

CHAPTER III

METHODOLOGY

This chapter presents: (1) Correlational Research (2) research design, (3) research variables, (4) operational definitions, (5) subject of the study, (6) data collection, (7) data instrument analysis, (8) data analysis

3.1 Correlational Research

Correlation research provides an opportunity to predict score and explain the relationship among variables. Cohen, Manion, and Marrison (2007) state that correlation involves the collection of two sets of data, one of which will be restospective, with a view to determining the relationship between them. Meanwhile, Creswell (2012) states that in correlation research designs, investigation use the correlation statistical test to describe and measure the degree of association (or relationship) between two or more variables.

To understand how to study the relationship between two variables when both variables are quantitative, all of the researcher need a basic understanding of a correlation coefficient. According to Johnson and Christensen (2014), correlational coefficient is a numerical index that provides information about the strength and direction of the relationship between two variables. It provides information how variables are associated. More specifically correlation coefficient is a number that can range from -1 to 1, with zero standing for no correlation at all. If the number greater than zero, there is a positive correlation. If the number is less than zero, there is a negative correlation. If the number is equal to zero, there

is no correlation between the two variables. If the number is equal to +1.00 or equal to -1.00, the correlation is called perfect. Positive correlation is present when scores on two variables tend to move in the same direction while negative correlation is present when score on two variables tend to move in opposite direction as one variable goes up, the other tends to go down and vice versa.

The meaning of a given correlation coefficient can be seen below based on Cohen, Manion, and Marisson (2007).

Tabel 1 Level of correlation coefficient

Interval Coefficient	Level of Correlation
0.20 – 0.35	Weak
0.35 – 0.65	Fair
0.65 – 0.85	Strong
Over 0.85	Very Strong

Source “Cohen, Manion and Marisson (2007, p.635)

Based on the table above, it can be provided informations; first, correlation ranging from 0.20 to 0.35 show only very slight relationship between variables although they may be statistically significant. A correlation of 0.20 show that only 4% of the variance is common to the two measures. Second, correlation ranging from 0.35 to 0.65 are statistically significant beyond the 1% level. Third, correlation ranging from 0.65 to 0.85 make possible group predictions that are accurately enough for mostly aim. Last, correlations over 0.85 as indicate a close relationship between the two variables correlation. A correlation of 0.85 indicates

that the measure used for prediction has about 72% variance, with the performance being predicted.

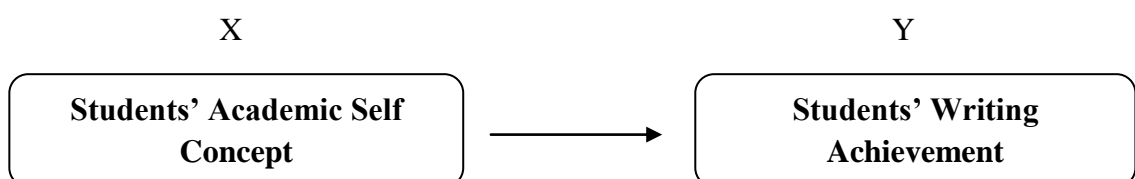
In a prediction design, I seek to anticipate outcomes by using certain variables as predictors. It helps to anticipate or forecast future behaviour. It is also to identify variable that will positively one or more predictor variables and criterion (or outcome) variable. It is supported by Creswel (2012), that a predictor variable is the variable used to make a forecast about an outcome being predicted.

3.2 Research Design

This research is a correlational research design that had determined the answer the objectives of the study. Those were finding out the correlation between students' academic self concept and their writing performance. According to Fraenkel, Wallen and Hyun (2012), correlational studies investigate the possibility of relationship between two variables, although investigations of more than two variables are common.

The procedure had been that, first; I identified the students' academic self concept by using questionnaire. Second, I obtained the students' writing test as the data of their writing performance. Next, I found out the correlation and influence among variables by using Pearson Product Moment and Regression. The research design is described in the following diagram.

Diagram 2 Research Design



3.3 Research Variables

A common and useful way to think about variables is to classify them as independent or dependent. According to Creswell (2012), a dependent variable is a variable that dependent on or influenced by the independent variable. Meanwhile, independent variable is an attributed or characteristic that influences or affects an outcome or dependent variable. In line with Bell, dependent variable is a variable that is simply measured by the reseacher. It is the variable that reflects the influence of the independent variable. Meanwhile, independent variable is a variable that is manipulated by the researcher. The independent variable is something that is hypothesized to influence the dependent variable (as cited in Holandyah, 2014, p. 171). In this research, independent variable was the students' academic self concept at SMP YP Swakarya Banyuasin, while the dependent variable was their writing performance.

