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CHAPTER III

RESEARCH METHOD

A. Design of the Research

The type of this research is correlational research. "It involves collecting data to determine a relationship between two or more quantifiable variables", (Gay and Airasian: 2012:204). It is a statistical test to determine the tendency or pattern for two (or more) variables or two sets of data to vary consistently. In the case of only two variables, this means that two variables share common variance, or they co-vary together (Creswell, 2008:338). Then, there are two variables designed; sophomores' autonomous learning of writing which was "X" or known as the independent variable, and the dependent variable or "Y" which is sophomores' writing ability.

Meanwhile, this type of quantitative research design which the researcher used was to determine if there is a correlation between sophomores' autonomous learning of writing and their writing ability particularly in narrative text and how the degree of both variables is.

B. Time and Location of the Research

This research was conducted starting from January until March 2017 in 2017/2018 of academic year. Furthermore, this was also conducted at State Senior High School 5 Pekanbaru and it was located at Bawal No. 43, Wonorejo, Marpoyan Damai, Pekanbaru, Riau.

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C. Subject and Object of The Research

The subject was sophomores of State Senior High School 5 Pekanbaru in 2017/2018 academic year. Meanwhile, the object was autonomous learning of writing

in connection with writing ability.

D. Population and Sample of the Research

1. The Population

It was the sophomores. It had 10 classes consisting of 6 classes of Science Department amounted to 242 students and other 4 classes of Social Department amounted to 160 students. Thereby, there were 402 students counted in State Senior High School 5 Pekanbaru of 2017/2018 academic year.

> Table III.1 The Total Population

No	Class	Number of Populations		
1	XI Science 1	40		
2	XI Science 2	40		
3	XI Science 3	40		
4	XI Science 4	40		
5	XI Science 5	40		
6	XI Science 6	42		
7	XI Social 1	40		
8	XI Social 2	40		
9	XI Social 3	40		
10	XI Social 4	40		
Total		402 sophomores		

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2. The Sample

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After designing on how this research should be conducted. Hence, a group of sample was necessarily taken in order to delegate the population appropriately. "A sample is a group of individuals, items, or events that represents the characteristics of the larger group from which the sample is taken and the process of selecting a sample is known as sampling", (Gay and Airasian, 2000:129).

The researcher actually coped with school administrative approval regulations which the school principle only allowed the researcher to take few classes to obtain the representative data or sample, on that ground, the researcher used one of non-probability sampling; namely convenience sampling; "selecting participants because they are willing and available to be studied and the sample can provide useful information for answering questions and hypotheses", (Creswell, 2012: 145-146).

The researcher decided to examine this group at this one school because they were available and because the researcher had the permission of the principal and could gain consent from the sophomores by the teacher to participate in the study, and researcher had 2 classes under the teacher. Yet, the researcher desired to have 30 respondents as a research size since the beginning of preliminary research due to analyzing 30 samples would lightly be much easier. To each of 2 classes, the researcher had the chosen sophomores volunteered to the number of 15 participants. Clearly, it is tabled below:

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Table III.2
The Total Selected Samples

No	Class	Numbers of Sophomores		
1	XI Science 6	15		
2	XI Social 1	15		
Total		30 Participants		

Emphatically, Nasution (2003) in Riduwan stated that the quality of a study is not always determined by the large number of the sample, but it can be determined by the theories, study design, quality of conducting and analyzing (2008: 240). And, according to Roscoe in her book of Research Methods for Business (1982:253), a decent measurement in a research sample is 30 to 500 samples (cited in Sugiono, 2012:131). Additionnally, "some researchers cite of 30 samples as guideline for correlational, causal comparative, and true experimental research. For correlational studies, at least 30 participants are needed to establish the existence or nonexistence of a relation", (Gay and Airasian, 2012:139). Cited in Cohen, et all, (2007:102), Borg and Gall (1979: 194–5) suggest that correlational research requires a sample size of no fewer than thirty cases. And approximately 30 participants for a correlational study that relates variables (Creswell, 2008: 146). In sum, then 30 samples were used in this research.

