CHAPTER III
RESEARCH METHOD

A. Research Approach

This is quantitative research. This research focus on identifying the effectiveness of using songs to teach asking and giving direction. The researcher focus on giving test to the student in order to know the effectiveness of using songs to teach asking and giving direction. Some statistical measurement, to calculate percentage that will applying to support the data analysis. In this study, researcher able to find out the effectiveness of using songs to teach asking and giving direction.

B. Setting and Time

The researcher conduct the research at the tenth grade of SMK Pati Unus Karangawen second semester of the academic year of 2013/2014.

C. Research Design

The method of the research is experimental. An experimental is "defined as a situation in which one observes the relationship between two variables by deliberately producing a change in one and looking to see whether this alteration produces a change in the other (Anderson 1969)".[1] In other words, the

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[1] Rodgers and Brown, *Doing Second Language Research,* (Cambridge: Oxford Press, 2002), p. 211.

researcher look at significant different between first variable (use of song in teaching asking and giving direction) and second variable (students' score in asking and giving direction) using pretest and posttest, control and experimental group.

The researcher chose the method because she wants to know the effectiveness of using songs in student's asking and giving direction achievement. The approach use quantitative. It means the method and instrument involve numerical measurement and then statistical quantification. In experimental design, a pre-test administer and then following by separate methodological treatments to a number of different groups of pupils.

This research focuses on identifying the effectiveness of using songs in asking and giving direction. So that to measure the effectiveness of song in asking and giving direction, the researcher identify some result they are:

1. The score of students before treatment.
2. The score of students after treatment.
3. The differences between pre test and post test score of students.
4. The differences of students' atmosphere between the students who are teaching by using song and the students who are not teaching by using song in teaching and learning process.

D. Variable Research

Variable is a variation object of the study. From the design of experiment there are two types of variables: dependent

variable (y) and independent variable (x). The dependent variable is the variable of focus or the central variable on which other variables will act if there is any relationship. The independent variable selected to determine the relationship with the dependent variable.[2] So, the variables in this study are:

1. Independent Variable (x).

    Independent variable in this research is the use of song in teaching Asking and giving direction.

2. Dependent Variable (y).

    Dependent variable in this study is speaking skill of students at the tenth grade of SMK Patiunus Karangawen in the academic year of 2014/2015.

E. Population, Sample and Sampling Technique

1. Population

    According Arikunto, population is all of the subject of research.[3] In other word, population is the big research group chosen to representing all members of group. The population of this research is the students of tenth grade of SMK Patiunus Karangawen in the academic year of 2014/2015.

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[2] Suharsimi Arikunto, *Prosedur Penelitian: Suatu Pendekatan Praktik* (Jakarta: PT Rineka Cipta, 2006), 13th Ed., p. 118-119.

[3] Suharsimi Arikunto, *Prosedur Penelitian: Suatu Pendekatan Praktik* (Jakarta: PT Rineka Cipta, 2006), 13th Ed., p. 130.

2. Sample

Sample is representative of population that will be observed.[4]Sampling is the process of selecting number of individuals for the study in such a way that the individuals represent the larger group from which they are selected.

3. Sampling technique

In this research, the researcher use random sampling technique. It use because it is easy to carry out and do not need to follow difficult procedure. In this case, the classes randomly choose as the sample of the research in which each of them as a number of populations include chance equal the sample.[5]

F. Technique of Data Collection

1. Test

Test is a set of questions and exercises used to measure the ability or capacity of the individual or group.[6] In order to discover how students are thinking and using the target language (English). The researcher will conduct oral test using song. The form of the test was direct test item of

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[4]Suharsimi Arikunto, *Prosedur Penelitian: Suatu Pendekatan Praktik* (Jakarta: PT Rineka Cipta, 2006), 13th Ed., p. 131.

[5]Sugiarto, *Teknik Sampling*, (Jakarta: PT Gramedia Pustaka Utama, 2003), p. 90

[6]Addision Wesley Longman, *Teaching by Principle : An Interactive Approach to Language Pedagogy*, (New York : A Person Education Company, 2001), 2nd Ed, p.384

speaking because the writer put the students in group and asked them to practice in singing song based on the expression of asking and giving direction. The lyrics is about the expression of asking and giving direction that are given based on picture map. The writer analyzed the result of the test and gave score. The test will be conducted to both control class and experimental class which consist of 25 students of control class and 25 students of experiment class in form of speaking the expression of asking and giving direction to evaluate students' speaking before and after the treatment. The scoring system will pay attention to the Three aspects of speaking scoring; vocabulary and grammar, discourse management and pronunciation.

