

## **2.3 Hypothesis**

In line to the theories and assumptions above, the researcher formulate hypothesis as follows:

**H<sub>0</sub>** (Null hypothesis) : There is no significant correlation between students' self-esteem and their writing ability in narrative text at the twelfth grade students of SMAN 2 Negeri Agung academic year 2021/2022.

**H<sub>a</sub>** (Alternative Hypothesis) : There is significant correlation between students' self-esteem and their writing ability in narrative text at the twelfth grade students of SMAN 2 Negeri Agung academic year 2021/2022.

## **CHAPTER III RESEARCH METHODOLOGY**

### **3.1 Research Method**

This research is correlation research by using descriptive quantitative research which is the researcher try to explain the phenomena which happen based on data collected from respondent by using previously validated instrument. According to Sugiyono (2016, p. 58) the explanation of theory in the research is a structured explanation of theory and research results related to the variable which is researched. This theory description contains an explanation of the variables studied through definition, complete and in-depth description of various references, so that the scope of the position and prediction of the relationship between variable which is researched becomes clear and more focused.

Arikunto (2013, p. 4) states that correlation research is research conducted by researcher to find out the level of relations between two or more variables, without making changes, additional, or manipulation of the data that already exists. This research have two variables, they are; independent variable (X) and dependent variable (Y). The independent variable (X) is variable which influence dependent or another variable, while the dependent variable (Y) is variable which depend or is influenced by independent variable. The independent variable (X) is self-esteem and dependent variable (Y) is writing ability.

## **3.2 Population, Sample, and Sampling Technique**

### **3.2.1 Population**

Research always needs a number of people to be examined or observed. Population is the total number of subjects who have several characteristics and are important things that must be known by researchers to be studied clearly and completely. Arikunto (2013: 173) argues that the population is the total number of research subjects or all members of any well defined class of people, even or subject. Therefore, the population of the research was the students at the twelfth grade at SMAN 2 Negeri Agung in the academic year of 2021/2022.

Total numbers of population are 122 students consist of 4 classes. The distribution of the population of the research could be seen in the below table:

**TABLE 2**  
**POPULATION OF TWELFTH GRADE**  
**STUDENTS IN SMAN 2 NEGERI AGUNG**

NO	CLASS	GENDER		TOTAL
		MALE	FEMALE	
1	IPA 1	18	14	32
2	IPA 2	16	13	29
3	IPS 1	17	12	29
4	IPS 2	17	15	32
<b>XI IPA (2 CLASSES)</b>				61
<b>XI IPS (2 CLASSES)</b>				61
<b>TOTAL</b>				122

Source: SMAN 2 Negeri Agung

### 3.2.2 Sample

The sample is part of the number and characteristics possessed by the population (Sugiyono, 2016, p. 81). This means that the sample is part of the population and is an important factor that must be considered in the study. According to Arikunto (2013, p. 174) the sample is part of the observed population. Arikunto (2013, p. 134) states that if the students are less than 100, it should be taken all, but if the students are more than 100, it could be taken 10% - 25%.

Based on the opinion above the sample was used in this research is 25% of the large number of population that was  $25\% \times 122 = 30.5$  To make easier, the researcher took 30 as

the sample of research. Furthermore, in this research, the researcher got 30 students from the population of twelfth grade in SMAN 2 Negeri Agung in academic year 2021/2022.

### 3.2.3 Sampling Technique

Sampling technique is a way to take sample in a research. According to Sugiyono (2016, p. 81) sampling technique to determine the sample to be used in the research, and there are various sampling techniques that are used. The population consists of several groups or classes, so a proportional sample must be taken to represent each group or class. The sample to be taken is 30 students who are selected through proportional random sampling technique. Proportional random sampling is a combination of two sampling technique that is sampling proportion or proportional sampling and random sampling.

Therefore, the way to take the sample in proportional random sampling technique which consist of four groups or classes, so the researcher take 7 persons, for 2 groups, for example;  $25\% \times 29 = 7.25$  so it can be written 7 persons. Furthermore, researcher take 8 persons for 2 groups, for example;  $25\% \times 32 = 8$  so it can be written 8 persons.

