

CHAPTER III

RESEARCH METHOD

This chapter discussed the research design, population and sample of research, research instrument, variable of the study, method of data collection, treatment, data analysis, normality and homogeneity testing, validity and reliability and hypothesis testing.

A. Research Design

In this research use quantitative approach because it is intended to find out the influence of a variable to another one. The design apply in this research is Quasai-experimental. It is because the writer comparing two group among control and experimental. In the experimental group, the researcher gives the pre-test, treatment and last post-test. In control group the students do not give a special treatment as experimental group. For the detail about the design of quasi-experimental, it can see in the table bellow:

Table 3.1 The design Pattern of the Study

Groups	Pre-test	Treatment	Post-test
Experiment	Y1	X	Y2
Control	Y3	-	Y4

(Ary, et.al 2010:316)

In which :

Y1: Pre-test for experimental group

Y2: Post-test for experimental group

X : Treatment (Experimetal group)

Y3: Pre-test for control group

Y4: Post-test for control group

From the table present above, the first is experimental research design. Its group receive a treatment (X) while the control group do not give a treatment (-). Both of them receive pre-test to get the students' score in writing recount text before and after the treatment. The treatment (X) "Peer Assessment through WhatsApp" is given to experimental group while the control group is given conventional peer assessment (-). For the conclusion, both of group is given post-test to obtain the data after the treatment.

B. Population, sampling, sample

1. Population

In here, the teacher needs to define the population before collecting sample. Including the description of the member to be included. According to Nawawi (2012) population is the whole research object which include human, things, animals, plants, indications test value or events as data source which have particular characteristics in a research. So, the population was the group of people or others as the data source. In this study, the population of first grade of SMA Negeri 1 Kauman Tulungagung which consist of twelve classes and each consist of 36 students each class. There were two majors in this school, that were MIPA and IPS. The class that the researcher chose were X-MIPA 6 and X-IPS 3. In X-MIPA 6 consist of 8 male and 28 female and X- IPS 3 consist of 14 male and 22 female students.

2. Sampling

According to Ary et al (2006:167) sampling is the small group that is observed. Sampling is also as a way the researcher select the number of individuals as a sample which presents the population. There were two kinds of samplings, they were probability and non-probability sampling. In this study, the writer used non-probability sampling. It means each individual do not have the same chance to be selected as the sample. Then, the type of non-probability sampling that used in this study was purposive sampling. Then, the writer had the reason why use that sampling as her way to select the sample. The reason was by this sampling the researcher could choose the normal classes. It means that there were progresses of the sample when they were given by the treatment. By choosing the normal classes which have same average ability, the writer believes that when she gave them treatment (peer assessment through WhatsApp), their writing ability in writing recount text would be increase.

3. Sample

Sample is the part of population that smaller than population. Based on the criteria used in selecting the sample, the sample of the study was the students in 10th grade of MIPA-6 and IPS 3 which consist of 36 students from MIPA-6 as experimental group, 36 students of IPS-3 as control group.

C. Research Instrument

The instrument used in this study was test. In this study, they were two kinds of test; pre-test and post-test. Pre-test was given in the earlier to get the student's score before giving the treatment (for experimental group). Then, post-test was given in the end of the session (after the treatments) to know whether the implementation of peer assessment through WhatsApp was effective to assess students' ability in writing recount text. The test was closed test used in this research. The researcher was giving several topics in the pre-test and post-test, so the students could choose their topic.

D. Variable of the study

Variable is the characteristics of the subject that would be researched. Based on Ary (1985:30) the most importance classification is on the basis of their use within the researcher under consideration, when they were classified as independent variables of dependent variables.

1. Independent variable which is the variable that affect the dependent variable. In this study, Peer Assessment through WhatsApp as the independent variable.
2. Dependent variable which is variable that was affected by independent variable. In this research the dependent variable was students' ability in writing recount text.

E. Method of data collection

Data in conducting research become the importance one because it could answer the research questions in the study. To gain the data of the research,

the researcher using test. Arikunto (2010:127) test is a series of questions, or others which are used to measure the skill, knowledge, intelligent, ability or talent that have by individual or group. In addition, technique of collecting data in this study could be elaborated as follows:

1. Administering Pre-test

Pre-test was conducted to measure the students' skill in writing recount text without using peer assessment through WhatsApp. Pre-test was given in the first meeting, February 13th 2020 in experimental group that was X-MIPA 6 and February 14th 2020 in control group that was X-IPS 3. The form of pre-test was essay that required the students to write about personal recount text with the close topic.

