

## CHAPTER III

### RESEARCH METHOD

In this chapter, the researcher would like to present the method of study, which was important as a guideline to attain the study's objectivity. It provided with research design, research variables, population and sample, Instruments of the research, treatment procedure, data collection, and data analysis technique will be mentioned as follows:

#### A. Research Design

It is a quantitative research. Uhar Suharsaputra stated, "Quantitative research is a research approach that represents the understanding of positivism where the data or information that is obtained will be proofed empirically. It refers to a theory and uses the hypothesis test to vivificate that theory as the result".<sup>46</sup> In addition, Creswell stated, "Quantitative research is an inquiry process of understanding based on distinct methodological traditions of inquiry that explore a social or human problem. The researcher arranges a complex, holistic, picture, analyzes words, reports from informants the detailed views, and conducts the research in a natural way".<sup>47</sup> So, it is carried out to investigate the effect of the suggestopedia strategy on students' descriptive paragraph writing through pre-test and post-test to obtain the numerical data.

The researcher designs this research as a quasi-experiment. In quasi-experimental research, the researcher has been given two classes to assign two-group. It is an experimental class where the researcher assigns the participants to groups for the experimental and control classes. This design uses pre-test and post-test in each group can be described as follows:

*Table 1 Design of the research*

GROUP	PRE-TEST	TREATMENT	POST-TEST
Experimental	O <sub>1</sub>	X	O <sub>2</sub>
Control	O <sub>3</sub>	X	O <sub>4</sub>

<sup>46</sup> Suharsaputra, Uhar. 2012. *Metode Penelitian: Kuantitatif, Kualitatif, dan Tindakan*. Bandung: Refika Aditama, Inc.

<sup>47</sup> Creswell, John W. 2012. *Educational Research*. Boston: Pearson Education Inc.

O = observation/measurement

X = treatment given to experimental group

The procedures of quasi-experimental design used two groups is as follow:

1. Carrying out a pre-test before applying the suggestopedia method to measure the descriptive writing skills of the tenth graders of SMAN 1 Nganjuk in the academic year of 2021/2022
2. Applying treatment by using the suggestopedia method to the experimental class and teaching the control class using the picture.
3. Administering a post-test after applying the suggestopedia method and picture. with the purpose of measuring the students' descriptive writing achievement of the tenth-grade students of SMAN 1 Nganjuk in the academic year of 2021/2022
4. Comparing the scores both pre-test and post-test both the experimental class and the controlled class.
5. Comparing the score from the experimental class and the controlled class to find the difference improvement.
6. Comparing the score of the male and female students in either the experimental class or the controlled class to find the difference in achievement for different gender.

## **B. Research Variables**

This research consists of three variables, one is an independent and the other is the dependent variable. Variable means “a concept where the subjects stand variously in a class”.<sup>48</sup> In this research, suggestopedia method is the independent variable. The students' descriptive writing achievement in the tenth graders of SMAN 1 Nganjuk in the academic year of 2021/2022 is the dependent variable, and the gender is the moderator variable.

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<sup>48</sup> Wallen, Jack R. Fraenkel and Norman. 2003. *How to Design and Evaluate Research in Education*. New York: Mc Graw Hill, Inc.

### C. Population and Sample

#### 1. Population

The tenth graders of SMAN 1 Nganjuk in the academic year of 2021/2022 are used as the population of this research. The students in class ten of SMAN 1 Nganjuk ten classes. Science classes are seven and three classes for social class. The population is 332 students.

#### 2. Sample

According to Wallen, “The taking sample technique is purposive sampling where the researcher takes the sample by using their judgment to find the appropriate sample in collecting the data needed and usually based on the previous information”.<sup>49</sup> It is chosen to make the researcher easier in collecting the data. Furthermore, the researcher also considered it based on the recommendation from the English teacher of this school. Especially for experimental and comparative research, according to Borg and Gall (2003: 176) required a sample of at least 15 respondents per group.<sup>50</sup> In this research, the researcher decides to take 71 students from the population as the sample for this study. Then the researcher assigns the sample to be experimental class and controlled class. For experimental class consists of 36 students, and for controlled class consists of 35 students.