Moreover, it can be calculated for all students in every class who become the subject of this research is 30 students as the sample of this research. It can be explained by the table as follows:

**TABLE 3**  
**SAMPLING TECHNIQUE OF TWELFTH GRADE**  
**STUDENTS OF SMAN 2 NEGERI AGUNG**

No	Class	Sample	Frequency	Percentage
1	IPA 1	8	32	25%
2	IPA 2	7	29	25%

3	IPS 1	7	29	25%
4	IPS 2	8	32	25%
<b>Total</b>		<b>30</b>	<b>122</b>	

### 3.3 Research Instrument

Research instrument is a quantify tool which is used to get data. According to Sugiyono (2016, p. 102) research instrument is a tool used to measure the observed natural and social phenomena. The instrument is used in the form of questionnaire and test. Questionnaire is used to measure self esteem and the test is used to measure students' writing ability. The test about writing ability is given in the form of writing a narrative text, which measure from the aspects of content, organization, vocabulary, language use, and mechanics. The researcher gave questionnaire that consists of 40 items to measure students' self esteem. After making instrument of the research, the next step is doing try out to find validity and reliability of instrument. The researcher gave the try-out to the students of twelfth grade in SMAN 2 Kotabumi that have equal accreditation and curriculum with SMAN 2 Negeri Agung.

#### 3.3.1 Research Instrument of Writing Ability in Narrative Text

##### a. Conceptual Definition of Writing Ability in Narrative Text

Writing ability in narrative text is the competence or skill of students to express the ideas, feelings, and thoughts by using words gramatically and knowledgeable in producing texts that tell a fictional story in the past. Writing is perceived as a skill that involved listening, speaking and reading. Therefore, if students have good writing skill, they will have good language skill. Moreover, the four language skills are integrated, so that developing one skill supports the development of

other skills. Writing is also have very important role in today's world. writing and speaking are called as productive skills which means they connect to produce language rather than accepting it.

#### **b. Operational Definition of Writing Ability in Narrative Text**

Writing ability in narrative text is the competence or skill of students to express the ideas, feeling, and thoughts by using words grammatically and knowledgeable in producing texts that tell a fictional story in the past which can be observed and measured by using questionnaire to get score from each students. the instrument in this research is the form of writing a narrative text, which is measured from the aspects of content, organization, vocabulary, language use, and mechanics.

The first aspects is content, in content for criteria excellent to very good is 30-27 interval score, for good to average 26-22 interval score, for fair to poor is 21-17 interval score, and for very poor is 16-13 interval score.

The second aspect is organization, in organization for criteria excellent to very good is 20-18 interval score, for good to average 17-14 interval score, for fair to poor is 13-10 interval score, and for very poor is 9-7 interval score.

The third aspect is vocabulary, in vocabulary for criteria excellent to very good is 20-18 interval score, for good to average 17-14 interval score, for fair to poor is 13-10 interval score, and for very poor is 9-7 interval score.

The next aspect is language use, in language use for criteria excellent to very good is 25-22 interval score, for good to average 21-18 interval score, for fair to poor is 17-11 interval score, and for very poor is 10-5 interval score.

The last aspect is mechanics, in mechanics for criteria excellent to very good is 5 interval score, for good to average 4 interval score, for fair to poor is 3 interval score, and for very poor is 2 interval score.

The writing test is writing the narrative text in certain title. The teacher will give the blank paper to be written by the students about narrative text. The theme of the text is about fairy tale. The students make the text with all characteristics of narrative text, start from orientation, complication, and resolution.

**c. Specification of Writing Ability**

In this research, students' writing test will be assessed based on some aspects; content, organization, vocabulary, language used, and mechanics. Jacob et al in Weigle (2009, p. 115) proposed the scoring profile of writing as follow:

**TABLE 4**  
**SPECIFICATION ASPECTS OF WRITING ABILITY**

<b>Variable</b>	<b>Aspect</b>	<b>Indicators</b>	<b>Interval Score</b>
Writing Ability	1. Content	The students are able to build up their ideas with suitable topic	13 — 30
	2. Organization	The students are able to express their idea clearly	9 — 20
	3. Vocabulary	The students are able to choose suitable	7 — 20

		vocabulary and expression	
	4. Language Use	The students are able to compose a sentence effectively	5 — 25
	5. Mechanics	The students are able to master the rules in writing	2 — 5

Adopted from Jacobs et al (as cited in Weigle, 2009, p. 115)

### 3.3.2 Research Instrument of Student's Self-Esteem

#### a. Conceptual Definition of Student's Self-Esteem

Self-esteem is an evaluation that individuals make and how individuals view himself, leads to acceptance or rejection, as well as individual belief in his abilities, and the success it has achieved.