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E. Technique of Collecting the Data

Two forms of instruments were applied to collect the data, as follow:

1. Questionnaire

As the first instrument used, questionnaire, as cited in Cohen, et all, 2007:317, is a widely used and useful instrument for collecting survey information, providing structured, often numerical data, being able to be administered without the presence of the researcher, and often being comparatively straightforward to analyze (Wilson and McLean, 1994).

Moreover, questionnaires are forms used in a survey design that participants in a study complete and return to the researcher. Participants mark answers to questions and supply basic, personal, or demographic information about themselves (Creswell, 2008: 626).

In this research, the adapted questionnaire is The Nine Factors of Learner Autonomy in Writing from Yeung. M, 2016:127-128. This questionnaire has been also accustomed and also costumized by the researcher due to particular need in collecting the research data appropriately.

On the other hands, the questionnaire comprises of 32 questions describing six indicators related to autonomous learning of writing that is mapped below:

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Table III.3

Blue Print of Sophomores' Autonomous Learning of Writing

No	Indicators	Item Number
а¬ni	Autonomous learning of writing is a form of aid for students to improve their English writing ability.	1, 2, 3, 4, 5, 6, 7
2	The students can identify what is being taught is students' ability to well understand every relation of each process of Learning English writing.	8, 9, 10
3	The students are able to formulate own learning objectives is an addition to enhance students' writing ability.	11, 12, 13, 14, 15
s k4 R	The students select and implement appropriate strategies; technique or additional learning opportunity is students' contribution to upgrade their writing ability.	16, 17, 18, 19, 20, 21, 22, 23
ia 5	The students can monitor and re-customize the effectiveness of strategies applied are students' necessity to see the progress of their English writing.	24, 25
6	The students consult to teachers or peers and ask the feedback as an evaluation of their English writing.	26, 27, 28, 29, 30, 31 32.

2. Test

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In addition, a test was also used to obtain the data, according to Cohen et al (2007: 421), test is subject to item analysis. Here, the test is writing. And, to measure students' ability in writing. The students were instructed to write a narrative story.

Then, to find out result of the test, it was measured based on Assessment Rubric of Writing by Jacobs, et al, 2002 as cited in Weigie, 2002:116 (see Appendix).

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F. Validity: Questionnaire and Test

In analyzing sophomores' autonomous of writing questionnaire; internal validity was used on SPSS 16.0 program. The researcher compared r value to r_{t} . The r_t at the significant level of 5% is 0.3061 (d = N-2 = 28). The r value of each \subseteq item should be higher than the r_t to be considered as a valid question. If the r value $\frac{C}{C}$ on the analysis of less than r table, it can be concluded that these items are not significantly correlated with the total score (resulting invalid) and must be removed or corrected. Afterwards, the result of questionnaire as follows:

> Table III.4 Validity of the Questionnaire

ſ	values of the Questionnaire							
	Item	r Item	r Table	Status	Item	r Item	r Table	Status
	Item 1	0.55	0.361	invalid	Item 17	0.554	0.361	valid
	Item 2	0.53	0.361	invalid	Item 18	0.665	0.361	valid
	Item 3	0.476	0.361	valid	Item 19	0.638	0.361	valid
	Item 4	0.597	0.361	valid	Item 20	0.570	0.361	valid
	Item 5	0.513	0.361	valid	Item 21	0.538	0.361	valid
	Item 6	0.553	0.361	valid	Item 22	0.705	0.361	valid
State	Item 7	0.574	0.361	valid	Item 23	0.630	0.361	valid
lte	Item 8	0.563	0.361	valid	Item 24	0.495	0.361	valid
S	Item 9	0.601	0.361	valid	Item 25	0.544	0.361	valid
lami	Item 10	0.424	0.361	valid	Item 26	0.541	0.361	valid
nic	Item 11	0.594	0.361	valid	Item 27	0.574	0.361	valid
	Item 12	0.838	0.361	valid	Item 28	0.495	0.361	valid
niv	Item 13	0.516	0.361	valid	Item 29	0.477	0.361	valid
er	Item 14	0.488	0.361	valid	Item 30	0.483	0.361	valid
versity	Item 15	0.577	0.361	valid	Item 31	0.672	0.361	valid
	Item 16	0.420	0.361	valid	Item 32	0.637	0.361	valid
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Form the table III. 6 above, it is previewed that the questionnaire items consist 230 items resulting valid but other 2 items were invalid. To this end, the instrument which could be used in this research was 30 statements of items.