### D. Instruments of the Research

An achievement test is used to measure the students’ descriptive paragraph writing development in this research. The researcher uses written test in the form of descriptive text. According to Heaton, “There are five elements, they are content, organization of the idea, vocabulary, grammar use, and mechanic (use of capital letters, punctuation)”.<sup>51</sup> By using this form, the researcher can do scoring quickly and easily. The assessment rubric used to assess student work in writing descriptive texts is as shown in the table 2.

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<sup>49</sup> Ibid.

<sup>50</sup> Meredith D. Gall, Joyce P. Gall, Walter R. Borg. 2003. *Educational Research: An Introduction*. New York: Allyn and Bacon.

<sup>51</sup> Heaton, J.B. 1998. *Writing English Language Test*. New York: Longman Group UK.

**Table 2 Writing Assessment**

No	Assessment	Score
1	Content	30
2	Organization of the idea	20
3	Vocabulary	20
4	Grammar	25
5	Mechanic	5
Total Score		100

The table 3 below shows how to rate the writing abilities.

**Table 3 Writing Assessment**

Aspect	Level	Score	Criteria
<b>Content</b>	Excellent – Very good	30-27	Relevant to the topic, provides detailed information, and corresponds to the recount text's goal
	Good - Average	26-22	Although mostly pertinent to the issue, there are some gaps in the information.
	Fair – Poor	21-17	Inadequate topic development, almost matching the aim of the recall text
	Very poor	16-13	Doesn't relate to the topic and isn't appropriate for the purpose.
<b>Organization</b>	Excellent – Very good	20-18	Fluent communication, clearly communicated ideas, well-organized, logical sequencing, and cohesion
	Good – Average	17-14	Limited support, sloppy organization, and logical but inadequate sequencing

	Fair – Poor	13-10	Ideas are disorganized or disjointed, and there is a lack of logical growth and sequencing.
	Very poor	9-7	There is no communication, no organization, and insufficient evaluation.
<b>Vocabulary</b>	Excellent – Very good	20-18	Use effective word/word choice /word usage, and knowledge of word forms.
	Good – Average	17-14	Occasionally, there are faults in word form, choice, and usage, but the message is not obfuscated
	Fair – Poor	13-10	Frequently occurring faults in word form, choice, usage, and meaning have obscured/confused the message
	Very Poor	9-7	Translation primarily, with limited English understanding and insufficient ability to assess
	Excellent – Very good	25-22	Argument, tense, number, word order/function, articles, pronouns, and preposition are all effective complicated constructions with few errors
<b>Language Use</b>	Good – Average	21-18	Minor issues in complicated construction, multiple errors of agreement, tense, number, word order/function, articles, pronouns, and prepositions, but meaning is rarely obscured.
	Fair - Poor	17-11	Significant problems with simple/complex construction, frequent negation, agreement, tense,

			number, word order/function, articles, pronouns, prepositions, and/or fragments, run-ons, deletions, and muddled or obscured meaning
	Very Poor	10-5	Almost no mastery of sentence building norms, dominated by errors, does not communicate or does not allow for adequate evaluation.
	Excellent – Very good	5	Displays command of conventions, with only a few spelling, punctuation, capitalization, and paragraphing problems.
	Good – Average	4	There are some problems in spelling, grammar, and paragraphing, but the meaning is not lost
<b>Mechanic</b>	Fair – Poor	3	Spelling, punctuation, capitalization, paragraphing, and poor handwriting faults, with meaning muddled or obfuscated
	Very Poor	2	Mastery of conventions, dominated by spelling, punctuation, capitalization, paragraphing, illegible handwriting, or insufficient to assess

### E. Treatment Procedure

The treatment in both the experimental and control groups lasts two meetings and follows the broad stages outlined below:

*Table 4 Schedule of Treatment*

<b>Meeting</b>	<b>Experimental Group</b>	<b>Control Group</b>
1	Pre Test	Pre Test
2	Treatment 1 using Suggestopedia The topic is “ Sedudo Waterfall”	Treatment 1 using picture The topic is “Sedudo Waterfall”

3	Treatment 2 using Suggestopedia The topic is “Monument dr. Sutomo Nganjuk”	Treatment 2 using picture The topic is “Monument dr. Sutomo Nganjuk”
4	Post Test	Post Test

