CHAPTER III
RESEARCH METHOD

A Research Design

Research design is an overall plan for connecting the conceptual research problems with the pertinent (and achievable) empirical research (Boru, 2018). Research designs also means the specific procedure involved in the research process: data collection, data analysis, and report writing (Creswell,2012).

When conducting an educational research, it is not always possible to select or assign subject at random. The use and applications of various experiments depend on the type of design used. In the case of this research, the researcher used Quantitative Quasi-Experimental research because the availability of participants were limited and the number of population in the school was appropriate with the number of sample expected by researcher. Moreover, the researcher decided to choose quasi experimental design because the participants were organized well in the class.

Quasi experiments include assignment, but not random assignment of participants to groups (Zubair, 2023). In this research design, there were two intact groups of classes involved. The researcher will give different treatment to both group, the first group is experimental group which used Taboo Game, while the second group is control group which just used conventional technique. The table of quasi-experimental designs could be illustrated as follows:

Table 3. Research Design

Class	Pre-test	Treatment	Post-test
C	O1	-	O2
E	O1	X	O2

Note :
E : Experiment Class
C : Control Class
O1: Pre-test
X : Taboo Game
- : Conventional Technique
O2 : Post-test
(Sugiyono, 2019)

Based on the explanation above the researcher gave the pre-test to know the students' real competence in speaking ability. The researcher conducted the pre-test before the treatment X (Taboo Game). After implementing the treatment, the researcher gave a post-test to measure the students' improvement in speaking English.

B. Research Variable

According to Sugiyono (2019) research variable is an attribute investigation, variable is everything that planed by the researcher to learn. Variables are constructor characters that may be analyzed. They can be classified as either independent or dependent. A variable that influences or is affected by another variable is called an independent variable. While a dependent variable is one that an independent variable has an impact on or has become an effect of. In this study, there were two variables that is used by the researcher, they were Independent (X) and Dependent (Y) variable.

The researcher conducted Taboo Game as an independent variable to indicate the technique, and in the dependent variable the researcher chose students' speaking ability. The description as follows:

Table 4. Research Variable

Group	Independent Variable	Dependent Variable
Experimental Group	Taboo Game	Students` speaking skill
Control Group	Conventional Technique	Students` speaking skill

Based on the explanation above, the researcher concluded that there were two variables in this study, they are X as (Taboo Game) and Y as (students' speaking ability).

C. Research Population, Technique Sampling and Sample

In this study, the researcher determined the population, technique sampling, and sample as follow:

1. Research Population

Sugiyono.,(2019) states that population is composed of the generalization object or subject that has quality and certain characteristics set by the researcher to learn and then take a conclusion. Therefore, the population of this research

were the students in the Beginner Class of Yos Sudarso High School academic year 2023/2024. It consists of 73 students.

Table 5. Research Population

No	Class	Number of Students
1.	A	24
2.	B	24
3.	C	25
Total Number Of Students		73

Based on the table 5, the population of this research was beginner class of Yos Sudarso High School in the academic year 2023/2024. There are three classes of this semester. The number of students in A class are 24 students, 24 students in B class and 25 students in C class . Therefore, the total of the population in this research were 73 students.

2. Sampling Technique

Based on Sugiyono., (2019) sampling technique is one of technique to take sample. The purpose of sampling is to make inferences or draw conclusions about the entire population or dataset based on the characteristics observed in the sample. In this research, the researcher used Cluster Random Sampling to take the sample. This research using cluster random sampling to determine which class will be experimental group and which class will be the control group. The steps that used by the researcher to choose the experimental group and the control group as follows:

a. The researcher write Beginner A, Beginner B and Beginner C in a piece of paper.
b. The papers are rolled and then put into the glass.
c. The glass are shaken until getting the rolling of paper out.
d. The first roll of paper that coming out was Beginner B who served as the experimental class.
e. The second roll of paper that coming out was Beginner A who served as the control class.

3. Research Sample

According to Bhardwaj., (2019) the most important factors that establish the accuracy of a study is sampling. Lineary, Sugiyono., (2019) explains that

sample is a part of the total and characteristics of the population. In this research, the researcher use two classes, Beginner A as the experimental class which consist of 46 students, while Beginner C as the control class which consists of 44 students.

D. Research Instrument

Instrument of the research is a part of activities to detect the accurate data. Ali in Aisrani., (2018) argues that research instrument is equipment that can be used in the research conducted to get the final goal of the research.