In addition to analyzing the test of writing, the researcher used 2 types of validities. Namely, construct validity; the degree to which a test measures an intended content area. (Gay and Airasian, 2012:163). Or it is a determination of the significance, meaning, purpose, and use of scores from an instrument, (Creswell, 2012:618). And content validity; the degree to which a test measures an intended content area, (Gay and Airasian, 161), and according to Creswell (2012:163), it is evidence of an analysis of the test's content (e.g., themes, wording, format) and the construct it is intended to measure and to examine logical or empirical evidence (e.g., syllabi, textbooks, teachers' lesson plans).

Following that, the test of narrative writing was given and taken based on Standard Based Curriculum (*KTSP*) syllabus material of sophomores of State Senior High School 5 Pekanbaru. And also, to have the test result, the researcher used inter-raters scoring (see Writing test reliability, table III. 9) and based on Jacobs' assessment table (see Appendix).





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G. Reliability: Questionnaire and Test

According to Creswell (2012:627), reliability means that individual scores from an instrument should be nearly the same or stable on repeated administrations of the instrument and that they should be free from sources of measurement error and consistent. Clearly, determines the quality of our measurement instruments, (Muijs, 2004:71).

Meanwhile, Internal Consistency Reliability is "the extent to which items in a single test are consistent among themselves and with the test as a whole. It is measured through three different approaches: splithalf, Kuder-Richardson, or Cronbach's alpha. Each provides information about items in a single test that is taken only once. Because internal consistency approaches require only one test administration", (Gay and Airasian, 2012:167). More to that, "An alternative calculation of reliability as internal consistency can be found in Cronbach's alpha, frequently referred to simply as the alpha Coefficient of reliability. The Cronbach alpha provides a coefficient of inter-item correlations, that is, the correlation of each item with the sum of all the other items", (Cohen, et al, 2007: 506).

Therefore, this form of reliability is only applicable to instruments that have more than one item as it refers to how homogeneous the items of a test are or how well they measure a single construct. When developing our self-concept scale, for example, we could first see whether the seven subscales we hypothesis exist and are measured by the variables we thought they would be (testing construct validity). Then for each subscale we can look at whether the items measure it in a

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reliable, internally homogeneous way. (Muijs, 2004:73). To be sure, the researcher had internal consistency reliability applied in this research and Cronbach alpha measured in his research.

In order to know how reliable the instruments were, the alpha coefficient the following guidelines can be used, as shown on the table below (cited Cohen, et al, 2007:506);

Table III.5
The Level of Reliability

No	Reliability	Level of Reliability		
1	>0.90	very highly reliable		
2	0.80-0.90	highly reliable		
3	0.70-0.79	reliable		
4	0.60-0.69	marginally/minimally reliable		
5	< 0.60	unacceptably low reliability		

In order to obtain the result value of reliability received, the researcher used SPSS 16.0 program to process. And, there are two reliability check done in the research; Questionnaire reliability and Writing Test reliability. As it explained below:

i. Questionnaire Reliability

Table III.6
Reliability Statistics of X Variable; Questionnaire

Cronbach's Alpha	N of Items
0.921	32

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The Questionnaire reliability based on the Cronbach's Alpha was resulting 0.921 where was valued more than 0.90 from the table III.8. In conclusion, by this identification, the reliability of the questionnaire was very highly reliable.