#### b. Operational Definition of Student's Self-Esteem

Self-esteem is an evaluation that individuals make and how individuals view himself, leads to acceptance or rejection, as well as individual belief in his abilities, and the success it has achieved. In assessing student's self-esteem can be measured using a questionnaire.

The type of questionnaire is used by researcher is a closed ended questionnaire. Students can answer the questions give from the questionnaire items by providing a checklist in the answer column. Total number of questionnaire items is 40

items which consist of positive and negative statement. There are 21 items in positive statement and 19 items in negative statement.

The making of the questionnaire in this research is based on the likert scale type. The answer to each instrument on the likert scale have a very positive to very negative gradation, which can be in the form of words such as; strongly agree, agree, doubt, disagree, and strongly disagree. For the likert scale, the score ranges from 1 to 5 could be seen in the following table:

**TABLE 5**  
**CATEGORY SCORE OF STUDENT’S SELF ESTEEM QUESTIONNAIRE**

No	Answer	Positive Score	Negative Score
1	Strongly Agree	5	1
2	Agree	4	2
3	Doubt	3	3
4	Disagree	2	4
5	Strongly Disagree	1	5

Adopted from Sugiyono (2016:93)

**c. Specification of Student’s Self-Esteem Questionnaire**

Based on the conceptual definition and the operational definition as discussed above, the specification of self esteem questionnaire can be illustrated in the following table.

**TABLE 6**  
**SPECIFICATION OF STUDENT’S SELF ESTEEM QUESTIONNAIRE**

<b>Variable</b>	<b>Aspects</b>	<b>Indicators</b>	<b>Positive Item</b>	<b>Negative Item</b>	<b>Total</b>
Self-Esteem	Global Self-Esteem	Global self-esteem refers to overall personality evaluation of self-assessments about themselves.	1, 3,5,7,9	2,4,6,8,10	10
	Specific Self-Esteem	Specific self-esteem is a better predictor of behavioral outcomes and actual performance on the concept attainment test. Specific self-esteem has a strong effect on school performance; moreover, having a good specific self – esteem is needed for students to acquire second or foreign language.	12,14,16,18, 20,22,24,25	11,13,15,17, 19,21, 23	15
	Task Self-Esteem	In the educational domain, task self-esteem relates to particular tasks within specific situations which focus on one special subject area.	26,27,29,31, 33,35,37,39	28,30,32, 34,36,38, 40	15
Total number of test instrument			21	19	40

Adopted from Brown (as cited in Gustaman, 2015, p. 122)

### 3.3.3 Validity of the Instrument

Validity is needed in research to know that the instrument is used in the research must be in accordance with the measurement instrument self esteem questionnaire or not. According to Cohen, Lawrence and Keith (2000, p. 105), validity is based on the view that it is essentially a demonstration that a particular instrument in fact measures what it purported to measure. In addition, Arikunto (2013, p. 211) states that validity is a measure that show the level of validity of an instrument and instrument can be said valid if it is able to measure what is desired.

The researcher use construct validity for que and writing ability test, while content validity for questionnaire self esteem and writing ability test. According to Sugiyono (2016, p. 125) construct validity is validity which the researcher used opinions from expert (experts' judgment). In this case, the expert judgment is the validator of the researcher, the instrument is constructed based on theory, consult with the expert, and then continue with tryout to student out of the sample. Content validity that is used in test, it is done by compared between content instruments with material of the lesson that have been taught (Sugiyono, 2016, p. 129). The way was the researcher consulted on aspects of the instrument, then the researcher asked the opinion of both experts about the instrument that has been made. The Experts of this research is lecturers of English Department, they are Mrs. Dewi Sartipa, M.Pd and Mrs. Rulik Setiani, M.Pd. The reseacher used the method to measure the content validity of the test is calculated with the *Product Moment Formula* (Arikunto, 2010:213) . The formula is as follows:

$$r_{xy} = \frac{N \sum xy - (\sum x)(\sum y)}{\sqrt{\left\{N \sum x^2 - (\sum x)^2\right\} \left\{N \sum y^2 - (\sum y)^2\right\}}}$$

Description:

$r_{xy}$	= Correlation coefficient of variable X and Y
$\sum xy$	= the sum of the products of X and Y
$\sum X$	= the sum of X scores
$\sum Y$	= the sum of Y scores
$\sum X^2$	= the sum of square of X score
$\sum Y^2$	= the sum of square of Y score
$(\sum X^2)$	= the sum of squared X scores
$(\sum Y^2)$	= the sum of squared Y scores
N	= the number of respondent