3.4 Operational Definitions

To avoid the possibility of misinterpretation about some terms in this research, especially those used in the title, the definitions are provided . First, the word **correlation** as a statistical technique for showing the strength and direction of the relationship between two variable. Second, the term **academic self-concept** is a students' self perception and views of their academic ability formed through individual experiences and interactions with the environmenr which indicated by their perception, feeling and attitude. Third, **writing** is the process of thinking to invent ideas, thinking about how to express into good writing, and arranging the ideas into statement and paragraph clearly.

3.5 Subject of the Study

To get the data of study, this research needed a subject. The subject of the research was the ninth grade students of SMP YP Swakarya Banyuasin.

3.5.1 Population

Population is the largest group to which one hopes to apply the result. Population is a [group](#) of [individuals](#) who have the same characteristic (Creswell, 2012, p.142). According to Fraenkel, Wallen, and Hyun (2012), population is the group of interest to the research, the group to whom the research would like to generalize the result of the study. The population of this research was all the ninth grade students of SMP YP Swakarya Banyuasin. There was six classes which were set as a population of the research. The total number of six classes in SMP YP Swakarya Banyuasin consists of 126 students in academic year 2018/2019. The population of this research is presented in the table of population as followed.

Table 2 Population of the Study

No	Class	Total
1	IX.1	20
2	IX. 2	20
3	IX. 3	20
4	IX. 4	20
5	IX. 5	25
6	IX. 6	21
Total		126

3.5.2 Sample

Sample is one of the most important steps in the research process to selection the sample of the individuals who will participate (Fraenkel et al., 2012). According to Creswell (2012), sample is also subgroup of the target population that the researcher plans to study for generalizing about the target population.

The sample of this research was taken by using purposive sampling method (judgmental sampling). Purposive sampling is nonrandom sampling technique in which the researcher solicits persons with specific characteristic to participate in a research study (Johnson & Christensen, 2012, p.231). I used IX.A and IX.B students of SMP Swakarya because this classes had average score in english so that I was easier to know the level of the students writing performance. The sample of the research is presented in table of sample as followed.

Table 3 Sample of the study

No	Class	Total
1	IX. A	25
2	IX. B	21
Total Sampel		46

Source : Administration of SMP YP Swakarya Banyuasin 1 years 2017/2018

The total of the sample were 46 students of the ninth grade students of SMP YP Swakarya Banyusian. 42 students participated in this study, and the others were absent when this study was being conducted.

3.6 Data Collection

Data as information obtained in a course of a study. To support this research, I used two instruments to get the data. The instruments were:

3.6.1 Questionnaire

Questionnaire is a set of questions on a topic or group of topic designed to be answered by a respondent. Questionnaire is also a form used in a survey design that participants in a study complete and return to the researcher (Creswell, 2012, p. 382). The participant chooses answer the questions and supplies basic personal or demographic information. The questionnaire was used to measure students' academic self concept (See Appendix A). I gave the questionnaire to obtain students' academic self cocnept and to gain the information whether or not students' academic self concept influences students' writing performance.

I used ready made questionnaire by Reynold, Remirez, Magrina and Allen (1980) and further validated by Reynolds (1988). The questionnaire consists of 40 items, based on the seven domains of academic self concept. Reynolds tentatively named the seven factors as grade and effort dimension (8 items), study habits (6 item), peer evaluation of academic ability (8 item), self confidence in academic (3 item), satisfaction with school (4 item), self doubt regarding ability (8 item), and self evaluation (3 item). The academic self concept questionnaire specifications is described in the following table.

Table 4 Academic Self Concept Questionnaire Specifications

No	Aspect (s)	Number of Statement	Total Item
1	Grade and effort dimension	2, 3, 4, 7, 8, 15, 25, 33	8 Items
2	Study habits	22, 27, 29, 34, 38, 40	6 Items
3	Peer evaluation of academic ability	6, 9, 13, 17, 28, 32, 36, 37,	8 Items
4	Self confidence in academic	10, 16, 23	3 Items
5	satisfaction with school	1, 20, 31, 35	4 Items
6	Self doubt regarding ability	5, 11, 14, 21, 24, 26, 30, 39	8 Items
7	Self evaluation	12, 18, 19	3 Items

Source : Reynolds (1980, p. 114)

Moreover, the questionnaire consists of four possible responses to each statement ranging from 1 “strongly disagree” to 4 “strongly agree”, with positive and negative statement. The specification of positive and negative statements is described in the following table.

