

CHAPTER III

RESEARCH METHOD

In this chapter, the researcher presents about research design, subject of the study, population, sampling, and sample, research instrument, data collecting method, validity and reliability testing, and data analysis.

A. Research Design

The design of this research is experimental research design using quantitative approach. Experimental research design is the general plan to carrying out a study with an active independent variable. The design is important because it determines then study's internal validity, which is the ability to reach valid conclusion about the effect of the experimental treatment on the dependent variable (Ary et al: 301). It means that experimental design is a research design that is used to find the influence of one variable to another. This research used quasi experimental design. The quasi experimental can apply pre- test and post- test group design approach (Creswell, 2012: 310). The researcher selected two classes consisting of experimental and control class. Besides, the experimental class in the research taught by using electronic storybook in the students' reading activity. Moreover, the control class taught without by using electronic storybook in the students' reading activity. The pre- test and post- test conducted for experimental and control class.

The research design is as follows:

Table 3.1 Research Design of Quasi-Experimental

GROUP	Pre-test	Independent Variable	Post-test
E	Y1	X	Y2
C	Y1	O	Y2

E : Experimental group

C : Control group

Y1 : Pre-test for both of groups

X : Treatment for experimental group (by using electronic storybook)

Y2 : Post-test for both of groups

B. Population, Sampling, and Sample

1. Population

Population is a whole the object that has a certain characteristics and it becomes the source data which the researcher was conducted in the research. Creswell states that population is a group of individuals who have the same characteristics. Besides, according to Ary et al (2010: 148), population can be defined as all member of any well-defined class of people, event, or object. The population of this research was the students of second grade of MTs Assyafi'iyah Gondang that consist of five classes (A, B, C, D, and E) and the total population was 137 students.

2. Sampling

Technique to take sample is called sampling. According to Ary et al (2010: 167) stated that sampling is the small group that is observed. In this research, the researcher used purposive random sampling as a technique of choosing sample. Purposive sampling involves selecting sample which is believe to be representative given population. On the other hand, the English teacher gave an instruction to choose the class as a sample to the researcher. After getting the two classes, the researcher determined which class will be used as an experimental group and control one.

3. Sample

Sample is the small group that the researcher to conduct the research. According to Creswell (2012: 142) says that sample is a subgroup of the target population that the researcher plans to study for the purpose of making generalization about the target population. The sample has common characteristics of population as follows:

- a. The students study at the same school, MTs Assyafi'iyah Gondang, Tulungagung the academic year of 2018/2019.
- b. The students are at the same grade, the second grade of MTs Assyafi'iyah Gondang, Tulungagung.

In this research, the researcher divided into two classes. The first is an experimental group (VIII A) which where be taught by using electronic storybook. Then, the second is control one (VIII D) which where be taught without using electronic storybook.

C. Research Variable

Meanwhile, according to Frankel and Wallen (2009: 261) in experimental study, there is an effect of at least one independent variable on one or more dependent variables. The independent variables is also frequently referred to as the experimental or treatment. The dependent variable refers to the results or outcomes of the study. In this research, there were two variables as follows:

1. Independent Variable (X)

The independent variable in this research is electronic storybook.

2. Dependent Variable (Y)

The dependent variable of this research is students' reading scores.

D. Research Instrument

In this research, the researcher used reading test to know or to find out whether there is any significant difference toward the students' reading skill before who are taught using electronic storybook and those after who are taught using electronic storybook. According to Creswell (2008: 14), an instrument is a tool focus measuring, observing, or documenting quantitative data. It contains specific questions and response possibilities that we establish or develop in advance off the study. It means instrument

is a tool that is used to collect data. The researcher designed an instrument procedure before to make a good instrument. The procedure in developing instrument in this research as follows:

1. Reviewing literature from the text book of Junior High School to design and draft the instrument related the material. In this research, recount text used to be the material.
2. Arranging a blueprint and the item of instrument.
3. Conducting try out to the students in another the research class. The try out held before pre-test and post-test in research class. The researcher designed a try out for 15 students of VIII C. (The result of students' try out can be seen in appendix 5)
4. Determining the validity and reliability of the tests which is analyzed by using Cronbach's Alpha.

There are two time of test for the students in research class. The first is pre-test and the second is post-test. The researcher uses pre-test and post-test as the procedure to collect the data based on the research class. The pre-test proposed to measure the students' score in reading skill within classroom. Then, the researcher gave the treatments for experimental class by using electronic storybook in reading within classroom. But, the researcher did not give the treatment by using electronic storybook for control class.

The researcher gave the post-test after doing the treatment for control class and experimental class. The post-test took after doing the treatment by using electronic storybook in reading for experimental class. Then, the post-test took after the researcher did not give the treatment by using electronic storybook for control class. The researcher wanted to know the students' reading skill who are taught using electronic storybook and those who are taught without using electronic storybook at the second grade of MTs Assyafi'iyah Gondang Tulungagung especially VIII A and VIII D as the research class.

