

CHAPTER III

RESEARCH METHODOLOGY

This chapter presents research method, hypotheses, data collection, the procedures of conducting the research, and data analysis. Research method consists of research design and variables. Population, sample and data collection instruments will be explained in data collection. The procedures of conducting the research are divided into four parts namely organizing teaching procedure, administering pilot test, administering treatment, and administering pretest and posttest. In the last part of the chapter, data analysis will present scoring technique, data analysis on the pre-test and post-test, and data analysis from participation sheet and video recording.

3. 1 Research Method

3.1.1. Research Design

This study is experimental research. Based on Geoffrey (2006), experimental research was used to test hypothesis in finding out the cause-effect relationship between two variables. The design of the study is quasi-experimental because this study had little or no control over the allocation of the treatments or other factors being studied. The formula of the study can be presented as follows:

G1 T1 X T2

G2 T1 T2

From the design above, two classes were selected in this study. One class became experimental group (G1) which was given treatment (X) and another became control group (G2) which was not given treatment. Pre-test (T1) was administered before the implementation of MUF Framework in teaching English as the treatment. In the end of the treatment period, post-test was held to assess students' speaking skill.

3.1.2 Variables

A variable can be defined as an attribute of a person or an object which varies from each other (Coollidge, 2000). There are two types of variables in this study namely independent variable and dependent variable.

Hatch and Farhady (1982, p, 15) states that independent variable is variable which affects the dependent variable whereas dependent variable is variable which gets the effect from independent variable. In this study, the independent variable is MUF Framework while the dependent variable is teaching speaking to young learners.

3.2 Hypotheses

A hypothesis is a prediction of some sort regarding the possible outcomes of the study (Coolidge, 2000). In this study, two hypotheses are formulated namely null

hypothesis and alternative hypothesis.

The null hypothesis states that there is no difference in mean between the class using MUF Framework in teaching English as treatment and class without using MUF Framework.

The alternative hypothesis states that there is a difference in mean between the class using MUF Framework in teaching English as treatment and class without using MUF Framework

3.3 Data Collection

3.3.1 Population and Sample

The population of this study was the third grade students from one of elementary school in western Bandung. From the population, two classes were selected to be the sample. The first class was IIIA as the experimental group which was given treatment (using MUF Framework) and the second class was IIIB as the control group which was not given treatment (using Grammar-Translation Method).

Both classes have different number of students. IIIA consists of 36 students whereas IIIB consists of 35 students. In this study, not all students were considered as the sample. The sample was only students who participated in pretest, treatment, and post-test. IIIA and IIIB were chosen as the sample for the study because of those classes have the same level of English competence.

3.3.2 Data Collection Instruments

Instruments were needed to collect the data which will be analyzed to answer each research question. In collecting the data, there are three instruments which was used in this study namely speaking test (pretest and posttest), students' participation sheet and video recording.

Speaking Test

Speaking test were used to measure and assess students' speaking skill especially in offering something, asking and responding questions which was related to the topic (food, occupation and family). Furthermore, there were five aspects in assessing students' speaking skill namely fluency, pronunciation, grammar, vocabulary, and comprehension. These criteria were available to apply in both group.

Speaking test were conducted twice, in pretest and posttest. The score of speaking test in pretest and posttest were the data which were analyzed using t-test for analysis of MUF framework effectiveness. The form of speaking test which was used in pretest and posttest can be seen in appendix B.

- **Pre-test**

A pre-test was administered in control group and experimental group to find out the initial differences between the groups of students who had similar level of speaking. In this test, students were divided into several groups consist of two students. Each group was given pictures and situation or context where they had to make conversation based on the topic related to the picture. Before doing the conversation, they had to write their family's member name and their occupation and know what food they had based on the picture. From the situation, they were expected to produce some expressions such as asking and answering each other questions

concerning family member, occupation and food.

- **Posttest**

The posttest was given in the end treatment period to find out if there was significant difference between the two groups. Both experimental and control groups were given posttest at the end of the program. The items and procedures of posttest was the same with what was given in the pre-test. The aim was to measure the improvement between the pre-test and post test-after receiving treatment.