2. Administering Post-test

Post-test was given both experimental and control group. In the post-test the writer changed the close topic. Basically, this test was conducted to measure the students' ability in writing recount text after receiving the treatment (for experimental group). Post-test conducted on March 5th 2020 in X-MIPA 6 as experimental group and March 6th 2020 in X-IPS 3 as control group. It was given to know the students' score before and after they got the treatment.

F. Treatment

Treatment is the most crucial step that have to done by the researcher. It held on February 20th 2020 and on February 27th 2020 in X-MIPA 6 as

experimental group. The treatment conducted twice during two weeks on February. First meeting exactly February 20th 2020, the researcher gave stimulus to the students by asking questions about their experience in the past. It could be unforgettable experience and so on. next, the researcher explained what the correlation between the question and the material. Then, the writer provided sample of recount text entitle “My Football Experience” and explained about recount text such as general structure, language use and also social function in the power point. Before continued to the next step, the researcher made sure that the students understood about recount text. After that, the researcher asked the students to make a simple recount text with free topic in piece of paper. In the end, the writer asked the students to bring the text in the next meeting.

Second meeting February 27th 2020, the writer asked a question to the students about the difficulty in writing recount text in the first meeting. After the writer got the probleme, she offered the way to write recount easily by utilize a WhatsApp. The researcher made sure that all of the students were user of that Application. Next, the writer started to explain about peer assessment to the students and how to conduct it in pairs. Then, gave the scoring rubric by Cohen (1994: 328-329) and explained it point by point. After that, the researcher explained the way to conduct peer assessment through WhatsApp to the students. Later, the researcher would pair the students into a group. One group consist of two students. They would assess their pair’s text that was made in the first meeting used scoring rubric. In the

end of the section, each student had to send the result to their pair in the personal chat of WhatsApp. Then, after they got comments of their pair and rewrite it next, the students put the text into document file and sent the first draft to the last in one file with the format name and class. Last step, the students sent the file into group of WhatsApp was created before. So, other students could know and learned their friends' error of writing recount text and how to write it well.

G. Data analysis

Data analysis is the way data analyzed by the researcher. After data of pre-test and post-test are collected, then, the score will be calculating using SPSS (Special Package for the Social Sciences) voll.20. Afterward, the researcher will use statistical technique especially using *T-test* in SPSS to know the effectiveness of the variable. The t-test was one of a number of hypothesis test. It was used to determine whether there is significant difference between the means of two group. The content of the students' works would analyze and assessed using scoring rubric of recount text by Cohen (1994: 328-329).

H. Validity Test

In this study, to ensure test validity the researcher used construct validity, content validity and face validity. The explanation of the content validity, construct validity, and face validity as follows:

1. Content Validity

Based on standard competence curriculum 2013 revised in 2017 it was mentioned that the first grade of Senior High School were expected able to comprehend and produce simple text in form of recount text. In this research, the content to test use recount text. It was suitable for the 1st grade students of SMA Negeri 1 Kauman Tulungagung.

Table 3.2
English syllabus about recount text at 10th grade of Senior High School

Basic Competence	Indicator
3.9 Menganalisis fungsi sosial, struktur teks, dan unsur kebahasaan dari teks <i>recount</i> tentang pengalaman, kejadian, dan peristiwa sederhana, sesuai dengan konteks penggunaannya.	3.9.1 Menyimpulkan fungsi sosial yang terdapat dalam teks <i>recount</i> 3.9.2 Merinci struktur dari teks <i>recount</i> 3.9.3 Mengidentifikasi unsur kebahasaan dalam teks <i>recount</i>
4.13 Menangkap makna dalam teks <i>recount</i> lisan dan tulis sederhana.	4.13.1 Menjelaskan makna secara kontekstual terkait dengan fungsi sosial
4.14 Menyusun teks <i>recount</i> lisan dan tulis sederhana tentang pengalaman/ kegiatan/ kejadian/ peristiwa dengan memperhatikan fungsi sosial, struktur teks, dan unsur kebahasaan, secara benar dan sesuai dengan konteks.	4.14.1 Membuat teks <i>recount</i> personal tulis sederhana berdasarkan tema yang telah ditentukan. 4.14.2 Menyunting teks <i>recount</i> tulis sederhana berdasarkan tema yang telah ditentukan

Based on the table that mentioned earlier about English syllabus of recount text, the instrument of the test was valid.

2. **Construct validity**

Construct validity deals with the relationship between a test and a particular view of language and language learning (Johnson, 2001: 303). In this research, the test had high construct validity since it contained asking the students to make writing recount text with several topics that was given by the writer in the paper of pre-test and post-test to measure students' writing ability in writing recount text.