Test is used to measure the person☐s competence and to achieve the objective. The data was collected by giving speaking test. Speaking was conducted twice, there are pre-test and post-test. The form of the test is direct speaking test and the teacher gave scores on pronunciation, grammar, vocabulary, fluency and comprehension.

2. Documentation

The researcher needed another data to help run the research. In addition to do that, data will be collected through documentation of the students' previous examination score from the school. It will be used to validate the sample.

Documentation of students' speaking test recording is used to evaluate students' speaking skill.

G. Scoring Technique

In each test, the students tell the story about the topic based on the song that has been given by the teacher. Asking and giving direction using song. The researcher gave speaking test to the students to analyze their scores on pronunciation, fluency, and comprehension.

In giving scores to the students, the writer used analytic scale which categorized by some categories and the writer follows these scoring criteria for each category. This analytic score has 3 items and each item scores five. So, the maximum score is 15. But it will be added 5and multiplied 5, so the final maximum score will be 100.

Analytic scoring of speaking could be seen on the following figures:

Aspects	Score	Description
	5	Have few traces of foreign accent.
	4	Always intelligible, though one is conscious of a definite accent
	3	Pronunciation problem necessitate concentrated listening and occasionally lead to misunderstanding.
Pronunciation	2	Very hard to understand because of pronunciation problems, must frequently be asked to repeat.
	1	Pronunciation problems so severe

Aspects	Score	Description
		as to make speech virtually unintelligible.
	5	Makes few (if any) noticeable errors of grammar and word order.
	4	Occasionally makes grammatical and/or word order errors which do not, however obscure the meaning.
	3	Make frequent errors of grammar and word order which occasionally obscure meaning.
	2	Grammar and word order errors make comprehension difficult. Must oftener phrase sentences and/or restrict himself to basic patterns.
Grammar	1	Errors in grammar and word order so severe as to make speech virtually unintelligible.
	5	Use of vocabulary and idioms is virtually that of a native speaker.
	4	Sometimes uses inappropriate terms and/or must rephrase the idea because of lexical inadequate
	3	Frequently uses the wrong words; conversation somewhat limited because of inadequate vocabulary.
	2	Misuse of word and very limited vocabulary make comprehension quite difficult.
Vocabulary	1	Vocabulary limitations so extreme as to make conversation virtually impossible.
	5	Speed as fluent and effortless as that of a native speaker.
	4	Speed of the speech seems to be slightly affected by language

Aspects	Score	Description
		problem.
	3	Speed and fluency are rather strongly affected by language problems.
	2	Usually hesitant; often forced into silent by language limitations.
Fluency	1	Speech is so halting and fragmentary as to make conversation virtually impossible.
	5	Appears to understand everything without difficulty.
Comprehension	4	Understand nearly everything at normal speed, although occasional repetition may be necessary.
	3	Understand most of what is said at slower than normal speed with repetition.
	2	Has great difficulty following what is said. Can comprehend only social conversation spoken slowly with frequently repetitions.
	1	Can not be said to understand even simple conversation virtually impossible. Based on *Testing English as a Second Language*[7]

H. Methods of Data Analysis

There are three kinds of test that will hold in experimental research, they are pre-requisite test, try-out test, and hypothesis test. So, analyzing the data have to has three processes of test.

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[7] David P. Haris, *Testing English as a Second Language*, (Washington DC: Georgetown University, 1969). p. 84.

a. Pre-requisite Test

Before the writer determines the sample, the writer should conduct a homogeneity test by choosing 2 classes with cluster random sampling. This test conduct to determine whether the data are homogenous or not. After conduct the test, data analysis carryout to find out the homogeneity of the sample. It means to check if the research result met the requirement of good research or not. It means to get the assumption that sample of research come from a same condition or homogenous. The writer use the formula as follows:

$$F = \frac{Biggest\ Variance}{Smallest\ Variance}$$

b. Hypothesis Test

Firstly, the test is done in both groups, experimental and control group. Secondly, the result of the test is scored by using analytic scale. Thirdly, the means score of the two groups are determined. Finally, the two means are compared by applying t-test formula. T-test is used to differentiate if the students result of students speaking skill in transactional and interpersonal text by using song and without using song.