Criteria of validity test is the calculation result of  $r_{pbis}$  ( $r_{score}$ ) is consulted by  $r_{table}$  score of product moment, if  $r_{score} > r_{table}$ . So the item test is valid.  $R_{score}$  is shown with the table of interpretation as follows:

**TABLE 7**  
**INTERPRETATION  $r_{score}$**

<b><math>r_{score}</math></b>	<b>Interpretation</b>
0.000 – 0.1999	Very low
0.200 – 0.399	Low
0.400 – 0.599	Enough
0.600 – 0.799	High
0.800 – 1,000	Very high

### 3.3.4 Reliability of the Instrument

Reliability is something that can be quite reliable if the instrument can be used as a tool to measured and collect data at different places and times and still show similar or not

much different results. In additional, according to Arikunto (2013, p. 221) reliability means that an instrument can be believed to be as tool to collect the data because the instrument has been good and although the data is taken many times the results will be similar or consistent. According to Setiyadi (2006, p. 16), reliability is consistency of measurement or how far the measurement can measure the same subject in different times but show the similar result, the reliability of instrument in this research uses alpha formula (Arikunto, 2006:196) to measure self esteem as the following:

$$r_{11} = \left( \frac{k}{(k-1)} \right) \left( 1 - \frac{\sum \sigma_b^2}{\sigma_t^2} \right)$$

Description:

$r_{11}$  = coefficient of reliability

$k$  = number of items or number of questions

$\sum \sigma_b^2$  = number of items variance

$\sigma_t^2$  = total variance

To measure about the reliability of writing ability test instrument, the researcher can use Product Moment and Spearman Brown formula, the scores of the test is categorized become odd even fissure.

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

Notes :

$r_{xy}r_{xy}$  : The coefficient correlation between x and y

XY : total subject of x and y

X : total number of x score (odd items)

Y : total number of y score (even items)

$X^2$  : the sum square of variable x

$Y^2$  : the sum of square variable y

N : the total of sample

A criterion of reliability test is a result of  $r_{11}$  ( $r_{\text{count}}$ ) calculation is compared to value  $r_{\text{table}}$  score with the significant scale 5%. If  $r_{\text{count}} > r_{\text{table}}$  so that the test instrument are reliable.

To know how far the reliability, we can see from interpretation as follows:

**TABLE 8**

**THE CRITERIA OF RELIABILITY INTERPRETATION**

Score	Description
0.800 $\frac{3}{4}$ 1.000	Very High
0.600 $\frac{3}{4}$ 0.800	High
0.400 $\frac{3}{4}$ 0.600	Moderate
0.200 $\frac{3}{4}$ 0.400	Low
0.000 $\frac{3}{4}$ 0.200	Very low (Not Reliable)

### 3.4 Data Collecting Technique

According to Sugiyono (2016, p. 137) data collection can be done in various setting, sources, and ways, and data collection techniques can also be done by interview, questionnaire, using test, and observation. The researcher uses test and questionnaire as a technique to collect the data. Therefore, in conducting data, the researcher has writing ability

test by writing narrative text. While, for questionnaire of self-esteem, the researcher make 40 items questionnaire.

### **3.5 Data Analysis**

Analyzing data is needed after the data is collected. According to Sugiyono (2016, p. 147) data analysis is grouping data based on variable and type of respondent, tabulating data based on variable from all respondents, presenting data for each variable is researched, performing calculation to answer the formulation of the problem, and performed calculation to the test proposed hypothesis. The data analysis is begun by calculating normality test and homogeneity test. Then, the researcher uses parametric test statistic analysis in the research.

#### **3.5.1 Parametric Test Statistic Analysis**

According to Setiyadi (2006, p. 165) there are some significance that must be concerned for analyzing the data in order we can choose appropriate kind of analysis. First, the researcher must understand how many levels of independent and dependent variables of each variable itself. Second, the researcher has to know the kinds of comparison that we want to achieve. Third, the researcher has to identify the normal data, ordinal and interval data or not. Fourth, the researcher must look at the distribution of the data, whether the data is normally distributed and the average value uses the mean or median.

Setiyadi (2006, p. 165) state that statistic parametric analysis method is the test that used to analyze the quantitative data by having assumption that the data have normal distribution so that it will be found the mean and standard deviation. In addition, according to Sugiyono (2016, p. 150) parametric statistic require many assumptions to be fulfilled, the main assumption is that the data to be analyzed must be normally distributed. Therefore, to

determine whether or not there is any correlation between two variables, the researcher uses normality test as the first step in analyzing data.

