

CHAPTER III RESEARCH METHODS

A. Research Method

The type of research used is field research, which means that the researcher is directly involved in looking for all the data needed to be collected as material for the results of his research obtained directly from the field. The approach used in this research is a quantitative approach. A quantitative approach is a research approach that works with numbers, whose data is in the form of numbers (score or value, rank or frequency) which is analyzed using statistics to answer specific questions or research hypotheses and to predict that a certain variable affects other variables by using statistics. The main requirement is that the sample taken must be representative.¹

The reason for the quantitative investigation is to decide the relationship between factors in a populace. There are two sorts of quantitatively investigate plans, specifically expressive and exploratory. Expressive quantitative considers taking estimations as it were once. This implies that the relationship between the factors beneath examination as it were takes put once. In the meantime, test ponders carry out estimations between factors sometime recently and after to see the cause-and-effect relationship of the marvel beneath think about.

B. Research Population

The location of this research was carried out on the eighth grade of MTs Islamiyah Nirwana OKU Timur, located in Wanasari Village, precisely in RT 01 / RW 01, Semendawai Timur sub-district, East

¹ Masrukin, *Metodologi Penelitian Kuantitatif*, (Kudus: Media Ilmu, 2015), p 5

OKU district, South Sumatra, the research was carried out from July 2021 to completion.

C. Research Participants / Subjects

Participants is an area of generalization consisting of objects or subjects that have certain qualities and characteristics that are determined by the researcher to be studied at a later date and then draw conclusions. The population in this study were 23 students of class VIII MTs Islamiyah OKU Timur.

This study used a saturated sampling technique. Saturated Sampling is the determination of the sample when all members of the population are sampled. This is often done when the population is relatively small, or when the study wants to make generalizations with very few errors. Another term for a sample drop is a census, where all members of the population are sampled.²

D. Design And Definition Of Variables Oprations

1. Design

Researchers used pre-experimental design. The pre-experimental design used was one group pretest-posttest design. In this design, there is a pretest, which is given before the researcher makes a treatment in the form of recount text learning by applying picture series media to students and a post-test is given after the researcher provides picture series media in writing recount text to students. Thus, the results of treatment can be known to be more accurate because it can compare with the conditions before being given the treatment. This design can be described as follows:³

² Sugiyono, *Metode Penelitian Pendekatan Kuantitatif, Kualitatif, dan R&D*, (Bandung: Alfabeta 2011), p 117-125

³ Sugiyono, *Metode Penelitian Pendekatan Kuantitatif, Kualitatif, dan R&D*, (Bandung: Alfabeta 2011), p 108-116

Research Design Table

<i>Pretest</i>	<i>Treatment</i>	<i>Posttest</i>
O₁	X	O₂

Information :

O1 : pretest value before being given treatment by providing picture series media in writing recount text.

X : Treatment using picture series media.

O2 : After being given treatment by providing picture series media in writing recount text.

Based on this opinion, it can be concluded that experimental research is a study to find the effect of the time before the action treatment is given and the time after the action treatment is given.

2. Variable Operational Definition

The operational definition of a variable is a description that contains a number of indicators that can be observed and measured to identify the variables or concepts used. Operational definitions are made to facilitate understanding and measurement of each variable in the study.

The operational definition in this study is as follows:

Variable	Operational Definition	measuring instrument	measuring results	measuring scale
Variable free (X) is picture series media	The use of picture series media is expected to help students to get new experiences in writing activities so that students are able to develop	Observation	application of picture series media in writing activities for students	

	their imaginations when writing and develop their abilities.			
The dependent variable (Y) is the ability to write recount text.	Individual skills or potential to compose and write recount text in writing class activities in the future.	Use the writing test	Score of students write recount text	Interval

E. Test The Validity And Reliability Of The Instrument

1. Validity Test

Validity is a measure that shows the levels of validity or validity of an instrument. An instrument that is valid or valid has high validity. Conversely, instruments that are less valid means that they have low validity.