I. Analyzing the result

1. Normality

It is used to know the normality of the data that is going to be analyzed whether both groups have normal

distribution or not. To find out the distribution data, normality test is done using chi-square formula. Steps of chi-square test are as follows:

a. Determine the range (R)the highest score − the lowest score

b. Determine the class interval (K) with formula:

K = 1+(3,3) log in

c. Determine the length of the class using the formula

$P: \frac{R}{K}$

d. Make a frequency distribution table

e. Determine the class boundaries (bc) of each class interval

f. Calculating the class average Xi ($\bar{x}$) with formula:

$$\bar{x}: \frac{\overline{\sum f\iota\, x\iota}}{\sum f\iota}$$

g. Calculate variants with the formula:

$$s: \sqrt{\sum fi \frac{(xi - \bar{x})^2}{n-1}}$$

h. Calculate the value of Z with the formula:

$$Z: \frac{xi - \bar{x}}{s}$$

$\bar{x}$: Limit class

xi : Limit class

S : Standard Deviation

i. Define the wide area of each class interval.

j. Calculate the frequency expository (Ei) with the formula :
   nx wide area with the n number of sample

k. Make a list of the frequency of observation (Oi) with the
   frequency expository as follows:

Class	Bc	ZP	LP	Ei $\frac{Oi-Ei}{Ei}$

l. Calculate the chi-square (x^2) with the formula

$$x^2 : \sum_{i:1}^{k} \frac{(Oi - Ei)^2}{Ei}$$

m. Determine the degree of freedom (df) in the calculation of
   this data is arranged in is of frequency distribution
   consisting of k pieces so that the interval to determine the
   criteria test used formula dk:K-3. Where K is the number
   of class intervals and a=5%

n. Determining the value of $x^2 table$.

o. Determining the distribution normality with the test
   criteria: if $x^2 \, count > x^2 table$ so the data is not normal
   distribution and the other way if the $x^2 count < x^2 table$
   so the data is norma distribution.

2. Homogeneity

   It is to know whether experiment class and control
   class. That are taken from population have some variation or
   not. According to Nunan, a test should be given to both
   classes of students before the experiment just to make sure
   that the both class really are the same. The steps as follows:

a. Calculate variants both classes(experimental and control classes) with the formula:

$$S1^2 : \frac{\sum(x-\bar{x})^2}{n1-1} \text{ and } S2^2 : \frac{\sum(x-\bar{x})^2}{n2-n1}$$

b. Determine $F: \frac{Vb}{Vk}$

   Where :   Vb: bigger varian

   Vk: bigger varian

   Determine dk: (n-1) : $(n_2 - 1)$

c. Determine F_{table} with α: 5%

d. Determining the distribution homogeneity with test criteria if $F_{count} > F_{table}$ the data is not homogeneous and the other way if the $F_{count} < F_{table}$ the data is homogeneous.

3. Test average (t-test)

T-test was used to differentiate if the student`s result of questionnaire and test by using song was significant or not. The two means were compared by applying t-test formula hypothesis

$$Ho: \mu_1 = \mu_2$$
$$H_a: \mu_1 > \mu_2 \text{ or } \mu_1 < \mu_2$$

Where : μ_1 = the average of experiment class

μ_2 = the average of control class

For statistic above, t-test formula as follows:

c.a. If $\sigma_1 = \sigma_2$ homogeneity test of the experimental class and control class have some variant (homogeny) so the t-test formula:

$$t: \frac{\overline{\overline{x_1 - \bar{x}_2}}}{s\sqrt{\dfrac{1}{n_1} + \dfrac{1}{n_2}}}$$

Where: $S\sqrt{\dfrac{(n_1-1)s_1^2 + (n_2-1)s_2^2}{n_1+n_2-2}}$

Where: $\overline{X}$ = the mean score of experimental group

$\bar{x}_2$ = the mean score of control group

n_1 = the number of experimental group

n_2 = the number of control group

S = standard deviation

s^2 = variance

If $\sigma_1^2 \neq \sigma_2^2$ the homogenity of the experiment class control class have different variant (heteronic) so the t- test formula is:

$$t`: \frac{\bar{x} - \bar{x}_2}{\sqrt{\left[\dfrac{s_1^2}{n_1} + \dfrac{s_2^2}{n_2}\right]}}$$

If the obtained score was higher than t-table score by using α 5% of significance Ho was rejected. It meant Ha was accepted: there was significance difference student motivation and student`s achievement between the experiment and control group.

J. Outline of the Research

This thesis consists of 5 chapters.

Chapter 1 presents the introduction which contains background of the study, reasons for choosing the topic, research questions, objective of the study, and pedagogical significance study.

Chapter II deals with the theoretical foundation from related literature.

Chapter III presents the method of the research and the action. It deals with design of the study, procedure of the study, subject of the study, setting, instrument, data collection technique, data analysis and analyzing the result.

Chapter IV describes the result of the experimental research. It consists of whatever happens in the experimental research process. It also presents the students improvement in asking and giving direction for speaking skill.

Chapter V is the last chapter, it presents conclusions and suggestions.