

## CHAPTER III

### RESEARCH METHODOLOGY

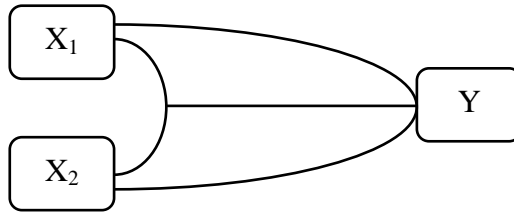
#### A. Research Design

This research discussed about the impact of parental income and home learning environment on children's academic performance at school at 5<sup>th</sup> grade students of State Elementary School 2 Banjardowo in the academic year of 2015/2016. The approximation method used in this research was quantitative. According to Juliansyah Noor, quantitative research is the method used to test certain theories by examining the relationship between the variables.<sup>1</sup> This research used correlational approach because the analysis on this study was to know the correlation and influence between independent variables (parental income and home learning environment) and dependent variable (children academic performance at school).

The researcher analyzed the data using two predictors regression analysis. The result of the analysis was interpreted to find out the impact of parental income and home learning environment on children's academic performance at school.

---

<sup>1</sup> Noor, Juliansyah, *Metodologi Penelitian*, Jakarta: Kencana, 2014.  
p. 38



$X_1$  : Parental Income

$X_2$  : Home Learning Environment

Y : Students' Academic Performance at School

## B. Time and Setting

The researcher would conduct the research at State Elementary School 2 Banjardowo. The researcher chosen this setting because most of the parents' profession are farmers and have different home learning environment. The researcher collected the data on November 28<sup>th</sup>, 2015 to December 3<sup>rd</sup>, 2015 about 5 days.

**Table. 2.1**

Procedure and Timeline of the Research

No	Activities	Preparation	Time
1	Preliminary visit		1 <sup>st</sup> day
2	Asking permission to Headmaster of the school	Research permission letter and Proposal	2 <sup>nd</sup> day
3	Contact the 5 <sup>th</sup> grade	Planning the	3 <sup>rd</sup> day

	teacher that will be researched	research of the class	
4	Questionnaire	Questionnaire list	4 <sup>th</sup> day
5	Documentation	Documentation list	5 <sup>th</sup> day

### C. Research Subject

According to Suharsimi Arikunto, population is all subject of the research.<sup>2</sup> While Sugiyono states that population is a generalization zone consisting of: object or subject that has certain qualities and characteristics defined by the researchers to be studied and then taken its conclusions.<sup>3</sup>

The population of this research was all students at 5<sup>th</sup> grade of State elementary school 2 Banjardowo in the academic year of 2015/2016 that consists of 31 Students.

While sample is part or representative of population which is observed.<sup>4</sup> Further Suharsimi Arikunto states that when the subject is less than 100, then it is better taken all the population as sample, so this research was the study of population because the population is not more than 100 respondents. However, if the subject is great or more than 100, it

---

<sup>2</sup> Arikunto, Suharsimi, *Prosedur Penelitian Suatu pendekatan Praktik*, Jakarta: Rineka Cipta, 2013. p. 173

<sup>3</sup> Sugiyono, *Statistika untuk Penelitian*, Bandung: Alfabeta, 2012. p.

<sup>4</sup> Arikunto, Suharsimi, *Prosedur Penelitian,,*, p. 174

can be between 10-15% or 20-25% or more.<sup>5</sup> Subject in this study was the 5<sup>th</sup> grade students of State Elementary School 2 Banjardowo in the academic year of 2015/2016 that consists of 31 Students.

**Table 2.1**

Table of Population

No	Name	Student Number
1	Bagas Dwi Yanto	2156
2	Diah Okvitasari	2159
3	Mohammad Fredi Prasetyo	2172
4	Adi Ragil Saputra	2195
5	Dimas Wahyu Pradana	2206
6	Doni Bagus Saputro	2208
7	Eko Bayu Sussilo	2209
8	Ivontri Khotimah	2215
9	Muhammad Evan Ardiyanto	2219
10	Nanda	2222
11	Rama Aditya Sukma Dendi	2224
12	Septhian Hartanto	2227
13	Titis Dian Susmita	2229
14	Abdul Nur Adzani	2237
15	Anjelita Dwi Maylia	2241
16	Bintang Surya Winata	2242
17	Deni Eko Kurniawan	2243
18	Desta Dimas Saputra	2244

