CHAPTER III

RESEARCH METHODOLOGY

In this chapter, researcher explained about research design, subjects and setting of the study, instruments of the study, data collection technique and data analysis technique.

A. Research Design

This research was conducted to found out the answer of the research questions. The research questions are: (1) Can TGT improve students' understanding about simple present tense in MTs. Jawahirul Ulum? (2) How are the students' responses about the implementation of TGT in their class?

From the research questions above, this research used an experiment research. It was done to found out the significance difference of TGT in improving the students' understanding on simple present tense in the first grade of MTs.Jawahirul Ulum.

In this experiment research, there were two groups that were given pre-test and post-test, they were control and experiment group. Both groups were given the pretest. Then, the treatment was given to the experiment group only. Both groups were given the post-test to found the difference after being given the treatment. The design of two group pretest-posttest can be seen as follows:

Group	Pretest	Treatment	Posttest
A	Y1	X	Y2
B	Y1	-	Y2

A : Experiment group

B : Control group

Y1 : pretest given before treatment

X : the treatment where TGT is applied

Y2 : posttest given after the treatment

Pretest was used to measure the students' understanding of grammar before giving treatment. On 20th May 2013, the researcher gave pretest to experiment and control group. The test contains 20 questions. On 21th May 2013, the treatment (Teams games tournament) was implemented in experimental group, while the control group was taught by using traditional teaching (the teaching that usually used by English teacher in this school). On 22th May 2013 the researcher conducted second meeting, the researcher did was not different with the first meeting. On 27th May 2013 researcher did the third meeting, the researcher did the treatment as day before and in the end of meeting the researcher conducted the final test to both classes. On 28th May 2013 the researcher gave questionnaire to experiment group only. It's used to know the students' response after the implementation of TGT in the class.

B. Subject of the Study

The subject of the study was students at seven grade of Mts.Jawahirul Ulum. The researcher chooses class VII as the subject of the study because she wants to solve the problem immediately. The students of VII (1) are an experiment group and the students of VII (2) are a control group. They will become source to know whether TGT can improve their understanding about present tense or not.

C. Setting of the Study

The research was conducted in MTs.Jawahirul Ulum. The researcher chooses MTs.Jawahirul Ulum because the researcher found the problem here. The school still lack of facility and there were many students still difficulty in learning grammar. TGT is the technique that very simple to be implemented. The researcher expected TGT could improve the students' understanding about simple present tense in MTs Jawahirul Ulum.

D. Research Procedure

Date	Time	Activity	
		Experiment Group	**Control Group**
20th May 2013	30 minutes	Giving pretest (20 questions)	
21th May 2013	90 minutes	Implementation of TGT (1st meeting)	Implementation of traditional teaching (teaching that was used by English teacher in this school) 1st meeting
22th May 2013	90 minutes	Implementation of TGT (2nd meeting)	Implementation of traditional teaching (teaching that was used by English teacher in this school) 2nd meeting
27th May 2013	60 minutes	Implementation of TGT (3rd meeting)	Implementation of traditional teaching (teaching that was used by English teacher in this school) 3rd meeting
27th May 2013	30 minutes	Give final test to both of classes (to measure whether there was improvement between the group was taught with TGT and the group was not taught with TGT)	
28th May 2013	20 minutes	Giving questionnaire (to know students' responses after implementation of TGT in the class)	-

E. Instrument of the Study

There were some instruments prepared to get a data. The instruments in this study were test and questionnaire.

1. Test

To answer the first research question, the researcher took data from the test. The tests were grammar (simple present tense) test which consist of multiple choice, matching item and true/false. The test were given twice, pre-test and post test *(see Appendix 1)*. Pre test was given to measure students understanding about simple present tense before treatment and to know if those classes have similar mean score. It given before students got the treatment. While Post-test was given to measure students understanding after the treatment. And it were given after students get the treatment.

a. Validity of the Test

There are three types of validity, they are construct validity, content validity and criterion validity.[1] This research used content validity. The content validity of the instrument is measured by relating the content of the instrument to the course objectives in order to make it valid in terms of the content of validity. Its means that the test must be in line with the

[1] Sugiyono, *Metode Penelitian Pendidikan.* (Bandung: Alfabeta, 2010), 25.

content of the research. The researcher tests validity of instrument to the judgment expert, Mr.Dr.Muhammad Salik, M.Ag. (*see appendix 4)*

b. Reliability of the Test

This research used Internal Consistency to measure the reliability of the test. There are three common types of Internal Consistency, they are: Split Half, Kuder Richardson and Anova Hoyt.[2]