In the instrument test through item analysis, the product moment correlation formula is used. Calculations are performed using the SPSS computer software SPS program, with the following formula:⁴

$$r_{xy} = \frac{N \sum XY (\sum X)(\sum Y)}{\sqrt{(N \sum X^2 - (\sum X)^2)(N \sum Y^2 - (\sum Y)^2)}}$$

Information:

r_{xy} = Correlation coefficient of variable x and variable y

X = picture series media

Y = ability to write recount text

x^2 = Product from x and x

y^2 = Product from y and y

⁴ Suharsimi Arikunto, *Prosedur Penelitian Suatu Pendekatan Praktek*, (Jakarta : Rineka Cipta, 2012), p 213

XY = Product dari x dan y

N = the amount of data or samples

The rule of decision making in the validity test is if $r_{hitung} > r_{tabel}$ at the significant level 0,05, Then the instrument is said to be valid and fit for use in data collection. Conversely, if $r_{hitung} < r_{tabel}$ at the significant level 0,05, then the instrument is said to be invalid and unfit for use for data collection.

2. Reability test

Reliability refers to an understanding that the instrument can be trusted enough to be used as a data collection tool because the instrument is good.⁵ Saifuddin Azwar stated that reliability is expressed by the reliability coefficient whose number ranges from 0 to 1.00. The higher the reliability coefficient approaching 1.00 means the higher the reliability. Conversely, if the lower coefficient is closer to the number 0, it means the lower the reliability.⁶

In this study, the reliability test of data collection instruments used the alpha coefficient formula. This formula is used to calculate rating-scale data. Statistical calculations were performed using a computer software program, the SPSS computer program. The alpha coefficient formula is as follows:⁷

$$r_{11} = \left[\frac{k}{k-1} \right] \left[1 - \frac{\sum \alpha_b^2}{\alpha_t^2} \right]$$

Information:

k = Number of grains

$\sum \alpha_b^2$ = number of item variables

α_t^2 = total variable

r_{11} = instrument reliability

F. Instrumen And Data Collection Techniques

⁵ Suharsimi Arikunto, *Prosedur Penelitian Suatu Pendekatan Praktek*, (Jakarta : Rineka Cipta, 2012), p 221

⁶ Saifuddin Azwar, *Metode Penelitian*, (Yogyakarta : Pustaka Pelajar, 2004), p 83

⁷ Suharsimi Arikunto, *Prosedur Penelitian Suatu Pendekatan Praktek*, (Jakarta : Rineka Cipta, 2012),p 223

In this study, the writing test was used as an instrument in the study. The pre-test and post-test were given by the researcher in the form of a written test. To determine the ability to write recount text before the treatment, a pre-test was carried out while the post-test was given to measure the students' ability to write recount text after the treatment. The theme given in the pre-test is "a unique experience that is very memorable" and the theme in the post-test is "an unforgettable vacation or event."

According to Mohammad Nazir, data collection is a systematic and standard procedure for obtaining the necessary data. Collecting data is an important step in the scientific method and can be done in various settings, various sources, and various ways of collecting data. According to Mohammad Nazir, data collection is a systematic and standard procedure for obtaining the necessary data. Collecting data is an important step in the scientific method and can be done in various settings, various sources, and various ways of collecting data:⁸

1. Test

The measurement scale is an agreement that is used as a reference to determine the length of the interval in the measuring instrument, so that the measuring instrument when used in measurement will produce quantitative data.

This method is used during the pre-test to measure the level of knowledge of students, before being given treatment using serial image media. In addition, this method is also carried out during the post-test and post-test, which is useful for measuring the extent of success in using serial image media on the ability to write recount text of students at MTs Islamiyah OKU Timur. The test is used in this study so that the required data can be obtained in a relatively short time, at a lower cost, but more data can be obtained.

