CHAPTER III
RESEARCH METHODOLOGY

A. Research Design

The design of this research was an experimental research. According to Gay, experimental research is the only type of the research that can test hypothesis to establish cause and effects relationship (L.R Gay& Airasian, 2000: 367). Creswell stated that there are three kinds of experimental design; true, quasi, and pre-experimental research. This research was quasi-experimental research. Quasi-experiments include assignment, but not random assignment of participants to groups. This is because the experimenter cannot artificially create groups for the experiment (Creswell, 2012:309). The writer applied the pre-test and post-test design approach to this research. The writer assign intact groups the experimental and control treatments, administers a pre-test to both groups, and conducted experimental treatments activities with the experimental group only, finally administered a post-test to assess the differences between the two groups (experimental and control).

There were two variables used in this research. The first was Guessing Game (X), and the second was students' speaking skill (Y). Louis Cohen, et.al stated that an experimental involves making a change in the value of one variable-called the independent variable and observing the effect that changes one another variable- called the dependent variable.

Table III.1
Variables of the Research

Class	Pre –test	Treatment	Post - test
A	T1	✓	T2
B	T1	X	T2

Note: A   : Experimental Group
         B   : Control Group
         T1   : Pre- test to experimental and control group
         T2   : Post- test to experimental and control group
         √   : Receiving particular treatment
         X   : Without particular treatment

Furthermore, the writer wanted to investigate and find out between effect of Guessing Game Technique and students' speaking skill of The First Year Students at State Junior High School 1 Kampar Regency.

B. Time and Location of the Research

This research was conducted on April 2016 at State Junior High School 1 Kampar Regency. It is located on Air Tiris village, Kampar regency.

C. The Subject and the object of the Research

The subject of the research was students of first year at State Junior High School 1 Kampar Regency. The object of the research was the effect of using Guessing Game Technique on students' speaking skill.

D. The Population and the Sample of the Research

Gay (1987:102) has stated that population is the group of interest researcher; the group to which she or he like the results of the study to be generalized able.

The population of this research was the first year student of State Junior High School 01 Kampar Regency. They consisted of eleven classes

(325 students). The specification of the population can be seen on the table below:

Table III.2
The Population of the Research

No.	Classes	Male	Female	Number of Students
1.	VII A	14	17	31 students
2.	VII B	12	18	30 students
3.	VII C	13	15	28 students
4.	VII D	15	17	32 students
5.	VII E	13	16	29 students
6.	VII F	11	17	28 students
7.	VII G	10	19	29 students
8.	VII H	12	18	30 students
9.	VII I	11	17	28 students
10.	VII J	15	16	31 students
11.	VII K	13	16	29 students
	TOTAL	139	186	325 students

Considering the population this research was bigger those, the writer took the sample of population of the research in this research. The writer took two of 'eleven classes as the sample of the research. The strategy used in taking sample was cluster random sampling. In this research, the writer used cluster sampling as the technique to choose the sample of population. According to Gay (2000:135), "in cluster sampling, intact groups, not individuals, are randomly selected." It means the sample of population is selected randomly. Having the sample, the writer used lottery by passing out the small rolled paper marked by the sequence name of the class.

The population was large enough to be all taken as sample of the research. Based on the design of the research, the writer took two classes as the sample of the research. The first class was labeled as experimental class (VII C) treated by using Guessing Game Technique and the second class labeled as control group (VII I) treated without using Guessing Game

Technique. These classes were decided by using cluster-random sampling. The classes consisted of 56 students in which class VII C consisted of 28 students and class VII I consisted of 28 students. The specification of the sample of the research can be seen on the table below:

Table III.3
The Sample of the Research

No	Classes	Male	Female	Number of Students
1	VII C	13	15	28 students
2	VII I	11	17	28 students
Total				56 students

E. The Technique of Collecting Data

To obtain the data needed to support this research, the writer used two kinds of data collecting technique, and there were observation and oral test (oral presentation). The test was done twice, before and after giving the treatment intended to obtain students' speaking skill of the first year student at State Junior High School 01 Kampar Regency.

1. Observation List

The function of observation list was to know whether the technique was really applied or not by the writer. The observation list consisted of steps of guessing game technique and it would be filled by the English teacher and observer during the writer gave the treatment in experimental class. The observation list can be seen in the table below:

Table III.4
Observation List

No	Options	The Dimension of Contrast	
		Yes	No
1	The teacher divides the class into teams of about seven or eight.		
2	The teacher asks one learner from one team to take a word card and to draw on the board what is on the card in no more than ten seconds.		
3	Allow the artist's team to call out what they think the drawing represents.		
4	Award points accordingly. If they are correct on their first try, the artist's team gets three points; if they are correct on their second try, they get two points; on their third try, one point. You must be the referee. If the called out word is not exactly the same as the word on the card you might still decide to award the points.		
5	If the artist's team fails to guess the word after three attempts, give the other team a try and award them with one point if they guess correctly.		