---

<sup>5</sup> Arikunto, Suharsimi, *Prosedur Penelitian Suatu Pendekatan Praktik*, Jakarta: Rineka Cipta, 2006. p. 134

19	Devita Andiyani	2245
20	Eko Budi Utomo	2247
21	Elena Navani Wafa Nabila	2248
22	Habibu Rohman	2249
23	Ira Yula Ika Utami	2250
24	Krida Pandu Kinantaka	2253
25	Krisno Giri Bimantoro	2254
26	Muhammad Fajar Kurniawan	2256
27	Rifki Finanda	2259
28	Riska Rohmawati	2260
29	Trio Ahmad maulana	2261
30	Tri Dewi Sundari	2262
31	Rahmad Adi Perdana	2297

#### **D. Variable and Indicator**

Variable can be classified into four categories, namely: independent variable, dependent variable, moderator variable and intervening variable. In this research, there were two variables namely: independent and dependent variable.

##### **1. Independent Variable**

Independent variable is a variable that affects or causes the change of the dependent variable.<sup>6</sup> Independent variable in this research were parental income and home learning environment. The indicators are:

##### **a. Parental Income**

---

<sup>6</sup> Noor, Juliansyah, *Metodologi Penelitian*,,, p. 49

- 1) Sources of parental income.
  - 2) The classifications of parental income.
  - 3) The use of parental income: primary needs, secondary needs and tertiary needs.
- b. Home Learning Environment
- 1) The types of family condition.
  - 2) Home location.
  - 3) Family factors.
2. Dependent variable

Dependent variable is the main factor to be explained or predicted and influenced by several other factors.<sup>7</sup> Dependent variable in this research was children's academic performance at school. The data of children's academic performance was the score of learning achievement in the mid-test at 5<sup>th</sup> grade students of State Elementary School 2 Banjardowo in the academic year of 2015/2016.

## **E. Data Collection Technique**

In this research, the researcher will use questioner and documentation to collect the data.

### **1. Questionnaire**

Questionnaire is a technique of collecting data by distributing a list of questions to respondents in the hope of giving a

---

<sup>7</sup> Noor, Juliansyah, *Metodologi Penenlitian,,* p. 49

response to the questions.<sup>8</sup> There are two kinds of questionnaires:

- a. Open questionnaire: the questionnaire that the answer is not determined by the researcher, so the respondents can answer the questions using their own sentences.
- b. Close questionnaire: the questionnaire that the answer has been determined by the researcher.

The researcher used the close questionnaire to know the condition of students' parental income and home learning environment at 5<sup>th</sup> grade students of state elementary school 2 Banjardowo in the academic year of 2015/2016. The questionnaire would be written in Indonesia because the students at 5<sup>th</sup> grade of state elementary school 2 Banjardowo would not understand if the researcher wrote the questionnaires in English.

## 2. Documentation

Documentation is a method used to find out the data about things or variables in the form of notes, transcripts, books, newspapers, magazines, inscriptions, etc.<sup>9</sup> In this research, the researcher used students' transcript score in the mid-test to know and view their performance and achievement in teaching and learning process.

---

<sup>8</sup> Noor, Juliansyah, *Metodologi Penelitian*,, p.139

<sup>9</sup> Arikunto, Suharsimi, *Prosedur Penelitian Suatu Pendekatan Praktik*, Jakarta: Rineka Cipta, 2013. p. 274

## **F. Data Analysis Technique**

Data analysis is the process of systematically searching and arranging the interview transcript, field notes, and other materials that have accumulated to increase your own understanding of them and to enable you to present what you have discovered to others. The analysis steps are as follow:

### **1. Introduction Analysis**

Introduction analysis would use to know the impact of parental income and home learning environment on Children's Academic Performance at School of students at 5<sup>th</sup> grade of State Elementary school 2 Banjardowo in the academic year of 2015/2016. The researcher got the data through questioner and documentation then analyzed it using statistical analysis.

The data that were taken from the Questionnaire (as the primary data) would be then analyzed by these steps:

- a) Compile data according to its category
- b) Make the data tabulation
- c) The data that has already been tabulated then analyzed by using two predictors regression analysis to know how big parental income and home learning environment impact on children's academic performance at school. To ease the data analysis, the score that comes from the respondents from their



questionnaire results need to be found out first. Thus, it is needed to have these score system criteria as follows:

- 1) The answer of A contains the amount of score 4.
- 2) The answer of B contains the amount of score 3.
- 3) The answer of C contains the amount of score 2.
- 4) The answer of D contains the amount of score 1.