Students' Participation Sheet

The aim of using the students' participation sheet was to figure out the students' participation toward the MUF framework, whether they gave poor, fair or good participation. To show their participation, teacher gave stars to students' participation sheet that represents their participation into one star for poor participation, two stars for fair participation and three stars for good participation. The form of participation sheet can be seen in appendix B.

Video Recording

Six meetings of teaching and learning processes were recorded into the video recording and was used to support the data gained from the students' participation sheet. The video recording gave description about students' participation in responding MUF Framework. Some various responses would be seen in the video and be categorized into three types of participations.

3.4 The Procedure of Conducting The Research

3.4.1 Organizing Teaching Procedure

In organizing teaching procedures, there were some steps should be prepared before giving the treatment. The steps are preparing the materials, the lesson plans, and the medias.

Based on the school regulation where the study was conducted, the materials should be in line with school curriculum so the study would not disturb the teaching and learning process. The textbook which was used by the school English teacher was used as the material resource for both classes. Some of the language focuses were considered in supporting the materials. In order to relate the topic from one lesson plan to another, the previous topic and language focuses were always related to the next one. The treatment would be conducted in six meetings and presenting three topics with six-language focuses.

Table 3.1

Language Focuses

Topic	Language focus	Objectives
Food and Drink	I am thirsty/ I am Hungry Are you hungry?/ Are you thirsty? Yes, I am/ No, I am not	Students are able to express whether she is hungry/ he is thirsty Students are able to say what they want
Food and Drink	Do you want (milk)? Yes, I do/ No, I don't What do you want? I want (Milk)	Students are able to ask what their friends want Students are able to say what they (students) want

Occupation	She is a doctor He is a teacher Are you a (doctor)? Yes, I am/ No, I am not	Students are able to say someone's occupation Students are able to ask someone's occupation
Occupation	What do you want to be? I want to be (a doctor) (Rika) wants to be (a doctor)	Students are able to say someone's occupation Students are able to ask someone's occupation
Family	My (father) is Mr. Budi Your (mother) is Mrs. Ana	Students are able to say the members of family
Family	Who is she? She is my mother What does she do? She is a doctor	Students are able to speak about their family

After preparing the material, the lesson plan was made. MUF Framework was used as the sequence in making the lesson plan in the experimental group, while the conventional way was used in the control group. Appropriate media was also prepared to support the teaching and learning process in creating context based on the topic.

3.4.2 Administering the pilot test

Before giving speaking test in pretest and posttest, the speaking test was pilot tested first. Pilot test was needed to find out the weaknesses of speaking test and

create the appropriateness of pre-test and post-test for experimental and control groups.

Sample of pilot test was taken from third grade students from one of elementary school in western Bandung on July 17, 2009. There were 24 students chosen as the sample of the pilot test. The students were asked to have conversation in pairs as the speaking test, which was employed using the following instructions.

In the beginning of the test, the students were given a family picture consisting of father, mother, brother, and sister and a list of food and drinks. Students had five minutes to write his or her family's name and occupation.

After they had written it, students worked in pairs and should do conversation based on the topic related to the picture. Students A was the visitor who will ask about her or his friend's family name and occupation. In other side, students B should offer some food or drinks he or she had and answered what student B asked. While a pair of students were having speaking test, the rest of the students in the class were asked to color the family and food picture. This situation also applied in speaking test for pretest and posttest.

3.4.3 Administering Treatment

Treatment was conducted for experimental group. This treatment was given in six meetings. This study used MUF Framework as the treatment in teaching English for young learners. In each meeting, teacher prepared a lesson plan which was able to support learning process.

During the treatment, teacher taught using MUF Framework which consists of three aspects namely meaning, use, and form that should always appear and relate to each other in each meeting. In every two meetings, teacher taught one topic. There were three topics in the treatment which are food, occupation, and family.