2. Oral presentation

   Oral presentation test was used to collect data about students' speaking skill in descriptive text (express ask and answer orally information of descriptive text). Oral presentations test was divided in two phases:

a. Pre-Test

   Pre-test was used to collect data about students' speaking skill in describing people (descriptive text) before applying guessing game technique. In the pre-test section, the writer spreaded some pictures of people to both of experimental and control classes, then let students to choose one of these pictures. Afterward, the writer asked the students to describe picture that they had chosen in approximately 2-3 minutes. While students presented their presentation of describing people, the writer recorded students' performance by using audio recorder. These data of audio recorder were analyzed by two raters.

b. Post-Test

Pot-test was used to collect data about students' speaking skill in describing people (descriptive text) after being taught by using guessing game technique (experimental class), and after being taught without using guessing game technique (control class). In this section, the writer spreaded some pictures of certain animation people to both of experimental and control classes, then let students choose one of these pictures. Afterward, the writer asked the students to describe picture that they had chosen in approximately 2-3 minutes. While students presented their presentation of describing people, the writer recorded students' performance by using audio recorder. These data audio of students' post-test of experimental class and post-test of control class, then were analyzed and compared.

According to Hughes (2003:131-132) there are some components that should be considered in giving students' score: they are accent, grammatical, vocabulary, fluency and comprehension. The scoring process was done by two raters by using the indicators of speaking skill as mentioned below:

Table III.5
Accent

Score	Requirement
1	Pronunciation frequently unintelligible
2	Frequent gross error and a very heavy accent make understanding difficult, require frequently repetition
3	"foreign second" requires concentrated listening, and mispronunciations lead to occasional misunderstanding and apparent errors in grammar of vocabulary
4	Marked "foreign accent" and occasional mispronunciation which do not interfere with understanding
5	No conspicuous mispronunciations, but would not be taken for a native speaker.
6	Native pronunciation with no trace of "foreign accent."

Table III.6
Grammar

Score	Requirement
1	Grammar almost entirely inaccurate except in stock phrases
2	Constant errors showing control of very view major patterns and frequently preventing communication
3	Frequent errors showing some major pattern uncontrolled and causing occasional irritation and misunderstanding
4	Occasional errors showing imperfect control of some pattern but no weaknesses that causes misunderstanding
5	Few errors, with no patterns of failure.
6	No more than two errors during the interview.

Table III.7
Vocabulary

Score	Requirement
1	Vocabulary inadequate for even the simplest conversation
2	Vocabulary limited to basic personal and survival areas (time, food, transportation, family, etc.)
3	Choice of words sometimes inaccurate, limitations of vocabulary prevent discussion of some common professional and social topics.
4	Professional vocabulary adequate to discuss special interest, general vocabulary permits discussion of any non-technical subject with some circumlocutions.
5	Professional vocabulary broad and precise; general vocabulary adequate to cope with complex practical problems and varied social situations.
6	Vocabulary apparently as accurate and extensive as that of an educated native speaker.

Table III.8
Fluency

Score	Requirement
1	Speech is no halting and fragmentary that conversation is virtually impossible
2	Speech is very slow and uneven except for short or routine sentences
3	Speech is frequently hesitant and jerky; sentences may be left uncompleted
4	Speech is occasionally hesitant, with some unevenness caused by rephrasing and grouping for words
5	Speech is effortless and smooth, but perceptively non-native in speed and evenness
6	Speech on all professional and general topics as effortless and smooth as a native speaker's

Table III.9
Comprehension

Score	Requirement
1	Understand too little for the simplest type of conversation
2	Understands only slow, very simple speech on common social and touristic topics; require constant repetition and rephrasing
3	Understand careful, somewhat simplified speech when engaged in a dialogue, but may require considerable repetition and rephrasing
4	Understand quite well normal educated speech when engaged in a dialogue, but occasional repetition or rephrasing
5	Understands everything in normal educated conversation except for very colloquial or low-frequency items, or exceptionally rapid or slurred speech.
6	Understands everything in both formal and colloquial speech to be expected of an educated native speaker.

The result of speaking was scored by using five components and each component had score or level. Each component had 20 as the highest score. The total of all components is 100. The specification of the test is as follows:

Table III.10

The Specification of the Test

No	Speaking Skill	The Highest Score
1	Accent	20
2	Grammatical	20
3	Vocabulary	20
4	Fluency	20
5	Comprehension	20
	TOTAL	**100**

F. The Validity and Reliability of Test

The test used for testing students' speaking skill had to have reliability and validity. The test is valid if it measures accurately what it is intended to measure. According to Gay (2000:163-167) states that there are three types of validity. They are content validity, criterion-related validity, and construct validity. In this research, the writer used content validity to know the validity

of speaking skill test. According to Brown (2003:22)states that content validity is partly a matter of determining if the content that the instruments contains is an adequate sample of the domain of content it is supposed to represent. Thus, the test was given based on the material studied by the students. The material of the test was taken from the text book used by first year students of State Junior High School 1 Kampar Regency.