An instrument is a tool when the researcher administered the research through a certain technique. The researcher gave a test as an instrument in this research. An oral test is used in pre-test and post-test. The pre-test is given to the students to measure their speaking ability before the treatment and the post-test gave to measure their speaking ability after giving the treatment.

After all of the test is reliable then the researcher conducted pre-test before treatment and gave post-test after the treatment. In this study, the type of speaking test in pre-test and post-test used an oral test. The score of the test is based on criteria on the speaking test rubric, those are pronunciation, grammar, vocabulary, fluency, and task.

E. Validity and Reliability

1. Validity

Validity is an evidence and theoretical support for the the interpretation of test results in accordance with the purpose of using the test Nurgiyantoro in Rosianna & Lumbangaol., (2017.). A valid instruments means that the measuring instrument used to obtain data is valid. Valid means that the instrument can be used to measure what should be measured (Sugiyono, 2019). Validity is concerned with the study success at measuring what the researcher set out, In this case after the instrument is constructed about some aspects which are measured based on the particular theory, it can be consulted by the experts.

A test is said to have instrument content validity in accordance with the material or content of the lesson given. Content validity refers to the notion of whether the test kit has parallels or is in accordance with the objectives and descriptions of the subject matter being taught (Nuryadi, 2017). In this study the researcher analyzed the test from content validity. Content validity examines whether the test is a good representation of the material that needs to be tested. It means that the item of the test represented by the material that is discussing.

The validity instrument is corrected by the experts which called as validator. There are two experts which given the evaluation, they were Aulia Hanifah Qomar, M.Pd as a speaking lecture and Rosaria Dewi Meitasari, S.S.,S.Pd as an english teacher at Yos Sudarso High School. The experts review the test instrument on how well the test instrument will be given to students. There are five criteria of validation by the experts as follow: (1) Very Poor, (2) Poor, (3) Enough, (4) Good, and (5) Very Good

2. Reliability

Reliability refers to the extension to which the test is consistent in its score and give an indication of how accurate the test score is. Arikunto as cited in (Rauzana, 2016) says that the reliability of the test refers to whether an instrument is legitimate enough to be used for gathering data. In line with it (Best & Kahn, 1998; Manning & Don Munro, 2006; Pallant, 2005; Wiersma & Jurs, 2005) as cited in Budiastuti & Bandur., (2018) states the same that reliability is the consistency of the methods, conditions, and results.

Reliability of the test shows whether the instrument is reliable and can be used as a device to collect the data. Reliability implies the stability of test scores when the test is used. A test is reliable to the extent that it measures consistently, from one time to another.

In this research, the researcher try to find out the reliability after computing the validity of the instrument, to measure the reliability of the test, the researcher used Inter-Rater Reliability (IRR) by Cohen's Kappa using SPSS version 20. It could be possible to enhance the transparency and reliability of data analysis by using an IRR approach (Cole, 2023). By comparing two or more results from the researchers might help prevent selective perception and interpretive bias (Cole, 2023). There were two rater who assesed the student's work in this research, the first rater was Rizki Nurlidia Oktipia who conduct a same research in speaking ability and the second rater was the researcher. The result of the reliability test could be seen in the table 3.4 below:

Table 6. The Summary of Reliability Test

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Measure of Agreement	Kappa	,763	,091	11,198	,000
N of Valid Cases		24			

From table 3.4 above the computation of reliability test had a result of 0,763. Whereas according to the theory,it could be inferred as reliable with hig=h category.

The table of criteria for the reliability test according to Liliana et al., (2020) as follows

Table 7. The Value of Reliability Coefficient

r	Criteria
0.00-0.20	Very Low
0.20-0.40	Low
0.40-0.60	Fair
0.60-0.80	High
0.80-1.00	Very High

Source : (Liliana et al., 2020)

F. Data Collecting Technique

Collecting the data is being a very crucial thing to do in this research to determine the result. A test is a method to measure someone's ability or knowledge. The researcher used an oral test to measure students speaking ability. The detail explanation can be seen below :

1. Pre-Test

A pre-test is conducted as the preliminary research to identify the students' real competence and problems in learning speaking. A pre-test is done before the treatment process. The researcher took the score to get the first information. In pre-test, the students were given various animal pictures during the pre-test activity. They then had five minutes to select an image and create an outline of the animal they had selected. Following the creation of the outline, students were required to use it to describe the picture they had selected orally for no less than two minutes. When they are prepared, the students record and upload their speeches into Google Drive. The score of the pre-test is based on criteria on the speaking test rubric, those are pronunciation, grammar, vocabulary, fluency, and task.

