 0.050. Before doing homogeneity testing, the researcher decides hypothesis in this homogeneity as follow:

- a. H<sub>0</sub> : If the value of significance > 0.050, means data is homogeny
- b. H<sub>1</sub> : If the value of significance < 0.050, means data is not homogeny

The result of homogeneity testing can be seen as follow:

Table 3.5

### Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Test Result	Based on Mean	,704	1	60	,405

Based on Median	,977	1	60	,327
Based on Median and with adjusted df	,977	1	59,096	,327
Based on trimmed mean	,740	1	60	,393

Levene value of the test is shown on the line of Value Based on Mean, ie with p value (sig) of  $0.405 > 0.05$  which means there are similarities between variables or the variables are homogeneous.

## H. Data Collecting Method

In this research, the researcher used test as the data collection. The test would be in the form of speaking test to see different result of students' speaking ability who being taught by using Find Someone Who Game. Method of data will provide reality about some steps which are used in the process of collecting data. To get data the researcher used method of data collecting as follows:

### a. Pre-test

The first stage in conducting this research was giving pre-tests to students. After determining the group for the experimental class, the next step is conducting pretest which aims to find out student's initial abilities. The pre-test was held on Tuesday, June 13<sup>th</sup>, 2023. Students are given several questions that must be answered by students within a certain time. This question is in the form of an oral test. Answers from students can be used as a benchmark for how far their speaking ability is. To carry out the assessment the researcher was guided by several aspects that must be mastered in speaking including grammar, fluency, comprehension, vocabulary, and pronunciation. After the assessment, student

scores will be grouped into several categories to make it easier to see student abilities.

b. Treatment

Once done pretest, the next step is to give treatment. The researcher provides treatment twice to students. The first treatment was given on Tuesday, June 13<sup>th</sup>, 2023 and the second treatment was held on Wednesday June 14<sup>th</sup> 2023.. The steps in carrying out the treatment are as follows:

- Introduction

First, the teacher opens by greeting and pray to start the lesson. After that convey the purpose and the final achievement of learning ends with the presence of students.

- Learning

During learning, students are given material related to Talking About Hobbies. Students are asked to listen to the material before being given a treatment in the form of Find Someone Who Game. After that the teacher conditions the class before the treatment or game begins. The teacher explains the technicalities of the game and what tasks must be completed. Learning method using Find Someone Who, namely students are given a number of Find Someone Who questions that must be done by students. This Find Someone Who game requires students to go around the class to find their friend's name and write it on

the question sheet. Each student receives different questions and they must complete the questions according to the characteristics obtained.

- Closing

The teacher provides opportunities for students to ask questions about the material that has been taught. Students are given the opportunity to give a summary about the material that has been studied and collect the assignment.

- c. Post-test

After the treatment is done, the next step is to give post-test for the experimental class. Posttest aims to determine whether there is an increase in student learning outcomes before and after the treatment. The post test consists of five oral questions that must be answered by students in less than 15 minutes. The assessment is based on an assessment rubric that contains several aspects of speaking that students must achieve such as pronunciation, grammar, fluency, vocabulary, and comprehension. After getting the score from the post-test, the researcher compared it with the pre test score to find out whether there was a change or increase in students' abilities from before the treatment

It can be concluded from the above that there is one group that is given a pre-test in the form of a speaking test. After that, given treatment in the form of Find Someone Who game and students were asked to do another test called post-test. The paradigm of this research design is that there is a pretest before being

treated so that the results of the treatment can be known more accurately, because it can compare with the condition before being treated.

### **I. Data Analysis**

The result of the data will be compared between the first data (pre-test) and the second test (post-test) to know whether there are any significant student's scores before and after being taught by using Find Someone Who. The researcher analyzed the collected data by quantitative. In this research, the researcher used quantitative data analysis technique. The quantitative data was analyzed by using statistical method. This technique was used to find the significant difference on the student's scores after taught by using Find Someone Who. This technique of data analysis belonged to quantitative data analysis and the data was analyze by using SPSS 26.0. The researcher used t-test to know the significance value was higher or smaller than 0,05.

### **J. Hypothesis Testing**

After consucting paired sample t-test by using SPSS 26.0 and determining that the significance level ( $\alpha$ ) is 0,05 or 5% the final step of data analysis is testing hypothesis, either rejecting or accepting the null hypothesis. The base on accepting or rejecting null hypothesis states as: If T-score (donated by Sig)  $\leq \alpha$  (5%), Ho is rejected and this Ha is accepted. But if T-score  $> \alpha$  (5%), Ho is is accepted and thus Ha is rejected.