The treatment schedule is as follows

Table 3.2

No.	Experimental Group Treatment	
	Date	Topic
1.	30 July 2009	Food and Drinks
2.	6 August 2009	Food and Drinks
3.	13 August 2009	Occupation
4.	27 August 2009	Occupation
5	3 September	Family
6.	10 September 2009	Family

To have clear understanding about the MUF Framework, a brief description about both classes which used different method was given below:

- **The Description of MUF Framework Implementation in Experimental Group**

In implementing the MUF framework in first meeting, teacher had prepared a lot of media such as big picture, puppet and flashcard. The class was begun by making set of rules that was made by teacher and students. The first stage of MUF Framework is meaning. Teacher created a contextual learning around the class in presenting the meaning of the

language. The topic of the first meeting was about food and drink. Before introducing the kind of food and drink, teacher wanted to explain about how to express if someone was hungry or thirsty through giving the students some gestures. After students had understood about the meaning 'I am thirsty or I am hungry', teacher checked students' understanding about the language item through miming game. In introducing the yes no question related to the topic and kinds of food and drink, teacher used puppet to help her. Teacher and puppet asked each other about the same question and said what actually teacher or puppet wanted. After that, teacher asked every students in the class about the same question.

In the second stage, use stage, students were given opportunities to speak and use the language based on what have been taught in previous stage. The students did the conversation in pairs and the teacher walked around the class to help and check students' understanding about the use of the language.

In the last stage which is form stage. Teacher gave exercise to students so the students could aware the language form of the sentences. The exercise was based on students' characteristic and the context. The exercise was matching the picture and the words. Sets of the pictures were provided in exercise sheet and students should match the picture with the words, whether the person in the picture hungry or thirsty and what he exactly wanted. The lesson plan and worksheet of this meeting can be seen in appendix A.

- **The Description of Conventional Way (Grammar-Translation Method) implementation in Control Group**

The control group class used conventional way (Grammar-translation method) in their learning process. This method focused on reading, translation and grammar. The teacher did not use learning media in presenting the language item. The teacher just focused on the text book. At the first, teacher wrote some words and the meaning in the blackboard. The next step, teacher asked students to read it aloud and gave the students chance to write about the words in their book. After that, teacher wrote some sentences and introduced the language form to the students. To check students' understanding, the teacher gave exercise to the students based on the grammar that the students learnt before. In the end, teacher asked students to do the exercise from students' text book. The lesson plan of control group can be seen in appendix A.

3.4.4 Administering Pretest and Posttest

Pre test was given in the beginning of the program before the treatment to measure students' level in speaking. The pretest is in speaking test form. The pretest was given in both control and experimental group. It was given to class 3A as the experimental group and 3B as the control group on July 23, 2009. The pretest was conducted in the morning.

Posttest, on the other hand, was given to measure the students' progress on speaking after they had received the treatment. The posttest was given in control and

experimental class on October 7, 2009 and was conducted in the afternoon. The items and the procedure of the post test was similar to the pre test, the reason was to find out whether or not the students made a progress in speaking skill after the treatment.

3.5 Data Analysis

3.5.1 Scoring Technique

Student Oral Language Observation Matrix (SOLOM) was used to assess the speaking skill of the students in pre-test and post-test. The score and criteria of SOLOM are represented as follows:

Table 3.3

Criteria of Assessment of Pronunciation

Score	Criteria
17-20	Pronunciation and intonation approximate that of a native speaker.
13-16	Always intelligible, although the listener is conscious of a definite accent and occasional inappropriate intonation patterns.
9-12	Pronunciation problems necessitate concentration on the part of the listener and occasionally lead to misunderstanding.
5-8	Very hard to understand because of pronunciation problems. Must frequently repeat in order to make him/herself understood.
<4	Pronunciation problems so severe as to make speech virtually unintelligible

Criteria of Assessment of Vocabulary

Score	Criteria
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17-20	Use of vocabulary and idioms approximate that of a native speaker.
13-16	Student occasionally uses inappropriate terms and/or must rephrase ideas because of lexical inadequacies.
9-12	Student frequently uses wrong words: conversation somewhat limited because of inadequate vocabulary.
5-8	Misuse of words and very limited: comprehension quite difficult.
<4	Vocabulary limitations so extreme as to make conversation virtually impossible.