*Table 5 Treatment Activities*

<b>Steps</b>	<b>Experimental Group</b>	<b>Control Group</b>
<b>1</b>	The teacher greets the students and followed decorating the classroom by pasting posters and pictures related to material such as vocabulary, tenses, and photos of tourist attractions related to the descriptive text material.	The teacher greets the students and asks them to tidy up the class for convenience in learning
<b>2</b>	The teacher motivates the students that they will write easily, every student has the ability and can definitely write descriptive text well and the teacher gives an overview of the benefits of studying descriptive texts about tourist attractions and historical sites in everyday life.	The teacher motivates the students that they will write easily, every student has the ability and can definitely write descriptive text well and the teacher gives an overview of the benefits of studying descriptive texts about tourist attractions and historical sites in everyday life.
<b>3</b>	The teacher explains the meaning and social function of descriptive texts. The teacher explains tenses, vocabulary, and punctuation related to descriptive text	The teacher explains the meaning and social function of descriptive texts. The teacher explains tenses, vocabulary, and punctuation related to descriptive text
<b>3</b>	The teacher asks students to determine and imagine that they are other people who have different characters, personalities, occupations, or even names that can help them in this class to learn English.	The teacher asks students about their experiences visiting tourist attractions or historical sites and students are asked to share their impressions of the places they have visited
<b>4</b>	The teacher asks each student to try to imagine or become another character and make a real or imaginary role play to get an overview of tourist attractions or historical sites that are in accordance with English	The teacher asks each student to look at the pictures in the worksheets to get an idea of the tourist attractions or historical sites that they will write in the form of descriptive text in English
<b>5</b>	Here, a descriptive text in Indonesian form is given by the	students look for pictures related to descriptive text from the

	teacher to the students and read aloud following the intonation of the music. Students listen to the teacher by following, and paying attention to the teacher's words	internet and try to make a short description in Indonesian from pictures of tourist attractions or historical sites that they get independently
6	Students create their fantasies by closing their eyes in a comfortable, quiet place, and the teacher giving instructions in a pleasant voice with a slow presentation. This means that students are relaxed but not sleeping to imagine the text read by the teacher in English.	The teacher divides the students into several groups and then instructs each group to discuss what they write to help each other. They try to convert their description into English
7	Students reread texts in English aloud as they play, individually or as a team. With many expressions such as angry, sad, and cheerful, students practice it in front of the class	The teacher asks student representatives from each group to read the text they made in the group in English aloud in front of the class and other students listen carefully
8	Students collaborate in groups to study material, review and consolidate learning. In the form of games, dramas, and singing together where students focus on creating and writing descriptive texts in their own words.	The teacher assigns students to write descriptive texts from the pictures they get from the internet and those in the worksheets independently in their own words.

## F. Data Collection

In research, data is needed to support the investigation. There are several ways to collect data such as questionnaires, observations, field notes, interviews, documentation, tests, and others. The researcher uses an achievement test to measure the student's progress in descriptive paragraph writing. The forms of tests are written test. From those forms, the researcher can get score directly the specific learning. There are three aspects of assessment in descriptive paragraph writing. They are content (the accuracy of the information based on the topic, the relevancy of the supporting details to the main idea, organization of the idea), style (grammar use, diction), mechanic (use of the capital letter, punctuation).



## G. Data Analysis Technique

After obtaining the data from the pre-test and post-test in the experimental and control group, the researcher tests the consistency of the two raters who assess the students' work in writing to get the reliability of the data before doing data analysis. Data analysis used by the researcher is descriptive analysis, after that the normality test by using the "Kolmogorov" test, and then homogeneity test, and the last is two Way ANOVA test explained as follows:

### 1. Descriptive Analysis

This descriptive is conducted to obtain an overview and exposure of the research data, including the amount of data, maximum value, minimum value, and average value.

### 2. Normality Test

According to Susetyo, "Normality test is to determine if the data from the population is normal or not".<sup>52</sup> This test is to make sure that the data distribution is normal or not. According to Nornadiah, "Normal distribution data is a prerequisite for conducting two way ANOVA test. Normality test used is the Kolmogorov test".<sup>53</sup> The researcher tests the data normality with SPSS 22. The testing criteria are:

- a. If the value of significance of the data  $> 0,05$ , it means that the data from the research have a normal distribution.
- b. If the value of significance of the data  $< 0,05$ , it means that the data from the research don't have a normal distribution.

