

CHAPTER III

RESEARCH METHOD

This chapter is dealing with research design, population, variable of the study, method in collecting data, method of data analysis, validity, reliability, and hypothesis testing.

A. Research Design

This study focused on students' writing ability in narrative text. This study was conducted to know whether *Storybird* platform is effective to teach writing skill or not. Based on the purpose of this study, the design used in this study is quantitative research design. According to Cresswell (2018), quantitative research is an approach for testing objectives theories by examining the relationship among variables. In addition, Ary, Cheeser, and Razavieh (2010) stated that experimental research involves a study of the effect of the systematic manipulation of one variable(s) on another variable. The manipulated variable is called the experimental treatment or the independent variable. The observed and measured variable is called the dependent variable. So, quantitative design is used to describe what can be counted or measures and can be considered the objectivity.

This study used two groups of classes. The first group is called by treatment group, and the second group is called nonequivalent group. Also, this study used posttest only to test the both of group. According to Cresswell (2018), the design is under the quasi-experimental design, and used *nonequivalent control group posttest-only*. Ary et al (2010) stated quasi-experimental design is research in which the researcher can control the treatment and the measurement of the dependent variable but cannot control assignment of the subjects to treatment.

Table 1. Research Design

Group	Treatment	Post-test
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Treatment group	Y	Y
Nonequivalent control group	-	Y

(Adapted from Cresswell, 2012:310)

Where:

1. Treatment group was given treatment by using Storybird platform, and had posttest.
2. Nonequivalent group was not given treatment, but also had posttest.

B. Population, Sampling, Sample

1. Population

Population is a set of people living in a certain place. According to Sugiyono (2011) population is not only people, but also all of the quantity of object or subject that will be learnt, but also involve the whole of characteristics of the subject or object. In other words, population is a group of individuals who have the same characteristic.

In this study, the population was all the tenth grader students of SMK Sore Tulungagung. It consists of 938 students that divided into 24 classes and 8 majors.

2. Sampling

Sampling is a technique to take a sample. This is supported by Walled (1996), he stated that sampling is a process of selecting unit or individual who participate in the research. There are two types of samplings; those are probability sampling and non-probability sampling.

In this study, the researcher used non-probability sampling. It means that each individual has no the same chance to be selected as sample. Thus, this does not use randomization. The type of the sampling technique is purposive sampling. Purposive sampling means in choosing the sample, the researcher had a certain purpose to be reached. It is supported by Arikunto (2010), who stated that purposive sampling is the process of selecting

sample by taking subject that is not based on the level or area, but it is taken based on the specific purpose. The researcher chose two classes as sample. The classes chosen were normal class or class that classified having average level. The researcher knew about the situation from the English teacher who teaches those classes. It means that the students are able to improve their skill if they get certain stimulation. In selecting the sample, whether the two classes had the average level or not, the researcher used t-test in SPSS 16.0 to prove it.

3. Sample

Sample of the research is the people from the population who participate in the research. In the other words, sample means apart of population that will be observed by researcher. According to Arikunto (2002) samples are partially or representative of the population studied. Arikunto (2006) he also stated that if the subject is less than one hundred it is better to take the entire subject. Furthermore, if the subject is more than one hundred it can be taken between 10-15% or 20-25% or more than it.

The sample of this study consisted of two classes. The first was X TP 1 as experimental group which consist of 37 students, and the control group was X TP 2 which also consist of 37 students. To know whether those classes were equal or not, the researcher proved it by using SPSS 16.0 the scores that used to count the equality of the two classes were gotten from the English teacher, that was the evaluation scores of them. The result was as follows:

Table 2. Equality of two classes

		Group Statistics			
Group		N	Mean	Std. Deviation	Std. Error Mean
Students' Scores	Treatment	37	76.54	1.145	.188
	Nonequivalent	37	76.54	.960	.158

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Students' Scores	Equal variances assumed	2.798	.099	.000	72	1.000	.000	.246	-.490	.490
	Equal variances not assumed			.000	69.880	1.000	.000	.246	-.490	.490

Based on the table above, the two classes were equal sample. It can be seen from the sig. value. The sig. value showed 0.99. It was higher than 0.05. So the two classes were equal.

C. Instrument

Instrument is a measurement tool that designed to obtain data on a topic of research interest. In other words, instrument can be said as a tool of collecting data. It is supported by Gay and Airasian (2000) who stated that instrument is a tool that is used in collecting data. In addition, Arikunto (2000) revealed that instrument as a tool to collect data help the researcher to find out the data in order to make the researcher easier. There are many kinds of research instrument that can be used in a research.

The instrument used to collect the data in this research was test. According Ary et al (2010) tests are valuable measuring instruments for educational research. A test is a set of stimuli presented to an individual in order to elicit responses on the basis of which a numerical score can be assigned. The data were in the form of students' achievement on writing tests. The test was used to measured students' ability in writing narrative text related to urban legend. The test was done once in both of classes. The test is called post-test which used to see the students' achievement in writing narrative after experimental group got treatment by using *Storybird platform* and nonequivalent control group got no treatment. See appendix 3.

