

CHAPTER III

RESEARCH METHOD

This chapter presents nine topics dealing with the Research Method; those are Research Design, Population, Sample and Sampling, Variable, Research Instrument, Validity, and Reliability Testing, Normality Testing, Data Collecting Method, and Data Analysis.

A. Research Design

Research design is a plan on how to collect and process data that can be implemented to achieve the research objective. According to Creswell (2008: 03) research designs is plan and the procedures for research that span the decisions from broad assumptions to detailed methods of data collection and analysis. It means that research design is the planning and proceduring to explain and reach how the data was collected.

The research design in this study was experimental research. According to Donald Ary (2007: 265) experimental can be defined as a scientific investigation in which the researcher manipulates one or more independent variables, controls any other relevant variables, and observes the effect of the manipulations on the dependent variable. The manipulated variable is called the experimental treatment or the independent variable. The observed and measured variable is called the dependent variable. In addition, experimental research is the way to look for relation cause and effect of two factors created by the researcher consciously.

Research design typically includes how data are collected to achieve the research objective. This study used the pre experimental design in the form of One Group Pretest-Posttest design that consist of pre-test, treatment and post-test. The pre-test and post-test

were given to take the score of student's speaking ability before and after taught by using market technique.

Table 3.1. The design of One group Pre-test, and Post-test

Pre-test	Treatment	Post-test
O	X	O

In this study, the procedures of experimental research using One-Group Pretest-Posttest design were explained as follows:

1. Administering a pretest to measure Speaking skill before being taught by using market technique of seven grade class at SMPN 4 Tulungagung
2. Applying the experimental treatment teaching speaking by using Market Technique to the subject (seven grade class at SMPN 4 Tulungagung)
3. Administering a posttest to measure the speaking skill after being taught by using market technique of seven grade class at SMPN 4 Tulungagung.

In this research, the researcher wanted to know the effectiveness of using Market Technique to improve speaking skill by experimental research. The. The effectiveness of the technique known after knowing the significance differences between the students were taught before and after using market technique.

B. Population, Sample, and Sampling

1. Population

Population is whole of subject being studied Arikunto (2010:173). Moreover population is Individuals, object or items covered a group or community. The population in this research was the 7th grade students of SMPN 4 Tulungagung in the academic year 2015/2016.

2. Sample

Sample is a portion of a population. According to Webster in Fridah (2002: 01) sample is a finite part of statistical population whose properties are studied to gain information about the whole. Sample of this research was the students of 7th grade of E class that consisted of 38 students with 18 boys and 20 girls.

3. Sampling

Sampling technique is the process of selecting a number of individuals for a study in such a way the individual represent the large group from they were selected. The researcher used the purposive sampling, The researcher took one class of the students' seventh grade at SMPN 04 Tulungagung, exactly E class, because that class had average proficiency in studying English.

C. Variable

There are two variables in this research, they are: independent and dependent variables. The independent variable was the major variable to be investigated. This variable was selected, manipulated, and measured by the researcher. In this research, the independent variable was Market Technique. The dependent variable was the variable that was observed and measured knowing the effect of independent variable. In this study, the dependent variable was students' achievement in speaking skill.

D. Research Instrument

Instrument is a tool to collect a data which is needed in a research. The researcher used test as the instrument to collect the data. In this research, the researcher used pre-test and post-test as instruments.

1. Pre-test

The pre-test was administered before implementing the technique. The pre-test was held on May 04th 2016 and on May 07th 2016. The pretest was conducted twice, because the researcher measured every student' speaking skill, therefore need more time. In this pre-test, the students were given a task to describe picture about person, (see Appendix 1). Based on the picture that prepared and given by the teacher. Each student was given 4 minutes to describe picture. Pre-test needed to know the students' speaking skill before being taught by using Market Technique.

2. Post-test

The researcher gave post-test twice; they were on May 16th 2016, and on May 18th 2016. This post-test was intended to measure the students' speaking ability after being given a treatment. In this test, the students were asked to describe a picture about animal. The picture of animal can be seen in Appendix 2. The students were given 4 minutes to describe the picture.