The validity and reliability is related. It is possible for a test to be reliable without being valid for a specific purpose, but it is impossible a test to be valid without first being reliable. According to Hughes (1989: 20), a reliable test is consistent and dependable. If the same test is given to the same student or matched students on two different occasions, the test should yield similar results. There are five types of reliability: stability, equivalence, equivalence and reliability, internal consistency, and rater agreement. In this research, to know the reliability of the test the writer used the rater agreement type concerned with inter-rater reliability, because the writer has two raters to score the students' speaking skill.

The following table describes the correlation between the first raters' scores and the second raters' scores by using SPSS 16:

Table III. 11
Correlations

		Rater1	Rater2
Rater1	Pearson Correlation	1	.324
	Sig. (2-tailed)		.092
	N	28	28
Rater2	Pearson Correlation	.324	1
	Sig. (2-tailed)	.092	
	N	28	28

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

It was necessary to find out the df (degree of freedom) as follow:

$$df = N - Nr$$

Where:

    df = degree of freedom
    N = Number of freedom
    Nr = number of correlated variable

$$df = 28 - 2 = 26$$

Df would be correlated at level 5% and 1%. At level 5%, t_{table} was 0.374. While, at level 1% t_{table} was 0.478. Thus, the $r_{obtained}$ (0.324) was higher than r_{table} at level 5% and 1%. It can be read 0.374<0.644> 0.578. So the writer concluded that there was a significant correlation between score given by rater 1 and score given by rater 2. In other words, the written test was reliable. Then, the writer calculated by using Spearman-Brown prophecy formula in order to know the classification of reliability. The formula could be seen as follow:

$$r_{tt} = \frac{nr_{A,B}}{1 + (n-1)r_{A,B}}$$

Where:

    r_{tt} = Inter-rater reliability

    n = The number of raters whose combined estimate the final mark for the examines

    r_{AB} = The correlation between raters,or the average correlation among all raters if there are more than two

While, the calculation of it was as follow:

$$r_{tt} = \frac{nr_{A,B}}{1 + (n-1)r_{A,B}}$$

$$r_{tt} = \frac{2 \times (0.324)}{1+(2-1)\times 0.324}$$

$$r_{tt} = \frac{0.648}{1.324}$$

$$r_{tt} = 0.48$$

The writer used the categories of reliability that could be seen in the following table, (Zelly, 2011: 35).

Table III. 12
The Categories of Reliability

No	Reliability	Level of reliability
1	0.0 - 0.20	Low
2	0.21 - 0.40	Sufficient
3	0.41 - 0.70	High
4	0.71 - 1.0	Very High

From From result of calculation above, the inter-rater reliability in this research was 0.48. Thus, it was categorized into high level.

G. The Technique of Data Analysis

1. Normality and Homogeneity of the Test

Before analyzing the data by using t-test formula, the writer had to find out the normality test of the data. The normality test of the data was analyzed by using Kolmogorov-Smirnov technique with SPSS 16 version. Analysis:

Ho: Data is normally distributed

Ha: Data is abnormally distributed

If probability (sig) > 0.05, Ho is accepted

If Probability (sig) < 0.05, Ho is rejected

Then, the writer also had to find out the homogeneity of the test. To analyze the homogeneity was by comparing sig. in based on trimmed mean with 0.05.

Analyze:

Sig > 0.05 the data is homogenous

Sig < 0.05 the data is not homogenous

2. Analysis Data of Independent Sample T-test

In analyzing the data, the writer used the score of pre-test and post-test of the students from both of experimental class and control class. In order to find out whether there is or nor a significant effect of using guessing game technique on students' speaking skill, the data were analyzed by using independent t-test. In taking the conclusion, the writer concluded by comparing t-obtained with probability value.

Analysis:

Ha : t-obtained > probability value

Ho : t-obtained < probability value

- H_O is accepted if t_o < probability value or there is no significant effect of using guessing game technique on students' speaking skill of the First Year Students at State Junior High School 1 Kampar Regency.

- H_a is accepted if t_o > probability value or there is a significant effect of using guessing game technique on students speaking skill of the First Year Students at State Junior High School 1 Kampar Regency.

To identify the level of the significant effect of using guessing game technique on students speaking skill of the First Year Students at State Junior High School 1 Kampar Regency, it was calculated by using eta squared formula:

$$\text{Eta Squared} = \frac{t^2}{t^2 + (n1 + n2 - 2)}$$

Where:
- t : value of the table
- N1 : number of students of first group
- N2 : number of students of second group