

CHAPTER III

RESEARCH METHOD

This chapter presents the research method. It discusses the method used in this study. It includes research design, population and sample, research instrument, variable, data and data source, validity and reliability testing, normality testing, data collecting method, treatment and data analysis technique.

A. Research Design

According to Burgin (2005:84), Research design is all process that be needed in conducting the research. The design of this research was conducted in experimental design by using quantitative approach.

According to Sukardi (2003:179), an experimental research can be defined as systematic method to build relation that contains causal-effect phenomena (causal-effect relation). Experimental research also is defined as a method of research which is used to look for certain influence toward the other on the controlled condition (Sugiyono, 2007: 107). Experimental research can be done in the laboratory, in the class, or in the field. In this research, the researcher conducted experimental research in the class.

This experimental research used pre-experimental design. According to Sugiyono (2009:73) there are three kinds of pre-experimental design, those are: One-shot case study, One Group Pretest-Posttest, and Intec-Group Comparison. In this research, the researcher uses pre-experimental design with One-Group

Pretest-Posttest design. Differences attributed to application of the experimental treatment are then evaluated by comparing the pre-test and post-test score (Ary, 2006:237). The table of the experimental design is shown as follow:

Table 3.1 A Diagram of One-Group Pretest - Posttest Design

Pretest	Treatment	Posttest
Y1	X	Y2

Y1 : Students' ability on recount speaking ability before being taught by using snake and ladder board game.

X : Snake and ladder board game treatment

Y2 : Students' ability on recount speaking ability after being taught by using snake and ladder board game.

In this research the researcher wanted to know the effectiveness of using snake and ladder board game towards students' recount speaking ability at the first grade of SMKN 1 Bandung. The effectiveness was known after finding out the significant difference between the students' achievement before being taught by using snake and ladder board game and after being taught by using snake and ladder board game by comparing pre-test and post-test score.

B. Population, Sample, and Sampling

1. Population

A population can be defined as all member of any well-defined class of people, event or object (Ary *et. al*, 2010: 148). Population is object that has some qualities and characteristic that is chosen to be

cleared and to be concluded by the researcher (Louis: 2005). It means that population is large group of the research.

The population in this research was the students of accountancy classes in the first grade of SMKN 1 Bandung in the academic year 2016/2017. It consist 148 students that are divided into 4 classes, and each class consists around 36-38 students.

2. Sample

Sample is portion of the population selected for the data sources (Sukardi: 2003). The sample in this research was X-AK3 class. This class consists of 38 students of the first grade at SMKN 1 Bandung Tulungagung. The students consist of 1 male and 37 female. The researcher got information from the English teacher that this class has average proficiency in English, so the English teacher recommended the researcher to choose the class.

3. Sampling

Sampling is the process of selecting a number of individuals for a study in such a way that the individuals represent the larger group from which they were selected. Margono (2010:125) says sampling is way of taking sample that the total appropriate with the portion of sample as the data source, with shows the characteristics and spreading population to get the representative sample. In this research, the researcher used purposive sampling technique. Purposive sampling technique is a type of non-probability sampling where the researcher consciously selects

particular elements or subjects for addition in a research so as to make sure that the elements will have certain characteristics pertinent to the research. Purposive sampling is a sample which is taken because the researcher believes that she/he can give sufficient information. The researcher used purposive sampling because they have sufficient knowledge on English material. So, the researcher believes that X-AK3 class of SMKN 1 Bandung can give sufficient information.

C. Research Instrument

Instrument has important function in this research. Instrument is one of the significant steps in conducting this research. Instrument is a tool or facilities that are used by researcher (Arikunto, 2010: 160). The researcher must choose instrument in the process of collecting data. To know the effectiveness of teaching recount speaking ability by using snake and ladder board game, the researcher used test as instrument. The researcher gave oral test to the students. The oral test was divided into two parts; pre-test and post-test to get the students' scores in recount speaking ability.

Pre-test was the test which given to the students before the researcher taught by using snake and ladder board game in speaking recount ability. Pre-test is needed to know the basic competence for the students and how far the students understand the subject that will be taught. The form of pre-test was oral test. The researcher gave instruction for monologue test. The students told their experience in front of the class based on the researcher's instruction. The researcher also recorded the students' speaking. In scoring process, the researcher used oral

proficiency scoring rubric from Brown (2004:172-173). The scoring consists of five items: grammar, vocabulary, comprehension, fluency, and pronunciation. The oral proficiency scoring rubric is reported in the range from 1-5. *See Appendix 5.*

Post-test was the test which given to the students after the researcher give treatment or after taught the material by using snake and ladder board game. This test is needed to measure the students' recount speaking ability after taught by using snake and ladder board game. The form of post-test was same with the form of pre-test, that is oral test, but the instruction of monologue test in post-test was different topic with pre-test. The students told their experience in front of the class based on the researcher`s instruction. The researcher also recorded the students` speaking. While for scoring process in post-test was still same with scoring on pre-test which used oral proficiency scoring rubric. *See Appendix 5.*

D. Variable

According to Arikunto (2006:119), that all experiments have one fundamental idea behind them; to test the effect of one or more independent variables on a dependent variable (it is possible to have more than one dependent variable in experiment). Variable is divided into two kinds. They are independent variable and dependent variable.