For in this study, scores were the main data, the score must be taken from good process and good instrument. That is why; the researcher conducted the try-out of the instrument, to check its quality

In this research, the researcher conducted the try-out twice, the try-out of the test before pre test conducted on 02nd May 2016 and the try-out before pos-test conducted on 14th May 2016. The sample to do the try-out test was C class of seven grade students. The students consist of 38 students also. The try-out test was done to convince that the instrument was good. For in test the students were asked to speak, the students are expected to know the topic. That is why the try out was to: (1) Convince that the student understood the instruction. By understanding what they had to do they would not spend their time. (2) Convince that the students were intended

tent knowing the topic. They were expected to be able speaking based on the allocated time.

The criterion of success of the students speaking ability can be seen in the rubric follow:

Table 3.2 Analytic oral language scoring Rubric

Aspects	Excellent 4 (26-35)	Very Good 3 (18-25)	Good 2 (9-17)	Need Improvement 1 (1-8)
Vocabulary (35)	Be able Applying the vocabulary in appropriate way, pronoun the vocabulary correctly, so in describing is clear listened	Applying the vocabulary in appropriate way enough, seldom make mistake in pronouncing, but the listener still can catch what the speaker is describing	Sometimes Applying the vocabulary in appropriate way, pronoun the vocabulary incorrect, so it's difficult be understand by listener	Often Applying the vocabulary in unappropriate way, pronoun the vocabulary incorrect, so it's hard to be understand y the listener
Aspects	Excellent 4 (20-25)	Very Good 3 (15-19)	Good 2 (10-14)	Need Improvement 1 (1-9)
Fluently 25	Speak was effortless and smooth with speed that close to the native speaker	Speak was mostly smooth, but with some hesitation and unevenness caused primarily by rephrasing and groping for words	Speak was slow and often hesitant, but the student was able to continue	Speak was very slow, stumbling, nervous and often for stopping
Aspects	Excellent 4 (20-25)	Very Good 3 (15-19)	Good 2 (10-14)	Need Improvement 1 (1-9)
Grammar 25	Almost there is no mistake in grammar, so it's easy to be understand	Sometime correct using the tenses. But doesn't influence the describing	There are often grammar mistake that block the meaning and often re arrange the sentence	A lot of mistake in grammar so it's become so hard to understand
Aspects	Excellent 4 (12-15)	Very Good 3 (8-11)	Good 2 (4-7)	Need Improvement 1 (1-3)

Content 15	Content was very clear, and be able describing in ten sentences.	Content was clear, and be able describing in eight sentences	Content no too clear and be able describing in 5 sentences	Content was not clear and able describing just 3 sentences
-----------------------	--	--	--	--

From the given rubric of scoring, the students' gained score, then categorized onto following classifications:

Table 3.3 Classification of Standard Performance

Points	Standard of Performance
80-100	Excellent
70-79	Very Good
60-69	Good
1-59	Need Improvement

There are limitations of total score above to categories student's skill, the excellent score of speaking was between 80-100, and the minimum score was between 1-59. Passing score was score that have to be reached by the students in order to pass the test.

Related to the construct validity used, in this study measuring students' speaking ability was done on the basis of the following matrix of the test development.

Table 3.4 The Matrix of Test Development

Syllabus	Indicator	Learning Material	Technique	Test Items
<p>Standard Competence: Mengungkapkan makna dalam teks lisan fungsional dan monolog pendek sangat sederhana berbentuk descriptive</p> <p>Basic Competence: Mengungkapkan makna dalam monolog pendek sangat sederhana dengan menggunakan ragam bahasa lisan secara akurat, lancar dan berinteraksi dengan lingkungan terdekat dalam teks berbentuk descriptive.</p>	Mengungkapkan isi pada gambar dengan mendiskripsikannya dan menggunakan bahasa yang baik dan benar	<p>About Person Vocabularies yang terkait dengan picture. Picture 1. Grand mother Picture 2 Grand father Picture 3 Father Picture 4 Mother Picture 5 teacher Picture 6 (Source: From Internet)</p>	<p>Speaking test</p> <p>Mendiskripsikan gambar (Orang)</p>	Pre-test
	Mengungkapkan isi pada gambar dengan mendiskripsikannya dan menggunakan bahasa yang baik dan benar	<p>About Animal Vocabularies yang terkait dengan picture. Picture 1. Butterfly Picture 2. Elephant Picture 3. Tiger Picture 4. Crocodile Picture 5. Cat Picture 6. Swan</p> <p>Source: From Internet)</p>	<p>Speaking test</p> <p>Mendiskripsikan gambar (binatang)</p>	Post-test