2. Treatment

After conducting a pre-test, the researcher give the treatment to the students. The aim of treatment is to develop the students' speaking ability. The treatment conducted by the researcher in experiment class. In treatment session, the researcher split the class into six groups during the teaching session. After divide the students, then taboo game was played in order by using TabuGo! application.This game allowed each party to play with as many cards as they could for two minutes. There will be a winner in every round who will go on to compete for the title of game winner of the day.

Since the researcher purposely used the Taboo Game as a treatment for the students, there was no way for the researcher to grade the students' work throughout the session. However, the researcher always give attention the the student's speeches to know whether the vocabulary they used were pronunce correctly. There were different theme for each treatment from the first until the last. In the first treatment, the students played the card related to animals and foods. In the second treatment, the students played some card related to places and vehicle. In the third and fourth treatment, the students played random card consisted of four previous theme.

3. Post-Test

Post-test be given after giving the treatment in an experimental class or after teach speaking by using Taboo Game. The aimed is to see how is the students improvement in speaking English after giving treatment. In this test, the researcher do the same activity as the pre-test. However, the picture given were more varied, consisted of animals, vehicle, places, and professions. The students had two minutes to observe and make an outline of the picture they chose. After that, the students described and recorded their speeches with a minimum time of 5 minutes then upload it to Google Drive.

The resercher served as the person who scored the student's works. Speaking assesment rubric was used by the researcher when scoring the students speeches. Each component was scored by following the rubric of asesment and then it will be totalled to find out the student's final speaking score.

G. Data Analysis Technique

After the researcher collected the data, the researcher analysed the result of data from pre-test and post-test related both of them through the formulas of normality test, homogeneity test, and hypothesis test.

The procedures to treat the data as follow:

1. Normality Test

The normality test is a procedure used to find out whether data comes from a normally distributed population or in a normal population. (Nuryadi, 2017). One of the test assumptions of the statistic compilation is that the data must fulfill the qualification of the normal distribution. Therefore, analyzing the normality of the students score is very important.

In this research, the researcher use Shapiro Wilk calculation by using SPSS. The criteria for normality test according to Nurgiyantoro et al., (2015, p. 124) as follows:

a. If the Significant value (Sig) > 0.05, the data distribution is normal.
b. If the Significant value (Sig) < 0.05, the data distribution is not normal.

2. Homogeneity Test

Homogeneity test is a statistical test procedure intended to show that two or more groups of sample data come from populations that have the same variance. (Nuryadi, 2017). In this research, the researcher use One way ANOVA by (Budiwanto, 2017) with two criteria as follows:

a. When the significance value is > 0, 05 or (Fo) > (Ft) it means homogeneous.
b. When the significance value is < 0,05 or (Fo) < (Ft) it means not homogeneous.

3. Hypothesis test

Hypothesis test is a procedure used to test the validity of the statistical hypothesis of population by using data from a sample of that population. (Nuryadi, 2017). Based on the normality test and homogeneity test, the researcher test the hypothesis using the Paired Sample T- test and Independent Sample T-test with SPSS.

a. First Hypothesis

The Paired Sample T- test used to test the first hypothesis. This test used to test the difference averages in the same group. The are two criteria for Paired Sample T Test using SPSS calculation as follows:

1) If the Significant value sig. (2-tailed) ≤ 0.05, Ha is accepted
2) If the Significant value sig. (2-tailed > 0.05, Ho is accepted

b. Second Hypothesis

The second Hypothesis is tested by using Independent T-test. The independent samples t-test, also known as the two-sample t-test, is a statistical hypothesis test used to determine if there is a significant difference between the means of two independent groups. The are two criteria for Independent T-test using SPSS calculation as follows:

1. If $_{ratio} \leq t_{table}$ or sig. (2-tailed) ≤ 0.05, Ha is accepted.
2. If $_{ratio} > t_{table}$ or sig. (2-tailed) > 0.05 H0 is accepted.

Based on the explanation above, the researcher conclude that a hypothesis test is a fundamental method used in scientific research to evaluate the validity of a hypothesis. It involves systematically gathering empirical evidence to determine whether the observed data supports or contradicts the proposed explanation or prediction.