Table 5 The Specification of Positive and Negative Statements

Statement	Item in the Questionnaire	Total	Responses	Score
Positive	1, 2, 3, 6, 7, 9, 10, 13, 15, 16, 17, 20, 23, 25, 27, 28, 29, 30, 31, 32, 33, 36, 37	22 Item	Strongly Agree	4
			Agree	3
			Disagree	2
			Strongly Disagree	1
Negative	4, 5, 8, 11, 12, 14, 18, 19, 21, 22, 24, 26, 30, 34, 35, 38, 39, 40	18 Item	Strongly Agree	1
			Agree	2
			Disagree	3
			Strongly Disagree	4

Source : Reynold (1980, p. 115)

3.6.2 Writing Test

To obtain students' academic self concept, I used writing test especially descriptive text in collecting the data of students' writing skill. The writing consists of 3 item. The analysis scoring rubric for writing test as cited from Brown (2007). There were five items to measure the students' writing achievement, they are; Content (30%), Organization (20%), Grammar (20%), Vocabulary (15%), Mechanics (15%). It needed more than one raters or judges to assess students' writing achievement (see Appendix C).

3.7 Data Instrument Analysis

There are two steps which examined; validity and reliability test. I used ready made instrument which have been developed by expert. Seliger and Shohamy (2001) state that using ready made instrument is more advantageous than developing a new procedure for which information regarding reliability and validity is available.

3.7.1 Validity Test

Validity is the development of sound evidence to demonstrate that the test interpretation matches its proposed (Creswell, 2012, p.159). According to Kothari (2004), validity is the most critical criterion and indicates the degree to which an instrument measure what it is supposed to measure. It means that validity test is used to measure whether the instruments are used valid or not. There were two validity in this research, that are validity of questionnaire and validity of writing comprehension test.

3.7.1.1 Validity of the Questionnaire

In this research, I used ready made questionnaire namely Academic Self Concept (ASCS) developed by Reynold, Ramirez, Magrina and Allen (1980) and Futher validated by Reynold (1998). Therefore, it did not need to be tried out first. I was translate the questionnaire into Indonesia, because it made the students more understand. Futhermore, I used construct validity for clarify the translation of the questionnaire.

3.7.1.2 Validity of Writing Achievement Test

In this research, there were two kinds of validity test to be administred for each instrument, they are as follows.

3.7.1.2.1 Construct Validity

Construct validity test is the most complex and abstract. Cohan (2005) state that a construct is an abstract; this separates it from the previous types of validity which dealt in actualities defined content. Meanwhile, Sogiyono states that expert judgments required to estimate the construct validity. After constructing the instruments measured, then it is consulted to achieve some expert judgments from at least three validators to evaluate whether the components of the instrument are valid or not to be applied in research activities (as cited in Holandyah, 2014, p.29).

Therefore, there are some characteristic for expert judgements or validators, such as (1) at least have 5 years teaching experience (2) hold master degree (3) have a TOEFL score at least 550. In relation to the explanation above, I

asked three validators to evaluate writing performance of the ninth grade students of SMP YP Swakarya Banyuasin.

3.7.1.2.2 Content Validity

Content validity is very important since it is an accurate measure of what it is supposed to measure. To demonstrate this form of validity the instrument must show that it fairly and comprehensively covers the domain or items that it purports to cover (Cohan et al., 2005). According to Hughes, a test is said to have content validity if its content constitutes a representative sample of the language skill, structures, etc. A specification of the skills or structures should be made based on the curriculum and syllabus. The result of content validity including : objectives of the test, text's title, test indicator, number of the test item, total of the questions, type of the test and answer key (as cited in Holandyah, 2004, p.48-49). The specification of the test is described in the following table.

Table 6 Test of Specification Table

Objectives	Tes Material	Indicators	Type Of Test
The students are able to write an essay in form of descriptive text	Descriptive Text	<ul style="list-style-type: none"> The students are able: <ul style="list-style-type: none"> - To complete an essay text in descriptive form - To Arrange the sentences into meaningful text - to write an essay text in descriptive form 	Writing Test

3.7.2 Reliability Test

Reliability refers to the consistency of score or an swers provided by an instrument. Reliability refers to the consistency of scores or answer from one administration of an instrument to another, and from one set of items to another (Frankel, Wallen, & Hyun, 2012, p.112). Meanwhile, Fraenkel et al. (2012) state that when used to check reliability of scores, the coefficient should be at least 0.70, preferbaly higher. In this research, there were two reliability of the instruments; reliability of the questionnaire and reliability of writing comprehension test.