Criteria of Assessment of Fluency

Score	Criteria
17-20	Speech in everyday conversation and classroom discussions fluent and effortless; approximating that of a native speaker.
13-16	Speech in everyday conversation and classroom discussions generally fluent, with occasional lapses while the student searches for the correct manner of expression
9-12	Speech in everyday conversation and classroom discussion frequently disrupted by the student's search for the correct manner of expression
5-8	Usually hesitant: often forced into silence by language limitations.
<4	Speech so halting and fragmentary as to make conversation virtually impossible.

Criteria of Assessment Grammar

Score	Criteria
17-20	Grammar and word order approximate that of a native speaker.
13-16	Occasionally makes grammatical and/or word order errors that do not obscure meaning.

9-12	Makes frequent errors of grammar and word order that occasionally obscure meaning.
5-8	Grammar and word order errors make comprehension difficult. Must often rephrase and/or restrict him/herself to basic patterns.
<4	Errors in grammar and word order so severe as to make speech virtually unintelligible.

Criteria of Assessment of Comprehension

Score	Criteria
17-20	Understands everyday conversation and normal classroom discussions.
13-16	Understands nearly everything at normal speech. Although occasional repetition may be necessary.
9-12	Understands most of what is said at slower-than-normal speed with repetitions
5-8	Has great difficulty following that is said. Can comprehend only social conversation spoken slowly and with frequent repetitions.
<4	Cannot be said to understand even simple conversation

3.5.2 Data Analysis on Pre-Test and Post-Test

3.5.2.1 Normal Distribution Test

Scores can be examined by t-test if they are normally distributed. Kolmogorov-Smirnov test in SPSS 16 was used to analyze if the data are normal distribution. If the significant value is more than the level of significance (0.05) the null hypothesis is accepted; the scores are normally distributed.

3.5.2.2 The Homogeneity of Variance Test

T-test can be used if the variances of both groups are homogenous. In analyzing the variance homogeneity of the scores, Levene Test Formula in SPSS 16 was used in this study. If the significant value is more than the level of significance (0.05) the null hypothesis is accepted; the variances of control group and experimental group are homogeneous.

3.5.2.3 The Independent T-Test

Independent t-test was used to find out the difference mean between two groups. Some aspects should be considered before using independent t-test. These aspects are the participants must be different in each group, it has normal distribution and the variance of the two groups are equal (Coolidge,2000).

The independent t-test in SPSS 16 was used to find out the differences between experimental and control group. If the significant value is less than the level of significance (0.05) the null hypothesis is rejected; the two groups are significantly different.

- **The Calculation of Effect Size**

Effect size was used to determine the effect of independent variable upon the dependent variable. If the treatment really works as detected by a large difference between two groups' means, then there is said to be large effect size. But if the

difference between the two groups' means is small, then there is said to be small effect size.

The formula is as bellow:

$$r =$$

Notes:

r = effect size

t = t value from the calculation of independent t-test

df = $N_1 + N_2 - 2$

Table 3.4

Effect Size

Effect size	r value
Small	.100
Medium	.243
Large	.371

(Coolidge, 2000: 151)

3.5.2.5 The Dependent T-Test

Dependent T-Test is used to find out the difference of the pretest and posttest means of the experimental group's scores. The scores were analyzed using the dependent t-test in SPSS 16. If the significant value is more than or equal to the level of significant, the null hypothesis is accepted. On the other hand, if the significant value is less than the level of significance, so the null hypothesis is rejected.

3.5.3. Data Analysis on Participation Sheet and Video Recording

In this study, student participation was analyzed by calculating the stars in the students' participation sheet. This participation was classified into three categories namely poor participation, fair participation, and good participation. The score was calculated manually. Five stars was categorized poor participation, ten stars was categorized fair participation and had more than ten stars was categorized good participation.

Students participation sheet was also compared with video recording to support the data from students' participation sheet. The video recording would explain the students behavior which showed their response to MUF Framework during the treatment.

