CHAPTER III

RESEARCH METHODOLOGY

This part presents the research methodology that has been briefly explained in chapter I. The discussion in this chapter covers research design, research instrument, hypothesis, population and sample, data collection, data collecting procedure, and data analysis.

3.1 Research Questions

The research questions in this research are:

1. IsTotal Physical Response Storytelling effective in improving young learners' vocabulary mastery?
2. What are the students' responses toward the use of TPR Storytelling method in their English class?

3.2 Research Design

This research applied one group pretest-posttest design of pre-experimental research. The effects of the treatment are judged by the difference between the pretest and posttest score. Therefore, this research does not provide comparison with a control group (Best, 1981). Here is the illustration of one group pretest posttest design as proposed by Best (1981).

O1	*X*	*O2*

Where:

O1: Pretest

X: Treatment

O2: Posttest

There were several reasons for choosing one group pretest-posttest design to be employed in the research. This design was chosen since it was not feasible to apply true exprimental design. The sample of the research was chosen purposively. Thus, one group pretest-posttest design was chosen. Besides, it was impossible to involve control group in the research because of the limitation of time and cost which were also became the consideration.

3.3 Variables

There are two variables in this research which are the independent and dependent variables. The independent variable of the research is the use of TPR Storytelling. Meanwhile, the dependent variable is young learners' vocabulary mastery.

3.4 Hypothesis

Hypothesis is a statement that predicts a single research outcome or a tentative explanation of the relationship between two or more variables. It limits the focus of the research to a definite target and determines what observations are to be made (Best, 1981).

In this research, the null hypothesis was tested since "technique of statistics is much better at demonstrating that a particular hypothesis or statementis *false*"(Kranzler and Moursound, 1998, p. 81). Hence, this research states the following hypothesis.

H_0:*"The use of TPR Storytelling method does not improve young learners' vocabulary mastery."*

3.5 Clarification of Key Terms

To avoid the possibility of misinterpretation to the study, here are some terms that should be clarified.

1. Effectiveness

   Effectiveness in this context is indicated by the measures of vocabulary mastery before and after the implementation of TPR Storytelling.

2. Young Learners

The term of young learners in this context is the students of the third grade of elementary school (8-9 years old).

3. TPR Storytelling

   Total Physical Response (TPR) Storytelling method is the language learning method based on the coordination of storytelling and action (gesture and mimic).

4. Mastery

   Mastery here is defined as learners' skill in using vocabulary.

5. Conventional method

   The conventional method in this study refers to a method which emphasizes on the use of question and answer, explanation of the material, learners' note what teacher says, and the exercises to be done by the learners.

3.6 Population and Sample

The population of this research was the third grade students of a public elementary school in Bandung. One class of the population was purposively chosen to be the sample. According to Best (1981), a small part of a population selected for observation and analysis is called as a sample. In this research, the sample involved 32 students. The consideration for choosing the sample is based on some characteristics of the students. First, the students learn English as the local content. Second, they are native Indonesians. Third, they used to learn English by using

conventional method such as memorization. Fourth, they learn English with a teacher who does not have a background in English education.

3.7 Data Collection

In collecting the data, this research administered some instruments such as try out test, pretest, posttest, and also questionnaire. Here are the description of those instruments.

3.7.1 Try Out Test

Before pretest was employed in the research, the try out test was administered to different sample class. This test is aimed to get reliable and valid questions for pretest and posttest (Arikunto, 2008). There were thirty five questions that were tested to the students who have similar characteristics with the sample of the research. The items that were tested were the most frequently used words in the learners' book.

3.7.2Pretest and Posttest

This test contains reliable and valid questions based on the tryout result. It has a goal to measure students' initial vocabulary mastery. The employment of this test was before the treatment.

Meanwhile, posttest was administred after the treatment was done. It was conducted in order to find out the signicance of students' vocabulary mastery after the treatment was given.

3.7.3 Questionnaire

Questionnaire may serve as the most appropriate and useful data gathering device in research project. It could save time and expense because of the availability of a number of respondents in one place. Moreover, it also provides a high proportion of usable responses from respondents.The use of questionnaire in this research was intended to find out the students' responses towards the use of TPR Storytelling in their class where seven questions were distributed to the students.

The type of questionnaire which administered was the Closed Form. It provided for marking *yes* or *no* (Best, 1981). In addition, Pinter states that "children may simply misunderstand a question because they are puzzled by the language used" (Pinter, 2006, p.184). Therefore, since the respondents have not mastered English yet, the questionnaire used their first language so that it would be more understandable.

3.8 Data Collecting Procedure

In collecting the data, there were some procedures that should be taken. The following part are the steps in doing the research.