### 3. Homogeneity Test

Its aim is to determine if a variance (diversity) of data from more than one group is homogeneous or heterogeneous. To conduct the two way ANOVA test, one of the requirements (not absolute requirements) is doing this test. The researcher conducts the homogeneity test with SPSS 22 and the testing criteria are:

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<sup>52</sup> Susetyo, Dr.Budi. 2010. *Statistika untuk analisis data penelitian*. Bandung: Aditama.

<sup>53</sup> Nornadiah Mohd Razali, dan Bee Wah Yap. 2011. "Power Comparision of Shapiro-Wilk, Kolmogorov Smirnov, Lilliefors, and Anderson-Darling tests." *Power Comparision of Journal of Statistical modeling and Analytics*, 2 No. 1. 21 21-33.

- a. If it is obtained that the significance value (sig.) based on mean  $> 0.05$ , it can be concluded that the variance of the post-test data of the experimental class and the control class is the same or homogeneous. It means that one of the requirements of the two way ANOVA test is met.
- b. If it is obtained that the significance value (sig.) based on mean  $< 0.05$ , it can be concluded that the variance of the post-test data of the experimental class and the control class isn't the same or heterogeneous. It means that one of the requirements of the two way ANOVA test isn't met.

#### 4. Two Way ANOVA Test

This test is used to investigate whether there is a significant difference between the mean of two unpaired samples. It is used to answer the research problem:

- b. Is the students' writing skills taught by using suggestopedia higher than the students' writing skills taught by using the picture?
- c. Is there any difference in achievement in descriptive writing between female and male students?
- d. Is there an interaction between learning methods and gender in determining students' descriptive writing achievement?

This test takes the data from the post-test of the experimental class and the control class. The researcher conducts the test with SPSS 22 and the testing criteria for research problem "Is the students' writing skills taught by using suggestopedia higher than the students' writing skills taught by using the picture?" are:

- a. If it is obtained that the significance value (2-tailed)  $< 0.05$ , it can be concluded that there is any significant difference between students' descriptive writing achievement taught by using the suggestopedia method and the conventional method of the tenth graders in SMAN 1 Nganjuk. It means that  $H_a$  (Alternative hypothesis) is supported or  $H_0$  (Null hypothesis) is rejected.

- b. If it is obtained that the significance value (2-tailed)  $> 0.05$ , it can be concluded that there is not any significant difference between students' descriptive writing achievement taught by using the suggestopedia method and the conventional method of the tenth graders in SMAN 1 Nganjuk. It means that  $H_a$  (Alternative hypothesis) isn't supported or  $H_o$  (Null hypothesis) isn't rejected.

The testing criteria for research problem "Is there any difference in achievement in descriptive writing between female and male students?" are:

- a. If it is obtained that the significance value (2-tailed)  $< 0.05$ , it can be concluded that there is a significant difference in achievement in descriptive writing between female and male students of the tenth graders in SMAN 1 Nganjuk. It means that  $H_a$  (Alternative hypothesis) is supported or  $H_o$  (Null hypothesis) is rejected.
- b. If it is obtained that the significance value (2-tailed)  $> 0.05$ , it can be concluded that there is not a significant difference in achievement in descriptive writing between female and male students of the tenth graders in SMAN 1 Nganjuk. It means that  $H_a$  (Alternative hypothesis) isn't supported or  $H_o$  (Null hypothesis) isn't rejected.

The testing criteria for research problem "Is there an interaction between learning methods and gender in determining students' descriptive writing achievement?" are:

- a. If it is obtained that the significance value (2-tailed)  $< 0.05$ , it can be concluded that there is an interaction between learning methods and gender in determining students' descriptive writing achievement of the tenth graders in SMAN 1 Nganjuk. It means that  $H_a$  (Alternative hypothesis) is supported or  $H_o$  (Null hypothesis) is rejected.
- b. If it is obtained that the significance value (2-tailed)  $> 0.05$ , it can be concluded that there is not an interaction between learning methods and gender in determining students' descriptive writing achievement of the

tenth graders in SMAN 1 Nganjuk. It means that  $H_a$  (Alternative hypothesis) isn't supported or  $H_0$  (Null hypothesis) isn't rejected.