1. Independent Variable

Creswell (2012: 116) states that an independent variable is an attribute or characteristic that influences or affects an outcome or dependent variable. Independent variable is the cause of other variable.

The independent variable of this research was “snake and ladder board game”.

2. Dependent Variable

Creswell (2012: 115) states that a dependent variable is an attribute or characteristic that is dependent on or influenced by the independent variable. The dependent variable was not manipulated by the researcher, but it was affected by the independent variable. The dependent variable of this research was “the students` recount speaking ability”.

E. Data and Data Source

1. Data

Data is note or fact or information that will be processed in the research activity. According to Arikunto (2006), data is a whole fact and number that can be used as material for arranging information is used as need. The data in this research were the students` score of the X-AK 3 class of at SMKN 1 Bandung in the form of speaking test in pre-test and post-test.

2. Data Source

Data source is subject in which the data are gotten. In this case, the researcher did effort to get data from the subjects. Data source is students of X-AK3 class at SMKN 1 Bandung Tulungagung consisted of 38 students.

F. Validity and Reliability Testing

A research is always depends upon measurement. There are two important characteristics that every instrument should go through a process of validity and reliability check.

1. Validity

Validity is a measurement that shows the validity levels of an instrument. A valid instrument has high validity. The other way, the fewer instruments mean it has low validity (Arikunto, 2010: 168). In addition, Lodico, *et al.* (2006: 87-88) presented, “Validity focuses on ensuring that what the instrument “claims” to measure is truly what is measuring”. It can be concluded that validity was usefulness instrument that shows the degree of truly. There are four types of validity; 1) Content validity, 2) Criterion related validity, 3). Construct validity, 4). Face validity. In this research, to measure whether the test has a good validity, the researcher analyzed the test from content validity and construct validity.

a. Content Validity

Content validity is correspondence between curriculum objectives and objectives being assessed. In this research the researcher used content validity to test the instrument valid or not. Content validity is a kind of validity which depends on careful analysis of the language being tested and a particular test. A test is said to have content validity if its contents constitutes a representative sample of the language ability, structures, etc. (Hughes, 2003:26).

The instrument in this research had content validity because the items were materials used for teaching recount speaking ability at the first grade of SMKN 1 Bandung suits with basic competence of 2013 curriculum. The tests were designed based on core competence and basic competence in syllabus Curriculum 2013 since the school implements the Curriculum of 2013 at the time the researcher conducted the research. To complete form of the core and basic competence in the Curriculum 2013 see *Appendix 2*. Besides that, the researcher provided some instructions for speaking recount test which consulted or validated with advisor (Emmi Naja, M.Pd).

b. Construct Validity

A test is said to have construct validity if it can be demonstrated that it measures just the ability which is supposed to measure (Isnawati, 2014:29). Construct validity deals with the relationship between a test and a particular view of language and language learning (Johnson, 2001: 303). It is the process of determining the extent to which test performance can be interpreted in terms of one or more constructs. In this research, the researcher administered a speaking test and the technique of scoring the students' speaking is based on the five aspects of speaking; they are vocabulary, grammar, comprehension, fluency, and pronunciation.

c. **Face Validity**

Face validity refers to the degree to which a test looks right, and appears to measure the knowledge or abilities it claims to measure, based on subjective judgment or the examinees who take it, the administrative personnel who decide on its use, and other psychometrically unsophisticated observers (Brown, 2004). The test in this research was designed to measure students' speaking ability, thus, to achieve face validity, the researcher gave the instruction to ask students to speak in front of the class.

d. **Reliability**

Brown (2004:20) stated a reliable test is consistent and dependable. Lodico, et, al. (2006:87), reliability refers to consistency of score, that is, an instrument's ability to produce "approximately" the same score for individual over repeated testing or across different raters. It means that reliability of instrument is needed to make sure that the instrument can be consistent if used in other time. Therefore, the instrument as the test was reliable.