This research was conducted to give us a detail explanation of how was the condition of parental income and home learning environment of 5<sup>th</sup> grade students of State Elementary School 2 Banjardowo in the academic year of 2015/2016, it was expected that the results would be able to give description or guidance for any necessary that might come in the future.

## 2. Hypothesis Analysis

The researcher used two predictors regression analysis and analyzed all data using SPSS Program V.21, while the steps are as follow:

- a. Looking for regression similarity. The formula is as follow:<sup>10</sup>

$$Y = a + b_1X_1 + b_2X_2$$

Y : Tied Variable (Children Academic Performance at School)

---

<sup>10</sup> Sugiyono, *Statistika untuk penelitian,,* p. 275.

a : Constanta

b : Variable X regression coefficient

X<sub>1</sub>: Dependent Variable (Parental Income)

X<sub>2</sub>: Dependent Variable (Home Learning Environment)

b. Looking for coefficient of determination ( $R^2$ )

$R^2$  has interval score between 0 up to 1 ( $0 \leq R^2 \leq 1$ ). The higher score  $R^2$  has (near to 1), the better result for that regression and near to 0, it means independent variables can't explain the dependent variable. To get  $R^2$  using formula as follow:<sup>11</sup>

$$R^2 = \frac{\sum(Y * - \tilde{Y})^2 k}{\sum(Y - \tilde{Y})^2 k}$$

$R^2$  : Coefficient of Determination

Y : Observation Score

Y\*: Y score that appraisal using regression model

$\tilde{Y}$  : The average of observation

K : The number of independent variables

c. T test

T test is used to know the significant impact of individual independent variable toward dependent variable (X<sub>1</sub> and

---

<sup>11</sup> Sulaiman, Wahid, Analisis Regresi Menggunakan SPSS, Yogyakarta: Andi Offset, 2004. p. 86

Y) and ( $X_2$  and Y). This test is done by comparing  $T_{reg}$  and  $T_{table}$ , The formula as follow:<sup>12</sup>

$$T_{reg} = \frac{b_i - (\beta_i)}{se(b_i)}$$

$b_i$  : Coefficient variable  $n$   
 $\beta_i$  : parameter  $n$  that hypothesis  
 $se(b_i)$  : the standard of error  $b_i$

d. F test

F test is done to know the influence of independent variables toward dependent variable. This test is done by comparing  $F_{reg}$  and  $F_t$ . To get  $F_{reg}$  score using formula as follow:<sup>13</sup>

$$F_{reg} = \frac{\sum(Y * - \tilde{Y})^2 / k}{\sum(Y - \tilde{Y})^2 / (n - k - 1)}$$

$R^2$  : Coefficient of Determination  
 $Y$  : Observation Score  
 $Y^*$ : Y score that appraisal using regression model  
 $\tilde{Y}$  : The average of observation  
 $K$  : The number of independent variables  
 $n$  : The number of respondent (sample)

---

<sup>12</sup> Sulaiman, Wahid, *Analisis Regresi Menggunakan SPSS*,, p. 87

<sup>13</sup> Sulaiman, Wahid, *Analisis Regresi Menggunakan SPSS*,, p. 86-87

## G. Final Analysis

After getting  $F_{reg}$ , the next step is comparing the price of  $F_{reg}$  with the  $F_{table}$  on table value. The table value is 5% and 1%.

1. If  $F_{reg} < F_{t\ 5\%}$  or  $Sig > 0,05$  so  $H_0$  is accepted and  $H_a$  is rejected. It means that there is no impact of parental income and home environment on children's academic performance at school at 5<sup>th</sup> grade students of State Elementary School 2 Banjardowo in the academic year of 2015/2016.
2. If  $F_{reg} > F_{t\ 5\%}$  or  $Sig < 0,05$ , so  $H_0$  is rejected and  $H_a$  is accepted. It means that there is significant impact of parental income and home environment on children's academic performance at school at 5<sup>th</sup> grade students of State Elementary School 2 Banjardowo in the academic year of 2015/2016.