E. Data Collecting Method

In this research, the technique that the researcher used is test to know the students' reading skill. In this case, the researcher used test to know the students' reading skill before who are being taught using electronic storybook and those after who are being taught using electronic storybook. The tests are pre-test and post-test. Pre-test is conducted into two groups to know the students' reading skill. Then, the researcher was given the treatment for VIII A as an experimental group by applying electronic storybook. The last, the researcher administered post-test to know the students' reading skill.

Moreover, Data collecting method is important for the researcher to collect the data. The researcher cannot get information without the data. In this research, the data collected from the students especially VIII A for experimental class and VIII D for control class as the research class. The researcher gave pre-test and post-test for both of the class.

1. Pre-test

The researcher gave the pre-test for experimental class and control class before to know the students' reading skill. The pre-test held on April, 15th 2019 for VIII A as an experimental class. Then, the researcher gave pre-test held on April, 16th 2019 for VIII D as a control class. The researcher gave the same test for experimental class and control class. The students did the pre-test after reading the text. (The pre-test item can be seen in appendix 5)

2. Treatment

After administering the pre-test, the researcher gave the students treatment. The treatment was conducted after the administering of the pre-test. The treatment in experimental class (VIII A) was taught by using electronic storybook. In the first meeting, the researcher introduced electronic storybook to the students. Then, the researcher gave the explanation about what is electronic storybook and how to use electronic storybook. Moreover, the researcher gave an explanation about the theme of the text in electronic storybook. But, in this process, the reseacher focus on one of the kind of text especially

recount text based on the syllabus in second grade of Junior High School. Next, in the second and third meeting, the researcher conducted the treatment that the researcher did some steps for teaching reading through electronic storybook (the steps of using electronic storybook can be seen in appendix 10) as follows:

- a. The researcher chosen developmentally appropriate electronic storybook. The reseacher chosen a recount text as a material in reading within classroom.
- b. The researcher and the students used electronic storybook in addition to traditional print books.
- c. When the students used electronic storybook, it will be better when they paired adult (out of the class) and teacher instruction when they learn within classroom.
- d. Monitoring distracting features embedded in electronic storybook.

3. Post-test

The researcher gave the post-test after the treatment. It conducted to know the students' reading skill. It held on April, 29th 2019 in VIII A as an experimental class. The post-test for experimental class was given after the treatment by using electronic storybook as a media in reading skill. The steps for teaching reading through electronic storybook such as choosing an appropriate electronic storybook based

on the material, giving instruction how to use electronic storybook by turning the screen, monitoring the students when they read the text.

Then, the post-test for control class was given after the treatment without using electronic storybook, it held on May, 8th 2019 in VIII D. (The post-test item can be seen in appendix 7)

F. Validity and Reliability Testing

1. Validity

The researcher analyzed the test from content validity, face validity, and construct validity to measure whether the test has good validity. To measure the students' reading skill, the test used was a reading test. It means that test is said to have content validity if it is represented the content of universe. According to Ary et al (2010:226) stated that to have a content validity, the instruments are representative of some defined universe or domain of content. It means that the items of the test must really test the domain that was reading skill. In this research, the test designed in the form of True or False tests. Moreover, In this research, the validity of the reading test was calculated by using SPSS 16.0 for windows.

1. Content validity

The researcher used content validity to take the test valid.

Content validity is correspondence between curriculum objectives and objectives being assessed. In this research, the researcher used content validity to test the instrument valid or not. The test is said

to have content validity if its contents constitutes a representative sample of language skill, structure etc. being tested (Ida Isnawati, 2013:27). The test given to the students based on the material that they had learned about recount text. The content validity in this research as follow:

Table 3.2 Content Validity

Materi : Recount Text Tes : Tulis (reading written test)	
Kompetensi Inti 3. Memahami dan menerapkan pengetahuan (faktual, konseptual, dan prosedural) berdasarkan rasa ingin tahunya tentang ilmu pengetahuan, teknologi, seni, budaya terkait fenomena dan kejadian tampak mata. 4. Mengolah, menyaji, dan menalar dalam ranah konkret (menggunakan, mengurai, merangkai, memodifikasi, dan membuat) dan ranah abstrak (menulis, membaca, menghitung, menggambar, dan mengarang) sesuai yang dipelajari di sekolah dan sumber lain yang sama dalam sudut pandang/teori.	Kompetensi Dasar 3.11 Membandingkan fungsi sosial, struktur teks, dan unsur kebahasaan teks personal recount lisan dan tulis dengan memberi dan meminta informasi terkait pengalaman pribadi di waktu lampau, pendek, dan sederhana, sesuai dengan konteks penggunaannya. 4.11 Text Recount 4.11.1 Menangkap makna secara kontekstual terkait fungsi sosial, struktur teks, dan unsur kebahasaan teks recount lisan dan tulis sangat pendek dan sederhana, terkait pengalaman pribadi di waktu lampau (personal recount).
Indikator Pencapaian Kompetensi 1. Mengidentifikasi fungsi sosial, struktur teks, dan unsur kebahasaan teks personal recount. 2. Membuat teks personal recount.	