ii. Writing Test Reliability

Surely, the researcher used inter-rater reliability formula; "a procedure used when making observations of behavior. It involves observations made by two or more individuals of an individual's or several individuals' behavior. The observers record their scores of the behavior and then compare scores to see if their scores are similar or different, (Creswell, 2012:161). This becomes important where we use more than one judge to look at a situation, such as where we have several classroom observers doing classroom observations. We would then want our observers to give the same rating to an event they had all observed, (Muijs, 2004:73).

In other words, there were two of raters decided to score students' ability in writing narrative. Then, both of two raters' scores calculated and compared in order to find out the scores were similar or not. Then, to find out the reliability between two of raters' scores, the inter-correlation of the test used in finding the test reability, and the result shown below:

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Table III.7 Reliability Statistics of Y Variable; Writing Test

Cronbach's Alpha	N of Items
.874	2

The Writing test reliability based on the Cronbach's Alpha was resulting

_0.874 where was valued in between 0.80-0.90 from the table III.9. In conclusion,

by this identification, the reliability of the writing test of scoring result from Rater

1 and Rater 2 were very reliable.

H. Technique of Data Analysis

In order to find out whether there was a significant correlation between sophomores' autonomous learning of writing and their writing ability, the data were analyzed by using statistical formula. The researcher used the score of questionnaire as Variable X and the writing test score as variable Y.

In determining what type of correlation formula to be used, the researcher started with knowing the data distribution whether or not it is normal. Therefore, normality test is used. The normality of data can be done by parametrical analysis. The following table shows the normality test for variable X "sophomores' autonomy of learning writing" and variable Y "sophomores' ability in writing." Both of variable data was analyzed by using SPSS 16.00 program as tabled below:



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Table III.8

Normality Test

One-Sample Kolmogorov-Smirnov Test between

Sophomores' Autonomous Learning of Writing and Writing Ability

sophomores rationom	Williams and Williams Homey			
		Autonomy	Writing	
N	30	30		
Normal Parameters ^a	Mean	75.0000	70.7000	
	Std. Deviation	8.84736	9.07498	
Most Extreme	Absolute	.145	.200	
Differences	Positive	.145	.111	
	Negative	063	200	
Kolmogorov-Smirnov Z	.794	1.096		
Asymp. Sig. (2-tailed)	.554	.181		
a. Test distribution is N				

For normality test, if the significance level (Asymp. Sig) > 0.05, the data distribution is normal. From the table above, it was found that the asymp.sig value of sophomores' autonomous learning of writing was 0.554 and students' ability in writing was 0.181. This means that the data distribution was normal then the analysis of correlation for sophomores' autonomous learning of writing and their writing ability can proceed.

Meanwhile, to analyze the correlation between sophomores' autonomous learning of writing and their writing ability, the researcher used Pearson product-moment correlation coefficient (r) technique on SPPS 16.0 program. The conclusion of the analysis was obtained by seeing the r value. Statically, the Hypotheses are (Riduwan, 2015:127):

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If r value > r table so, Ha is accepted or there is a significant correlation between the students' belief of autonomous learning of writing and their writing ability.

If r value $\leq r$ table so, Ho is accepted or there is no significant correlation between the students' belief of autonomous learning of writing and their writing ability.

Dilarang mengumumkan dan memperbanyak sebagian atau seluruh karya tulis ini dalam bentuk apapun tanpa izin UIN Suska Riau Pengutipan tidak merugikan kepentingan yang wajar UIN Suska Riau Pengutipan hanya untuk kepentingan pendidikan, penelitian, penulisan karya ilmiah, penyusunan laporan, penulisan kritik atau tinjauan suatu masalah