3.7.2.1 Reliability of the Questionnaire

The reliability of the questionnaire did not check because the author of the questionnaire had chacked the reliability which had examined by Cronbach's Alpa. According to Fraenkel et al. (2012), Cronbach's Alpa is a mesure of internal consistency of items that are not scored right versus wrong, as in some essay test where more than one answer is possible. To check the reliability of the questionnaire by Reynold, Remirez, Magrina and Allen (1980) used Test-retest reliability technique which was brought out by using SPSS to find out the internal consistency reliability of the questionnaire. Internal consistency of Cronbach alpha is 0.91 (high reliable), besides the questionnaire is reliable.

3.7.2.2 Reliability of Writing Achievement Test

To analyze the realiability test on the students' writing achievement, it needs two or more raters (judges) which is called "inter-rater reliability". According to Brown, Interrater reliability is essentially a variation of the

equivalent forms type of reliability in that the scores are usually produced by two raters and a correlation coefficient is calculate between them (Herlina & Holandyah, 20015, p. 116). In this research, I used intraclass correlation coefficients to see the consistency of the writing test.

3.8 Data Analysis

After all the instruments have been tested, there were 3 parts to be done. They were data instrumen analysis, pre-requisite analysis and hypothesis testing.

3.8.1 Data Instrument Analysis

3.8.1.1 Questionnaire Analysis

In analysis the students' academic self concept, I collected the data by using questionnaire. I calculated the students' score and compare it with the mean and standars deviations of score of the questionnaire by using descriptives statistics formula. Then, I determined whether the students have high characteristic and vice versa. The result of students' academic self concept was classified in case of analyzing frequency and percentage. The interval score is described in the following table

Table 7 The Catagory of Academic Self Concept Scale

Score Interval	Category
121 – 160	High
81 – 120	Average
40 – 80	Low

3.8.1.2 Writing Achievement Analysis

To analysis the students' writing achievement, I used the writing test. The writing consists of four possible point to each item, the highest score is 4 and the lowest score is 1. After the all scores of the students writing test obtained, the percentage range and qualifications as students' interval score from administration of SMP YP Swakarya Banyuasin used. The classification of the writing achievement is described in the following table

Table 8 The Classification of Students' Writing Achievement

Score Interval	Category
86 – 100	Very Good
71 – 85	Good
56 – 70	Fair
41 – 55	Poor
0 – 40	Very Poor

3.8.2 Pre-requisite Analyses

In pre-requisite analyses, it deals with normality and linierity test to see whether the obtained data is normal and linier for each variable.

3.8.2.1 Normality Test

Normality test is used to measure whether the obtained data normal or not. The data can be classified into normal when the output is higher than mean significant difference at 0.05 level (Sugiyono, 2007 p.85). In this research, the normality test used to find out whether tha data of self concept and writing tes are normal or not. When the data are normal, the result of the normality test can be

generalized of the population. Furthermore, in measuring normality test I-Sample Kolmogorov-Sminovin SPSS 23 would be apply. If p-value is higher than 0.05, the data are normal to distribute.

3.8.2.2 Linearity Test

Linearity test aims to determine whether each variable or data have a linier relationship or not. In this research, linearity test conducted to know whether the data of academic self concept and writing performance test is linear or not. In measuring linearity test, I applied linearity test in SPSS 23 to see if the data is linear or not. If the score is higher than 0.05, it means that each variable is linier, but if less than 0.05 then regression analysis cannot be continue.

3.8.3 Hypothesis Testing

The result of hypothesis testing from statistical calculation using SPSS application program are described as follows.

3.8.3.1 Measuring the Correlation between Students' Academic self concept and Writing Achievement

Correlation is used to determine the closeness and direction of relationship between the variable. To find out there is or no a significant correlation between academic self concept and writing performance, this research used Pearson Pruduct Moment Correlation Coefficient which is examined by SPSS. A significant correlation is found whenever p-value is lower than 0.05

3.8.3.2 Measuring the Influence between Students' Academic self concept and Writing Achievement

To find out the influence between academic self concept and writing performance, I used Simple regression analysis. The score of academic self concept and writing test was calculated by using SPSS ver.23. then, the significant influence will be found if R^2 is equal to 0.05