D. Variable of The Study

Variable is something that may vary or differ. According to Santrock (2004) explained that a variable is the characteristic or attribute of individual, group, or educational system that researcher is interested in. This study had two kinds of variables; those are independent variable and dependent variable. Independent variable is variable that affect the dependent variable or independent variable is the cause of dependent

variable is going to be. So, dependent variable is variable that is affected by independent variable. The variable of this study can be seen as follows:

1. Independent variable: *Storybird* platform.
2. Dependent variable: students' writing ability of narrative text.

E. Procedure of Treatment

The treatment was given after the researcher count the equality of the two classes because the researcher did not use pre-test. The score that used to count the equality of two classes was their evaluation scores. The researcher got those scores from their English teacher.

The experimental group was X TP 1 and the nonequivalent control group was X TP 2. The researcher only got three meetings for each class because time allocation in one meeting is 135 minutes.

For experimental group, the researcher did twice meeting for treatment on Wednesday, February 19th and February 26th 2020. In the first meeting, the researcher gave a material about *Storybird platform* and narrative text including its general structure, its function, and its language features on the first 45 minutes. After that, the researcher asked the students to write some sentences by using narrative text's language feature on the second 45 minutes. On the third 45 minutes, the researcher asked students to make a paragraph of narrative text. In the second meeting, the researcher asked students to write a narrative text related to their urban legend story by using pictures on *Storybird platform*.

For control group, the researcher also did twice meeting. It was on Monday, 17th February and Saturday, 29th February. In the first meeting, the researcher gave a material about narrative text including its general structure, its function, and its language features. Students were asked to write some sentences by using correct language features of narrative text. In the second meeting, the researcher asked students to make a short narrative text about urban legend around their village.

F. Methods in Collecting Data

This study was quantitative research, and the result must be in form of number. The right method in collecting data is important. Data collection

here is method to obtain the data. The method of collecting data in this study is by using test. Test is an instrument to collect data about test itself and students' ability. The test is in form of written text.

a. Post-test

Post-test was done after students in treatment group get a treatment by using *Storybird* platform. Post-test was done in both of the group, treatment group and nonequivalent control group. Post-test used to measure how far the difference of students' writing ability of narrative text after getting treatment.

However, in making a test, the researcher must fulfill the requirements to make a good test. Before using the written test as an instrument, the researcher did a try out. The trying out was done at another class, that was X TPM 1. The researcher conducted the try out on Thursday, February 20th 2020. The trying out of the test was done once, and the result was calculated by using SPSS 16.0.

G. Methods of Data Analysis

In analyzing the data, the researcher used the scoring criteria before input the score to the SPSS 16.0. In giving scores to the students, the researcher used analytic scale. It means the scoring process would be done by scoring part by part. The analytic scale here had five items, which each item has its score. The maximum score is 25. All score then times to 4, so the maximum is 100. The elements that were be scored are as follows:

Table 3. Scoring Rubric

Aspects	Score	Description
Content	5	Main ideas, started clearly and accurately, change of opinion very clear
	4	Main ideas stated fairly clearly and accurately, change of opinion relatively clear

	3	Main ideas somewhat unclear and inaccurate, change of opinion somewhat weak
	2	Main ideas not clear or accurate, change of opinion weak
	1	Main ideas not all clear or accurate, change of opinion very weak
Organization	5	Well organized and perfectly coherent
	4	Fairly well organized and generally coherent
	3	Loosely organized but main ideas clear, logical but incomplete sequencing
	2	Ideas disconnected, lacks logical sequencing
	1	No organization, incoherent
	Vocabulary	5
4		Effective choice of word and use of idioms and word forms
3		Adequate choice of words but some misuse of vocabulary, idioms and word forms
2		Limited range, confused use of words, idioms and word forms
1		Very limited range, very poor

		knowledge of words, idioms and word forms
Grammar	5	No errors, full control of complex structure
	4	Almost no error, good control of structure
	3	Some errors, fair control of structure
	2	Many errors, poor control of structure
	1	Dominated by errors, no control of structure
Mechanism	5	Mastery of spelling and punctuation
	4	Few errors in spelling and punctuation
	3	Fair number of spelling and punctuation errors
	2	Frequent errors in spelling and punctuation
	1	No control over spelling and punctuation

H. Validity

This study is quantitative research and uses test as an instrument to collect data. The good test fulfils the requirement of validity. Validity is the extent to which inferences made from the test results are appropriate, meaningful, and useful in terms of purpose of the test itself. There are three kinds of validities; those are construct validity, face validity, and content validity.

1. Construct validity

Construct validity means the test or instrument that is used is appropriate to measure what skill or ability that is going to measure. In other words, construct validity assesses the extent to which a measuring instrument accurately measures a theoretical construct it is designed to measure. In this study, the researcher will measure students' writing ability of narrative text.

According to Nunan (2003), writing can be defined as a mental work of inventing ideas, thinking of how to express them in form of written language and it can be understood by the readers. A good writing test must fulfill some requirements of writing test itself. Nunan stated a writing test must be clear so that people who take the test can think how to express them in the form of written words. The researcher took some considerations in making the test. It is supported by Harmer (2004) who stated some things that must be prepared before designing a writing test. The first is assessing the situation where the test takes place. The second is decide what will be tested and do what will be tested. Because the test is writing test, so the format of the test is also written form. Thus, the construct validity is fulfilled.