Data collection techniques in this study using quantitative data. using pre-test and post-test to obtain

⁸ Moh Nazr, *Metode Penelitian*, (Bogor: Ghalia Indonesia. 2013),p 31

quantitative data. In analyzing and assessing students' writing tests on the pre-test and post-test using an analytic scale as described below.⁹

Scale For Assessing The Students' Writing Test

a. Content

30-27	AMAZING TO EXCEPTIONALLY GOOD: Knowledge, understanding of the content, be thorough tesis development, the discussion does not go out of the theme given.
26-22	GREAT TO AVERAGE: Know some material, not broad coverage, limited writing development, sufficient by the discussion, but not sufficiently detailed.
21-17	FAIR TO POOR Limited knowledge of the discussion, little experience, Insufficient improvement of the topic.
16-13	VERY POOR Not know about the topic, not substantive, out of the discussion, nothing needs to be corrected.

b. Organization

20-18	AMAZING TO EXCEPTIONALLY GOOD: Can describe the atmosphere in writing, ideas are conveyed, concisely, the writing is sequential, the order is appropriate, compact.
17-14	GREAT TO AVERAGE A little less organized, not quite right but the ideas are conveyed well, limited references, the order in the writing is good but incomplete.
13-10	FAIR TO POOR Out of topic, confusing or inappropriate ideas, no clear progress in writing.
9-7	VERY POOR Unclear, incorrectly structured, and nothing to correct.

c. Vocabulary

20-18	AMAZING TO EXCEPTIONALLY GOOD: Wide vocabulary, choosing the right words and
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⁹ Arthur Hughes, *Testing for Language Teacher, Second Edition*, (United Kingdom:Cambridge University Press, 2005), p 104

	idioms, the right word formation, according.
17-14	GREAT TO AVERAGE Mastery of vocabulary is pretty good, the choice of words and idioms occasionally doesn't quite fit, choice, waste of words.
13-10	FAIR TO POOR Mastery of vocabulary is limited, mistakes often occur in the choice of words and idioms, the choice and use of meaning are not precise and confusing.
9-7	VERY POOR only a few master the vocabulary, use, and selection of idioms and words

d. Language use

25-22	AMAZING TO EXCEPTIONALLY GOOD: The language arrangement is appropriate, there are not many mistakes in the use of the language, the adjustment of words, numbers, idioms, and pronouns is correct.
21-18	GREAT TO AVERAGE simple but precise wording, there are only a few errors, a few errors were found in the choice of words, idioms, precise words but can still be understood.
17-11	FAIR TO POOR there are errors in the placement of the language structure, errors in the agreement, tensions, numbers, word/function order, articles, pronouns, prepositions. the meaning of the sentence is confusing.
10-5	VERY POOR almost completely lacking the ability to compose sentences, there are many mistakes, nothing to correct.

e. Mechanism

5	AMAZING TO EXCEPTIONALLY GOOD: looks very mastering the flow, there are only a few
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	errors in spelling, paragraph arrangement, letters, punctuation.
4	GREAT TO AVERAGE not many errors were found in spelling, letters, punctuation, paragraph composing.
3	FAIR TO POOR There are many errors in spelling, punctuation, letters, writing that are difficult to read, and meanings that are unclear and difficult to translate
2	VERY POOR not mastering conventions, lots of spelling mistakes, paragraph arrangement, letters, punctuation, difficult to understand writing, nothing that needs to be corrected.

2. Documentation

This technique is used to obtain data about research subjects. The documentation method is to find data about things or variables in the form of notes, transcripts, books, newspapers, magazines, inscriptions, meeting minutes, and so on. In this study, what is meant is a description of the characteristics of students and other data that is related to research, namely career decisions according to their talents, interests, abilities and potential.¹⁰

G. Data Analysis Techniques

Data analysis is the process of systematically searching for and compiling data obtained from the results of tests, interviews, and observations, field notes and documentation. By organizing data into categories, describing it in units of synthesizing, compiling patterns, choosing which ones are important, and which will be studied, and making conclusions so that they are easily understood by oneself and others.

To determine the success of the experiment, an increase in student interpersonal relationships can be used

¹⁰ Juliansyah Noor, *Metodologi Penelitian Skripsi Tesis Desertasi, dan Karya Ilmiah*, (Jakarta: Kencana Prenada Media Group, 2012), p 138

the Wilcoxon test. This analysis uses the help of the SPSS program. To find the Z_{hitung} test:

$$z = \frac{T - \left[\frac{1}{4}N(N+1)\right]}{\sqrt{\frac{1}{4} = (N)(N + 1)(2N + 1)}}$$

Information:

T = the smallest difference

N = Number of samples