The researcher used Kuder Richardson formula, usually called KR-21. It's used to measure the consistency of the test. This is the formula of KR-21:

$$r_i = \frac{k}{(k-1)}\left\{1 - \frac{m\,(k-m)}{k s_t^2}\right\}$$

K = Number of items in the test

m = mean

s_t^2 = variance total

To calculate mean, use this formula:

$$m = \frac{\sum x_t}{n}$$

Variance total:

$$s_t^2 = \frac{x^2}{n}$$

[2] Ibid, p.185

The criteria of the reliability of the test:

The criteria	The description
Very high r	.80 or above
Strong r	.06 - .80
Moderate r	.40 - .60
Low r	.20 - .40
Very low r	.20 or less

According the data (*see appendix 5*), from the calculation of the reliability by using KR-21 formula. The researcher got 0.99 as the result. Its mean that the test has a very high reliability so that the researcher did not have to revise the test

2. Questionnaire

Arikunto states that questionnaire was written question that were used to get information from the respondent.[3] To answer the second research question, the researcher took data from questionnaire to know students' responses after used TGT in their class. The researcher gave the questionnaire to the students in experiment group in the end of the meeting.

[3] Suharsimi Arikunto. *Prosedur Penelitian.* (Jakarta: PT.Rineka Cipta.2006), 226.

F. Data Collection Technique

In this research, to collect the data the researcher do the following steps:

1. Giving test

   The researcher gave the students some tasks about the material to get the improvement of students between experiment group and control group before and after apply the treatment.

   The first research was conducted on 20th May 2013

   - The researcher gave pretest to both of classes

   The first research was conducted on 21st on May 2013

   - The researcher gave the experiment group treatment of TGT and gave the control group traditional teaching (teaching that usually was used by English teacher in this school) first meeting.

   The second research was conducted on 22nd on May 2013

   - The researcher gave the experiment group treatment of TGT and gave the control group traditional teaching (teaching that usually was used by English teacher in this school) second meeting.

   The Third research was conducted on 27th on May 2013

   - The researcher gave the experiment group treatment of TGT and gave the control group traditional teaching (teaching that usually was used by English teacher in this school) third meeting.
   - The researcher gave both of two groups final test

She gave the same question in pretest, to know the improvement after TGT was implemented.

2. Giving Questionnaire

The questionnaire translates the research objective into specific questions. The answers to those questions provide the data for testing the research hypothesis. Questions must also interest the respondents enough that they will provide the information[4]

The researcher gave questionnaire to the students in experiment group. The researcher used closed ended response options. It is used to know the students' responses toward the implementation of TGT in students' understanding about simple present tense.

The researcher gave the questionnaire to experiment group only in the last meeting at 28th May 2013.

G. Data Analysis Technique

To analyze the data, the researcher calculated the scores using t-test procedures. The researcher used of pre-test score as a basic reference of the improvement of students understanding. Then, the researcher measured the score between pre-test and post-test using t-test. From the t-test result, it knew whether

[4] "Research Methods" *Instrumentation: Questionnaires* (www.csulb.edu/ ~msaintg/ppa696/696qstin.htm)

there are significant difference in students' understanding about simple present tense between experiment group and control group. The procedures are:

- Normality test

  The normality test was used to check whether the final test score of experimental group and control group were normally distributed. Using formula:

$$X^2 = \frac{(f_o - f_h)^2}{f_h}$$

  Descriptions:

  X^2 = *Chi Kuadrat*

  f_o = *Frequency observed*

  f_h = *Frequency expected*

- Homogeneity test

  The homogeneity test was used to calculate the homogeneity of variance of both experimental and control group post-test score. Using formula:

$$f = \frac{s^2{}_{higher}}{s^2{}_{lower}}$$

  Description: f = *homogeneity test*

  s^2 = *variance*

- Mean

The next step is comparing means of the experimental group and the control group. To calculate the mean of test score in each group, the researcher calculated the mean with the following formula:

$$\bar{x} = \frac{\sum x}{n}$$

Description: $\bar{x}$ = mean

$\sum x$ = the sum of the x scores

N = the number of the students

- Variance

Then, to calculate variance with the following formula:

$$s^2 = \frac{\sum (x_1 - \bar{x})^2}{n}$$

- t-test

The researcher used t-test to know if the difference in score is significant or not, i.e. the data is not a chance alone.

$$t = \frac{\overline{x_1} - \overline{x_2}}{\sqrt{\frac{(n_1 - n_2)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$$

Description: t = *the t-test*

$\bar{x}_1$ = *mean of experimental group*

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

s_1 = *standard deviation of experimental group*

s_2 = *standard deviation of control group*

n_1 = *the number of experimental group students*

n_2 = *the number of control group students*

For analyze of questionnaire the researcher used pattern as follows:

$$P = \frac{n}{N} \; x \; 100\%$$

Description:

P = *the percentage of student*

n = *the number of respondents who choose certain option*

N = *a whole of students*