E. Procedure of Teaching Speaking Applying the Market Technique

The researcher gave treatment on May 09th 11st 12nd 2016. The treatment was conducted after the pre-test was administered. The purpose of the treatment was to facilitate students to improve student's speaking skill. The experimental class was taught by using Market Technique. The procedures in giving treatment were as follows:

1. The teaching and learning process were held for about 80 minutes

2. The activity consisted of 5 minutes its introduction, 70 minutes its main activity and 5 minutes for closing.
3. In the main activity there were some activities as follow:
 - a. The teacher explained the instruction, material clearly.
 - b. The teacher divided the students into 6 groups, three groups took a role as sellers, and three groups took a role as the buyers. Every seller of group was given the different vocabularies, here the vocabularies used to give by drilling to the buyers group, then the three buyers group must rechange the vocabularies, till three times
 - c. Teacher provided the vocabularies contain the meaning based on theme (same with pre test), and the teacher pronounced how the correct pronunciation. In order the sellers group gave and produced the vocabularies correctly to the buyers group
 - d. The groups who took a role as the seller started to give the material to the buyer groups. And the four Principles of Market Technique were applied in every seller groups:

- 1) **Drilling**

The students who were the seller drill the vocabularies to the others students who were the buyer.

- 2) **Listening**

The buyers pay attention and listen to the seller, when they produced and drill each vocabulary

- 3) **Writing**

The buyer wrote the vocabularies after they listened

4) **Pronunciation**

After the buyer wrote the vocabularies they pronounced the vocabularies, and memorize it.

5) **Rechange**

After they have done these activities, they rechanged the model of the seller took a role as the buyer, and the model of buyer took a role as seller, then they did the four same principles before. The position and the vocabularies of this technique can be seen in Appendix 4.

- e. And at the end, the researcher gave test by describing picture about person, every student got time 4 minutes to describe it. The topic still the same in pre test before, in order they could realize what they have to improve in this treatment meeting.

In process of treatment the students felt happy and fun, they were cooperated and motivated.

F. Validity, and Reliability Testing

In collecting data process, the researcher used instrument to get data that was needed. Developing a particular study also had several major things. The development of a good instrument required considerable time, effort, skill. In this case, the researcher should make a good test than can measure the student's speaking skill based on their level. There were two important characteristics to measure instrument. The instrument should get validity and reliability.

1. Validity

Validity is the most complex criterion of an effective test, and the most important principle of language testing. Validity is defined as the extent to which a concept is accurately measured in a quantitative study Heale and Twycross (2015: 66). There are four types of validity a) Content Validity, b) Criterion Related Validity, c) Construct Validity, and d) Face Validity.

In this research, the researcher used The Content Validity and face Validity.

a. **Content Validity**

This kind of validity depends on careful analysis of the language being tested and the particular treatment activity. This category looks at whether the instrument adequately covers all the content that it should with respect to the variable. From the score achieved by the student in try out test showed that the students performed their ability as being measured. The instruction of test can be seen in Appendix 5. And in order to determine whether or not the test has content validity, we need a specification of the skills or structure being tested. A comparison of test specification and test content is the basis for judgment for content validity. The researcher made this test based on the course objective in the syllabus of second years. Therefore it can be concluded that based on the syllabus and speaking test administered in try-out has met the criteria of content validity.

b. **Face Validity**

A test is said to have face validity if it measures what is supposed to measure. Face validity is hardly a scientific concept that is very important. A test which does not have face validity may not be accepted by test takers, teachers, educations, authorities or employers. In this test, there are some

aspects that are consideration from this test to make a good test based on the validity.