3. **Face Validity**

A test was said to have face validity if it measures what was supposed to measure. Face validity was hardly a scientific concept that was very important. A test which does not have face validity may not be accepted by test takers, teachers, educators, authorities or employers. In this test, there were some aspects that were considered from this test to make a good test based on the validity.

- a. The instruction must be clear for the students, what they should do in the test.
- b. In this test, the students can construct a paragraph and express their ideas in a piece of paper. The instruction based on the syllabus and suitable with their level.
- c. Time allocation must be clearly. The researcher gives time about 60 minutes for each student.

I. Reliability Test

Reliability was a measure of accuracy, dependability of fairness of scores resulting from administration of particular examination. According to Airasian (1003:17) reliability is a consistency of a set of measurements and an instrument. To know the reliability of the test, the writer conducting tryout in X-IPS 2 which consist of 36 students but there were 9 of students who did not follow the try-out. Then, there was an improvement of the try-out in the instruction sheet point 6 changed by “write at least three paragraphs”. It changed because they got a loaded when the asked to write 150 words.

In the prior instrument, the point 6 was “write at least 150 words” but that point made the students felt loaded. So, the writer decided to change the instruction of the instrument. Afterward, the result of their try out assess by the researcher and inter-rater. So, the writer has two scores of try out. Afterward, the data was calculated using SPSS vol.20 to know the test whether the data was reliable or not. As a guide, the writer using Cronbach’s Alpha table value to make sure the test was reliable as follow:

Table 3.3
Value of Cronbach’s alpha

Cronbach’s Alpa	Interpretation
0.00 – 0.20	Less reliable
0.21 – 0.40	Rather reliable
0.41 – 0.60	Quite reliable
0.61 – 0.80	Reliable
0.81 – 1.00	Very reliable

Tabel 3. 4
Case Processing Summary in Reliability statistic

		N	%
T	Cases	27	100,0
	Valid	27	100,0
	Excluded ^a	0	,0
	Total	27	100,0

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table 3.4 showed the total of the students were 27. The number 100,0 means the data was all computed in SPSS.

Tabel 3.5

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,892	,894	2

Based on the try-out of instrument that has been done on February 12th 2020 at X-IPS 2 class, the researcher could find the result of the reliability test as seen in the table 3.5. The researcher used SPSS 20.0 to calculate the data of the try-out. The table 3.5 showed that the reliability of Cronbach's Alpha was 0,892. It was higher than 0,05. It can be concluded that the test was very reliable.

J. Normality and Homogeneity Testing

Normality test is used to test whether a variable is normal or not. Normal here means if the data have a normal distribution. The main reason of conducting normality testing in a research is that it is necessary for the

researcher to know that the population or data involved in the research is in normal distribution. To test the normality of the data used the One Sample Kolmogorov-Smirnov test with the provision that if Asymp. Sig > 0,05, the data were normally distributed (Asmarani, 2008:234).

Besides the Normality the researcher also use the Homogeneity test is used to test whether the data from two groups have the same types in order that the hypotheses can be tested by T-test. Like normality test, this kind of test also uses SPSS voll.20. The step is the same like those of normality test. Furthermore, after testing its normality and homogeneity the researcher began to test the hypothesis. The writer also using SPSS Voll.20 to calculate the t-test.

K. Hypothesis testing

Bluman (1998: 356) states that hypothesis testing is the process of evaluating claims about a population. Hypothesis testing functioned to know whether the null hypothesis (H_0) of the study is rejected or accepted. In testing the hypotheses, the researcher used these steps:

1. Stating the hypotheses

the hypotheses of this research are:

a. Null Hypothesis (H_0)

There is no significant difference score in writing recount text of the students taught by using peer assessment through WhatsApp and those taught by using a conventional peer assessment without using WhatsApp.

b. Alternative Hypothesis (H_a) There is significant difference score in writing recount text of the students taught by using peer assessment through WhatsApp and those taught by using a conventional peer assessment without using WhatsApp,

2. Finding the Critical Value

After stating the hypotheses, here the researcher determined the significance level or the tolerance of error at $\alpha=5\%$ because this study is the study about language and education.

3. Computing the Test Value

In calculating the data in order to test the hypotheses, the researcher use SPSS 20.0 version.

4. Drawing the Conclusion

After calculating the data in SPSS, the researcher will create the conclusion of the analysis. If P-Value less than 0,05 ($\alpha=5\%$), the null hypothesis (H_0) is rejected and the alternative hypothesis (H_a) is accepted and if P-value is higher than 0,05 ($\alpha=5\%$), the null hypothesis (H_0) is accepted and the alternative hypothesis (H_a) is rejected.