### 3.5.2 Normality Test

Normality test is used to know whether the data have normality distribution or not. Normality test is one of the requirements in doing an analysis of parametric statistic method. In other words, if the data have normal distribution so analysis of parametric statistic method can be used, if the data have no normal distribution so analysis of parametric statistic method can not be used (Setiyadi, 2016, p. 165).

In this research, the data must be normality distributed. Sudjana (2005, p. 466) state that to measure the normality data uses the Lilliefors's formula. In this way, it is used the statistical formula of Lilliefors's, the test criteria were:

$H_0$  is accepted if  $L_{count} < L_{table}$  (distribution of the data is normal)

$H_0$  is rejected if  $L_{count} > L_{table}$  (distribution of the data is not normal).

The steps are : Determine the standard number using the formula

Determine the standard number by using the formula:

$$Z_i = \frac{x_i - \bar{x}}{S}$$

$Z_i$  = standard number

$x_i$  = score which are gotten

$\bar{x}$  = *average*

$S$  = standard deviation

Determine opportunity each standard numbers with the formula:

$$F(Z_i) = P(Z \leq Z_i)$$

Determine the proportion by using the formula:

$$S(Z_i) = \frac{\text{Numbers } Z_1, Z_2 \dots Z_n \text{ that } \leq Z_i}{n}$$

Calculate absolute price using the formula:  $F(Z_i) - S(Z_i)$

Determining the largest absolute value which is called  $L_{\text{observed}}$ , and then compare  $L_{\text{observed}}$  with  $L_{\text{table}}$ . Normal criteria;  $H_0$  is accepted if  $L_{\text{observed}} < L_{\text{table}}$  so the group have normal distribution.

### 3.5.3 Homogeneity Test

Homogeneity test is measurement that can be used to determine a data variation. It is used to know whether the data homogeneous or not. Homogeneity test is one of requirements of analysis of parametric statistic method. Analysis of parametric statistic method can be used if the sample came from the same population, otherwise, if the sample does not come from the same population so parametric analysis method can not be used (Setiyadi, 2006, p. 165). According to Sugiyono (2016, p. 199) the formula homogeneity test is:

$$F = \frac{\text{the biggest variance}}{\text{the smallest variance}}$$

The testing criteria are as followed : If  $F_{\text{observed}}$  is higher than  $F_{\text{table}}$ , so the data is not homogenous, if  $F_{\text{count}}$  is smaller than  $F_{\text{table}}$ , so the data is homogenous.

### 3.5.4 Hypothesis Test

To measure about the correlation between two variables; self esteem and writing ability, the researcher uses product moment correlation formula. According to Arikunto (2013, p. 319) product moment correlation formula is as followed:

$$r_{xy} = \frac{N \sum xy - (\sum x)(\sum y)}{\sqrt{\{N \sum x^2 - (\sum x)^2\} [N \sum y^2 - (\sum y)^2]}}$$

Notes:

$r_{xy}$  : coefficient of correlation

N : total sample

$\sum xy$  : total x and y

x : the students' self esteem

y : the students ability in writing narrative text

$\sum x^2$  : the sum square of x variable

$\sum y^2$  : the sum square of y variable

The hypothesis that will be proved is:

$H_a$  is accepted if:  $r \neq 0$  (there is correlation)

$H_0$  is accepted if:  $r = 0$  (there is no correlation)

### 3.5.5 Significance Test

After analyzing the hypothesis test, in order to know how far the significance of the correlation between students' self esteem and their writing ability in narrative text, the researcher was used significance test (t-test). According to Ghazali (2018, p. 88) t-test is used to test the effect of each independent variable on the dependent variable. Supported by Sugiyono (2018, p. 223) t-test is a temporary answer to the problem formulation, which asks the relationship between two or more variables. The distribution of t formula by Sugiyono (2016, p. 184) as followed:

$$t = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}}$$

Note:

t : significance

r : product moment formula

n : sample

The testing criteria of significance test are if  $t_{\text{observed}}$  is higher than  $t_{\text{table}}$ , it can be concluded that correlation between X variable and Y variable is significance. However, if  $t_{\text{observed}}$  smaller than  $t_{\text{table}}$ , it can be concluded that the correlation between X variable and Y variable is not significance.