- 1) The instruction must be clear for the students
- 2) In this test, the students can conduct the producing the language based on the picture. The instruction based of syllabus and suitable with their level.
- 3) Time allocation must be clearly. The teacher give limited about 4 minutes for every students to describe based on the picture.

2. Reliability

Reliability is the consistency of student's score. Heale and Twycross (2015: 66) stated Reliability the extent to which a research instrument consistently has the same results if it is used in the same situation on repeated occasions. Means that the students score have the consistency, thus the instrument to be reliable to collect the data.

To measure the reliability of instrument, the researcher conducted the try out twice: try out before pre test and post test. The researcher used inter-rater reliability in which the two scores did the scoring and two sets of scores were calculated to get the correlation of coefficient. Beaumont (2009: 16) inter-rater reliability uses to access the reliability between different scorers. Mean that the two scores were gotten from two test taker. The two scores were the English teacher of 7th grade students was rater 1 and the researcher herself was rater 2. The researcher took two score from rater 2, one scores was from try-out before pre-test and another score was from try-out before posttest.

The researcher used Alpha Cronbach Reliability Coefficient in SPSS 16.0 to analyze the data. The Computation can be seen in Appendix 6. The result showed

that *alpha* is 0.810 and r table was 0.320. It can be concluded that the instruments was reliable and be used to collect the data.

G. Normality Testing

Normality test are used to determine whether the data set is well-modeled by a normal distribution or no, or to compute how likely an underlying random variable is to be normally distributed population.

In this research, the researcher used *Kolmogorow-Smirnove Test* with SPSS 16.0 version. The hypotheses for normality tasting are:

1. If value less than 0.05 it's indicates that the data are non-normal.
2. If value more than 0.05 it's indicated that the data are normal.

The result of the analysis could be seen in the table follow:

Table 3.5 Result of Pre-test and Post-test in Normality Testing

One-Sample Kolmogorov-Smirnov Test

		Post-test 1	Post-test 2
N		38	38
Normal Parameters ^a	Mean	62.26	64.18
	Std. Deviation	3.984	3.645
Most Extreme Differences	Absolute	.142	.125
	Positive	.109	.125
	Negative	-.142	-.065
Kolmogorov-Smirnov Z		.877	.773
Asymp. Sig. (2-tailed)		.426	.588

a. Test distribution is Normal.

Based on the output from SPSS above it was known that the significance value from pre-test was 0.426 and from the Post-test 0.588 the value from pre-test bigger than 0.05 ($0.426 > 0.05$). It means that H_0 was accepted and H_a was rejected and the data was in normal distribution. Then, the value from post-test bigger than 0.05 ($0.588 > 0.05$). It

means that H_0 was accepted and H_a was rejected and the data was in normal distribution. So it can be interpreted that both of data (pre-test and post-test) are normal distribution.

H. Method of Collecting Data

In this research the researcher collected the data by administrating test. Kizlik (2012: 03) stated that a method is to determine a student's ability to complete certain tasks or demonstrate mastery of a skill or knowledge of content. On the other hand test is a method to collect the data (score), thus to know how far the student mastery the language proficiency. Researcher used two kinds of tests. They were pre-test and post-test. Pre-test was given before being taught by using Market Technique and post-test was given after being taught by using Market Technique. From the test the teacher was got the quantitative score which can be analyzed by the tester.

I. Technique of Data Analysis

In this research, the researcher used a quantitative data analysis technique using statistical method. The data collected (data result) was processed by comparing the first data (pre-test) and the second data (post-test). This technique was used to find significant different on the speaking achievement of the students before and after being taught by using Market Technique. This technique of data analysis belonged to quantitative data analysis and the data were analyzed by using paired sample T-Test through SPSS 16.0 Version.