2. Content Validity

Content validity extent to which a measuring instrument covers a representative sample of the domain of the aspects measured. Writing test that will be measured by the researcher is about narrative text of tenth grader students of SMK Sore Tulungagung. To fulfill the requirement of content validity, the researcher took a curriculum of tenth grader students. The curriculum is known as K13 (Curriculum 2013). In this study, the researcher took narrative text material in form of written text.

Table 4. Curriculum

Main Competence	4 Mengolah, menalar, dan menyaji dalam ranah konkret dan ranah abstrak terkait dengan
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	pengembangan dari yang dipelajarinya di sekolah secara mandiri, dan mampu menggunakan metoda sesuai kaidah keilmuan
Basic Competence	4.8 Menangkap makna secara kontekstual terkait fungsi sosial, struktur teks, dan unsur kebahasaan teks <i>naratif</i> , lisan dan tulis sederhana terkait legenda rakyat
Indicators	Students are able to write a narrative story related to the urban legend.
Instruments	Writing test

3. Face Validity

Face validity refers to the degree to which a test looks right, and appears to measure the knowledge or abilities it claims to measure, based on the subjective judgment of the examinees who take it, the administrative personnel who decide on its use, and other psychometrically unsophisticated observers. Face validity will fulfill the requirement if:

- a. Expected format with familiar tasks
- b. A test has time allocation
- c. Test items are clear
- d. Instructions/directions are clearly stated
- e. Test is related to the course (content validity)

To make face validity fulfilled, the researcher tries to distribute a test based on the criteria, as follows:

Table 5. Test Indicator

Variable	Indicators	Instrument	Item of The Instrument
Writing ability	<ul style="list-style-type: none"> • Students are able to make a narrative text based on the themes given by teacher 	Writing Test	Themes that appropriate with the book

I. Reliability

Reliability refers to consistency or stability of the scores we get from our test and assessment procedures. In simpler form, reliability means the result of the test must be consistent and stable. In this study, the researcher measured the reliability of the test by using inter-rater reliability. Inter-rater

reliability means the same test is scored by two or more scorers. This technique could avoid bias in giving score. Thus, the scorers must have the similar scores.

The reliability was gotten from the trying out of test instrument. The trying out was conducted on February, 20th 2020 at X TPM 1 class. The researcher used Cronbach's Alpha in finding out the reliability of the test. The scores of trying out test can be seen as in the table below:

Table 6. Scores of Try Out

No	Name	Rater 1	Rater 2
1	ART	68	64
2	AR P	60	56
3	ARM	48	48
4	ASP	68	68
5	AH	48	48
6	ASM	64	68
7	AW	72	80
8	AK	68	68
9	AAAP	80	72
10	AAB	60	64
11	AFR	72	76
12	AM	80	80
13	ABA	64	68
14	AAD	44	40
15	AA	80	68
16	AER	64	68
17	ABS	60	60
18	AMG	60	64
19	APP	64	56
20	AYP	72	68
21	AIH	60	68
22	BYP	60	52
23	BS	72	60
24	DAW	60	64
25	DEP	80	72
26	DAP	76	68
27	DPA	56	40
28	DHS	76	68
29	DP	56	44
30	D JN	64	68
31	DADS	72	72
32	DD	60	52
33	DKA	64	68
34	DYA	40	56

35	DBK	64	52
36	DRP	48	48
37	DBY	68	68
38	DPP	76	68
39	DS	20	20

Based on Sujianto (2009), the criteria of reliability according to value of Cronbach's Alpha can be seen as follows:

Table 7. The criteria of reliability

Cronbach's Alpha	Interpretation
0.00-0.20	Less reliable
0.21-0.40	Rather reliable
0.41-0.60	Quiet reliable
0.61-0.80	Reliable
0.81-1.00	Very reliable

To know the reliability of the test, the researcher used SPSS 16.0 version in computing the students' score of try out. Then the result of the test can be seen as in the table

Table 8. The result of reliability testing

		N	%
Cases	Valid	39	100.0
	Excluded ^a	0	.0
	Total	39	100.0

Cronbach's Alpha	N of Items
.915	2

According to the table 3.4 the result of Cronbach's Alpha was 0.915. It was higher than 0.05 and it can be concluded that the test was very reliable.

J. Hypothesis Testing

In this study, the design of the research is quasi-experimental design which had purpose to investigate the effectiveness of *Storybird* Patform. Then, the researcher compared the result of before and after treatment from

both group, experimental and nonequivalent control group. The hypotheses of this research were as follows:

1. Null Hypothesis (Ho): There is no significant difference of students' writing ability of narrative text who are taught by using *Storybird* platform and those who are not taught by using *Storybird* platform.
2. Alternative Hypothesis (Ha): There is significant difference of students' writing ability of narrative text who are taught by using *Storybird* platform and those who are not taught by using *Storybird* platform.

In testing the hypothesis, the researcher used the standards rules, and the result was based on N. Sig in SPSS program.