- Conducting try out test.
- Analyzing the validity and reliability of try out test.
- Selecting the items for pretest.
- Administering pretest.
- Computing pretest result.
- Implementing treatment.
- Conducting posttest.
- Distributing questionnaire to the students.
- Computing posttest and questionnaire result.

In addition, the following table presents the schedule of the research.

Table 3.1

The Research Schedule

Activity	Day and Date
Try Out Test	Wednesday, February 29, 2012
Pretest	Friday, March 9, 2012
Treatment 1 Topic: At the park 1	Friday, March 30, 2012
Treatment 2	Friday, April 13, 2012

Topic: At the Park 2	
Treatment 3 Topic: Public Place 1	Friday, April 20, 2012
Treatment 4 Topic: Public Place 2	Friday, April 27, 2012
Posttest and Questionnaire	Friday, May 4, 2012

3.9 Data Analysis

3.9.1 The Analysis of Try Out Test Result

Try out test is needed to be conducted since the validity, reliability, difficulty level, and discrimination of the item should be investigated before employing the pretest to the sample. The assistance of ANATESV4 was used to analyze those aspects.

3.9.1.1Validity

Validity test was very important since it could decide whether the certain item was appropriate to be used as a tool for measuring what was intended to be measured (Best, 1981). The following is the categorization of coefficient correlation of validity that is proposed by Arikunto (2008).

Table 3.2

Coefficient Correlation of Validity

r value	Interpretation
0.8-1.0	Very high
0.6-0.8	High
0.4-0.6	Moderate
0.2-0.4	Low
0.0-0.2	Very Low

(Arikunto:2008)

3.9.1.2 Reliability

Another important aspect that needs to be done in the research is reliability testing. This test is aimed to observe whether the test is reliable to the extent that it measures consistently from one time to another (Best, 1981). Here is the table of category of coefficient correlation of reliability.

Table 3.3

Coefficient Correlation of Reliability

Coefficient Correlation	Interpretation
0.00 – 0.20	Low
0.21 – 0.40	Moderate
0.41 – 0.70	High
Above 0.70	Very high

(Arikunto:2008)

3.9.1.3 Difficulty Level

A good item is the item that should not be too easy or too difficult (Arikunto, 2008). Therefore, the analysis of difficulty level was used in order to determine whether the item is good to be used.

In addition, the table below shows the criteria of difficulty index which is used to interpret the data.

Table 3.4

Criteria of Difficulty Level

Difficulty Index	Interpretation
0.00-0.30	Difficult
0.30-0.70	Moderate
0.70-1.00	Easy

3.8.1.4 Discrimination Index

Discrimination index of an item is intended to differentiate the high and low achiever students (Arikunto, 2008). If high achiever gives correct answer and low achiever gives wrong answer on the same item, then it means that the item is good to be used because it could differentiate the high and low achiever students in the same way as the total score. The table of criteria of discrimination index is as follows.

Table 3.5

Criteria of Discrimination Index

Discrimination Index	Interpretation
0.00-0.20	Poor
0.20-0.40	Satisfactory
0.40-0.70	Good
0.70-1.00	Excellent

(Arikunto, 2008)

3.8.2 The Analysis of Pretest and Posttest Result

After pretest and posttest were conducted, the data was analyzed. The data from the result of pretest and posttest was calculated and compared in order to find out whether there is a significance between before and after treatment. The Dependent sample *t*-test was employed to analyze the data. The purpose of this test is to determine whether the means of two groups' scores differ to a statistically significant degree (Kranzler and Moursund, 1998).In this research, this analysis was used to show whether the use of TPR Storytelling was effective for improving the vocabulary mastery of the third graders or not.

Before analyzing the *t* value, the normal distribution test was done. In addition, employing the dependent sample *t*-test involves several steps. First, stating the hypothesis. In this research, the null hypothesis was proposed.

Ho: *"The use of TPR Storytelling method does not improve young learners' vocabulary mastery."*

Second, calculating the data gathered from pretest and posttest. Third, analyzing the data by using the assistance of SPSS 17. Fourth, selecting the level of significance (*p*) which was 0.05. Fifth, determining whether the null hypothesis (Ho) is rejected or not. If the t obtained $\geq$ t critical, either positive or negative, it means that Ho can be rejected. On the other side, if the $t_{obt} < t_{crit}$, it means that Ho cannot be rejected.

3.8.3. The Analysis of Questionnaire

After questionnaire was distributed to the sample, the response frequencies were computed into percentages. The following presents the formula to calculate the percentages.

$$P = \frac{Fo}{n} \times 100\%$$

Where:

P = Percentage

Fo = Frequency observed

n = Number of sample

100 = Constant