Before giving pre-test in X-AK3 class, the researcher did try out in other class. It was tried out on students of X-AK1 class on February 17th, 2017 consisted 36 students. To make sure instrument (test) is reliable, the researcher analyzed the result of try out used intra-rater

reliability. It meant that the researcher did the scoring twice. *See appendix 8.*

To make sure, the researcher measured the students' recount speaking ability objectively by using scoring rubric. Then, the researcher calculated two sets of score were gotten by using *Pearson Product-Moment* in IBM SPSS Statistics 16.0 for getting correlation coefficient. The table of data and the calculation are showed as follow:

Table 3.2: The Statistical Correlation of *Pearson Product-Moment* from SPSS 16.0

		Correlations	
		Rater1	Rater2
Rater1	Pearson Correlation	1	.915**
	Sig. (2-tailed)		.000
	N	36	36
Rater2	Pearson Correlation	.915**	1
	Sig. (2-tailed)	.000	
	N	36	36

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

The criteria of reliability instrument can be divided into 5 classes, those are very reliable, reliable, enough reliable, rather reliable, and less reliable (Riduwan, 2004: 136). The criteria of reliability can be showed as bellow:

Table 3.3 Criteria of Reliability

Interval Coefficient	Correlation
0.80 – 1.00	Very reliable
0.60 – 0.79	Reliable
0.40 – 0.59	Enough reliable
0.20 – 0.39	Rather reliable
0.00 – 0.19	Less reliable

The result of calculation showed that reliability coefficient was 0.915 and the ideal reliability coefficient is 1. In this research, the calculation was comparable to 1, it means the instruments of this research was very reliable because 0.915 closer the reliability coefficient to 1.

G. Normality and Homogeneity Testing

1. Normality Testing

Normality test is used to test whether a variable is normal or not. Normal here means if the data have a normal distribution. The main reason of conducting normality testing in a research is that it is necessary for the researcher to know that the population or data involved in the research is in normal distribution. To test the normality of the data can use the *One Sample Kolmogorov-Smirnov* test with the provision that if $Asymp. Sig > 0,05$, the data were normally distributed (Asmarani, 2008:234). The normality testing is done towards both pre-test and post-test score. The hypotheses for testing normality are:

- a. H_0 : If the value of significance > 0.05 , means data is in normal distribution

- b. H_a : If the value of significance < 0.05 , means data is not in normal distribution

2. Homogeneity Testing

Homogeneity testing is conducted to know whether the gotten data has a homogeneous variance or not. To know the homogeneity, the researcher used *Test of Homogeneity of Variances* with SPSS.16 by the value of significance (α) = 0.050. Before doing homogeneity test, the researcher decided hypothesis testing as follows:

- a. H_o : If the value significance > 0.05 , means data is homogeneity
- b. H_a : If the value significance < 0.05 , means data is not homogeneity

H. Data Collecting Method

Data collecting method is method which used by the researcher to collect the data. Data collecting is a systematic and standardized procedure to obtain the necessary data. To collect the data, the researcher used instrument. Instrument is a tool which used to get the data. In this research, the instrument was only test. In this research, the data was collected in two steps:

1. Pre-test

Pre-test refers to a measure or test given to the subject prior to the experimental treatment. This aims to know the basic competence and their earlier knowledge before they get the treatment. At the first meeting, the researcher gave pre-test to the students. It was done on Thursday, February 23rd. 2017. The pretest in recount speaking ability was monologue test with a

topic personal experience that decided by the researcher. It was conducted to know the student's score in speaking. It diagnosed individual's specific strengths and weaknesses in recount speaking ability. There were 38 students of X AK-3 class as the subjects of this research.

2. Post-test

The last method used to collect the data was administering post-test. A post-test is a measure on some attribute or characteristic that is assessed for participants in an experiment after a treatment (Creswell, 2008: 301). It was done on Thursday, March 23rd, 2017. In the post test, the researcher gave oral test. The researcher gave monologue test with different topic from pre-test. the students told their personal experience based on the researcher's instruction. After the students had gotten post-test, the researcher gave comment and feedback. There were 38 students of X AK-3 class as the subjects of this research.

I. Treatment

The researcher gave the treatment twice, that was on Thursday, March 2nd and Thursday, March 9th, 2017. The researcher used snake and ladder board game as the treatment of teaching recount speaking ability. The purpose of using snake and ladder board game was to give new inspiration, add attention more, and make enjoy in teaching speaking recount ability.

The first, the researcher chose the teaching material and composed the lesson plan for teaching learning activity. In this case, the researcher chose recount speaking ability. The researcher prepared some questions or statements

about personal experiences in the snake and ladder board game column. The students were divided into six groups. Every group sat in circle. Every student has opportunity to operate the dice. Then, the students had to tell their personal experience in front of their own group with questions or statements that existed on the snake and ladder board game column. A group will be a winner if all of their members can gain the finish column.

J. Data Analysis

In managing and analyzing the data collected, the researcher use quantitative data analysis by using statistical technique. The analysis is used to find the significant difference of the students' writing achievement before and after using snake and ladder board game. In this study, the researcher used Paired Sample T-Test through SPSS 16.0 to analyze the data. If the result is lower than at the level of significance 0.05, the null hypothesis can't be rejected indicating that Snake and Ladder Board Game is not effective in the students' recount speaking ability. While, if it is bigger than at the level of significance 0.05, the null hypothesis can be rejected indicating that Snake and Ladder Board Game is effective in the students' recount speaking ability.