2. Construct validity

Construct validity is one kind of validity that is measures the skill which is supposed to measure. In this research, the researcher asked the students to answer the test in the form of True or False tests based on the topic to know the students' reading skill and fulfilled the construct of reading test. Thus, valid in the term of construct validity.

3. Face validity

In this research, the item of the test was in the form of True or False tests. The researcher ensured face validity by consulting to English teacher of MTs Assyafi'iyah Gondang, Tulungagung.

Table 3.3 Result of Validity

Item	R-table	Result
1	0.5140	0.683
2	0.5140	0.755
3	0.5140	0.500
4	0.5140	0.634
5	0.5140	0.789
6	0.5140	0.443
7	0.5140	0.789
8	0.5140	0.494
9	0.5140	0.724
10	0.5140	0.575
11	0.5140	0.581
12	0.5140	0.577
13	0.5140	0.799
14	0.5140	0.709
15	0.5140	0.755
16	0.5140	0.440
17	0.5140	0.789
18	0.5140	0.574
19	0.5140	0.478
20	0.5140	0.695
21	0.5140	0.832
22	0.5140	0.576
23	0.5140	0.690
24	0.5140	0.690
25	0.5140	0.799
26	0.5140	0.464
27	0.5140	0.713
28	0.5140	0.789
29	0.5140	0.683
30	0.5140	0.600
31	0.5140	0.634
32	0.5140	0.755
33	0.5140	0.636
34	0.5140	0.832
35	0.5140	0.697
36	0.5140	0.747
37	0.5140	0.708
38	0.5140	0.600
39	0.5140	0.676
40	0.5140	0.575

2. Reliability

In this research, the reliability of the reading test was calculated by using SPSS 16.0 for windows to know the reliability of test instrument. For getting the reliability value, the researcher chose VIII C as try out class and took fifteen students as sample. The researcher asked the students to do the test of reading. Then, the researcher got the result of the test. The try out was done on April, 11th 2019. To check the reliability of the test, the researcher used Cronbach's Alpha in SPSS 16.0 for windows. The reliability of the instrument was the result of measurement that can be trusted. Then, it was important to get the data based on the purpose of measurement. Moreover, the researcher conducted the reliability test by Cronbach's Alpha and checked the result of reliability based on the Cronbach's value as follows:

Table 3.4 Cronbach's Value

Cronbach's Value	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

After the researcher get the result of the test, then the researcher calculated by using SPSS 16.0 for windows as follows:

Table 3.5 Reliability Statistics

Reliability Statistics	
Cronbach's Alpha	N of Items
.844	40

Based on the result of calculations by using SPSS 16.0 for windows on the reliability test was 0.844. It can be concluded that the instrument of test used by the researcher was very reliable.

G. Data Analysis

In this research, the researcher used statistical data analysis technique to find out whether there is any significant difference toward the students' reading skill who are taught by using electronic storybook and those who are taught without using electronic storybook at the second grade of MTs Assyafi'iyah Gondang, Tulungagung in academic year 2018/ 2019. In experimental research, the data analyzed by using formulation of T-test. T-test is used to test for significance. In the other hand, before analyzing the data by using T-test, the researcher analyzed the normality and homogeneity test.

1. Normality

Normality test is used to determine whether a data set is well modeled by a normal distribution or not. Normally test is intended to show that the sample data come from a normally distributed population. In this research, the researcher used *One-sample Kolmogorov-Smirnov* by using SPSS 16.0 for windows. The significance value (α) = 0.05. The normality testing was done by using the rule of Asymp. Sig (2 tailed) towards both pre-test and post-test score. The hypothesis for normality testing as follows:

- a. H_0 : If the value of significance > 0.05 , it means that the data is normal distribution.
- b. H_a : If the value of significance < 0.05 , it means that the data is not normal distribution.

2. Homogeneity

Homogeneity test is intended to show that two or more groups of data samples come from populations having the same variance. In this research, the researcher calculated the homogeneity testing by using SPSS 16.0 for windows. The significance value (α) = 0.05. The hypothesis for homogeneity testing as follows:

- a. H_0 : If the value of significance > 0.05 , it means that the data is homogeneity.
- b. H_a : If the value of significance < 0.05 , it means that the data is not homogeneity.

3. T-Test

The researcher used T-test to analyze the data. The researcher used T-test to determine whether the null hypothesis or alternative hypothesis is accepted or rejected. T-test was taken from the students' score which was conducted before and after getting the treatment by using electronic storybook in reading. The researcher used T-test to know the significant differences of using electronic storybook toward the students' reading skill.

4. Hypothesis Testing

The hypothesis testing of this research as follows:

- a. If the value of significance > 0.05 . Thus, the alternative hypothesis (H_a) is rejected and null hypothesis (H_0) is accepted. It means that using electronic storybook is not effective toward the students' reading skill.
- b. If the value of significance < 0.05 . Thus, the null hypothesis (H_0) is rejected and alternative hypothesis (H_a) is accepted. It means that using electronic storybook is effective toward the students' reading skill.