

CHAPTER III

METHOD OF THE RESEARCH

A. Research Design

The research is a correlational research, which consists of two variables. The first variable is students' conscientiousness personality, and the second one is students' English achievement. According to Anderson, correlational research is a research of describing in quantitative terms the degree to which variables are related. It is typically investigate a number of variables that is believed to be related to an important variable such as academic achievement.⁵⁰

Correlational research involves collecting data to determine the degree of relationship existence between two or more quantifiable variables. The purpose of this research type is to determine the relationship between variables and to use this relationship to make predictions.⁵¹

The design that used in this research is the explanatory design which explains the association between or among variables. In explanatory design, the writer assumes that a change in one variable is reflected in change in the other⁵²

⁵⁰ Gary Anderson, *Fundamental of Educational Research*, (London: The Falmer Press, 1998), p. 118

⁵¹ L. R. Gay and Peter Airisian, *Educational Research; Competencies for Analysis and Application Sixth Edition*, (New Jersey: Prentice Hall, 2000), p. 321

⁵² John W. Creswell, *Op. Cit.*, p. 358

B. Time and Location of the Research

The research was conducted at State Junior High School 4 Kampar. It was conducted from February to April 2014.

C. Subject of the Research

The subject of the research was the second year students of State Junior High School 4 Kampar.

D. Object of the Research

The object of the research was the correlation between students' conscientiousness personality and their English achievement at the Second Year Students of State Junior High School 4 Kampar.

E. Population and Sample**1. Population of the Research**

The population of this research was the second grade students of State Junior High School 4 Kampar. This school had 3 classes consisted of 62 students.

Table III. 1
Population

| No | Class | Population | | Total |
|-------|---------|------------|--------|-------|
| | | Male | Female | |
| 1 | VIII. 1 | 9 | 11 | 20 |
| 2 | VIII. 2 | 9 | 12 | 21 |
| 3 | VIII. 3 | 9 | 12 | 21 |
| Total | | 26 | 36 | 62 |

2. Sample of the Research

According to L.R. Gay, for correlational study, 30 participants are considered as a minimally acceptable sample size.⁵³ Based on that idea, writer used cluster sampling as technique in taking sample. Cluster sampling is a technique that selects groups (not individuals), and all the members of selected group have similar characteristics, like they are from the same class, school, or area.⁵⁴ The writer used lottery in doing cluster sampling and chose 2 from 3 classes to be sample of the research.

⁵³ *Ibid*, p. 322

⁵⁴ *Ibid*, p. 129

Table III. 2
Sample

| No | Class | Male | Female | Total |
|-------|---------|------|--------|-------|
| 1 | VIII. 2 | 9 | 12 | 21 |
| 2 | VIII. 3 | 9 | 12 | 21 |
| Total | | 26 | 36 | 42 |

F. Technique of Collecting Data

In this research, writer used two kinds of instrument to collect the data from the sample of research. The instruments are:

1. Questionnaire

Questionnaire is one of research's instruments that helps researcher to collect data in a structured form effectively. They can be very detailed, covering many subjects or issues; they can also be very simple and focus on one important area.⁵⁵

The questionnaire that is used in this research requires the respondent to indicate answers based on a predefined list or scale. This scale is ranging from a very positive answer to a very negative answer. According to Wilkinson and Peter, there are a number of ways to scale

⁵⁵ David Wilkinson and Peter Birmingham, *Using Research Instruments; A Guide for Researchers*, (London: RoutledgeFalmer, 2003), p. 7-8

responses to questions and the most popular approaches is the Likert scale.⁵⁶

Likert scale is named after Rensis Likert who developed this format in 1932. In this form, the respondent is presented a sentence and is asked to agree or disagree on a three, five or seven-point scale. However, a 5-point scale is the most practical for the most common purposes.⁵⁷

On this research, writer used Big Five Inventory (BFI) questionnaire (constructed by John, et.al.) to collect data of students' conscientiousness level. BFI is a set of questionnaire that allows an efficient and flexible assessment of the five dimensions of personality. It uses short phrases based on the trait adjectives known to be prototypical markers of the big five.⁵⁸ The blue print of BFI can be seen through the table below:

⁵⁶ *Ibid*, p. 12

⁵⁷ Gary Anderson, *Op. Cit.*, p. 184

⁵⁸ Oliver P. John, et. al., *Op. Cit.*, p. 129-130

Table III. 3
The Blue Print of Big Five Inventory Scale

| Trait | Facet | Fav | Unfav | Total |
|-------------------|----------------------|----------------------------------|----------------------|-------|
| Extraversion | Warmth | 1, 11, 16, 26, 36 | 6, 21, 31 | 8 |
| | Gregariousness | | | |
| | Assertiveness | | | |
| | Activity | | | |
| | Excitement-seeking | | | |
| | Positive emotions | | | |
| Agreeableness | Trust | 7, 17, 22, 23, 42 | 2, 12, 27, 37 | 9 |
| | Straightforwardness | | | |
| | Altruism | | | |
| | Compliance | | | |
| | Modesty | | | |
| | Tender-mindedness | | | |
| Conscientiousness | Competence | 3, 13, 28, 33, 38 | 8, 18, 23, 43 | 9 |
| | Order | | | |
| | Dutifulness | | | |
| | Achievement striving | | | |
| | Self discipline | | | |
| | Deliberation | | | |
| Openness | Fantasy | 5, 10, 15, 20, 25, 30, 40, 44 | 35, 41 | 10 |
| | Aesthetics | | | |
| | Feelings | | | |
| | Actions | | | |
| | Ideas | | | |
| | Values | | | |
| Neuroticism | Anxiety | 9, 24, 34 | 4, 14, 19, 29, 39 | 8 |
| | Angry hostility | | | |
| | Depression | | | |
| | Self-consciousness | | | |
| | Impulsiveness | | | |
| | Vulnerability | | | |

Favored and unfavored items for each trait is the rule to compute the score. For favored items, the score remains as what the participant filled. For example, when a student gave himself 5, the score is 5. For Unfavored items, the score should be reserved by subtracting the score given by 6. For example, when a student gave himself 5, compute 6 minus 5 and the redoded score is 1. So, a score of 1 becomes 5, 2 becomes 4, 3 remains 3, 4 becomes 2, 5 becomes 1.⁵⁹

2. Documentation

Documentation is one of research instruments that uses documents' record (written archive such as books, document, journal and so on) to get the data. According to Soukhanov in the American heritage dictionary of the English language, documentation is the act or an instance of the supplying of documents or supporting references or records or the collation, synopsising, and coding of printed material for future reference.⁶⁰ Here, writer used list of students' score that was documented by teacher to get data of students' English achievement.

There are some advantages in using this instrument to collect data like: *documentary evidence can provide insight into a situation where research take place; in most cases it provides information without much*

⁵⁹ *Ibid*, p. 158

⁶⁰ Anne H. Soukhanov, ed., *The American Heritage Dictionary of the English Language*, (Boston: Houghton Mifflin, 1992), p. 2225

*effort; a record of objectives and policies which are not easily communicated can be accessed through documents; and it can support other forms of evidence collected.*⁶¹

Students' English achievements were obtained through the examination conducted by the school, the writer categorized the students' score of English achievement into some measurable categories as follows:⁶²

Table III.4
The Category of Students' Achievement

| Scores | Category |
|----------|-----------|
| 80 – 100 | Very high |
| 66 – 79 | High |
| 56 – 65 | Medium |
| 46 – 55 | Low |
| 0 - 45 | Very low |

⁶¹ Valsa Koshy, *Action Research for Improving Practice; A Practical Guide*, (London: Paul Chapman Publishing, 2005), p. 96

⁶² Anas Sudijono, *Pengantar Evaluasi Pendidikan*, (Jakarta: PT Raja Grafindo Persada, 2007), p. 35

G. Reliability of the Instrument

Brown said that reliability has to do with accuracy of measurement. This kind of accuracy was reflected in obtaining of similar results when measurement was repeated on different occasion or with different instruments or by different person. The characteristic of reliability was sometimes termed consistency.⁶³ To know the reliability of the test, the writer used SPSS 16 application to find the reliability of the test based on Alpha Cronbach technique.

Table III.5

Reliability Statistics

| Cronbach's Alpha | N of Items |
|------------------|------------|
| .619 | 44 |

The table above shows that the reliability value was 0.619. According to Siregar, an instrument can be said as a reliable instrument when the score of reliability coefficient (r_{11}) is higher than 0.6⁶⁴. Based on the table, it was clear that r_{11} is higher than 0.6. the comparison can be seen as follows:

$$0.619 > 0.6$$

It shows that the score of r_{11} was higher than 0.6, it means that the test was reliable.

⁶³ H. Douglas Brown, *Op. Cit.*, p. 19

⁶⁴ Syofian Siregar, *Statistika Parametrik untuk Penelitian Kuantitatif: Dilengkapi dengan Perhitungan Manual dan Aplikasi SPSS Versi 17*, (Jakarta: Bumi Aksara 2013), 90.

H. Normality of the Data

Assessing normality of data is used to describe a symmetrical, bell shaped curve, which has the greatest frequency of scores in the middle, with smaller frequency towards the extremes. Normality can be assessed by obtaining skewness and kurtosis values.⁶⁵ In this research, the writer assessed the normality of data by using SPSS 16.0. The result of the test can be seen as follows:

Table III.6
One-Sample Kolmogorov-Smirnov Test

| | | Unstandardized Residual |
|--------------------------------|----------------|-------------------------|
| N | | 42 |
| Normal Parameters ^a | Mean | .0000000 |
| | Std. Deviation | 3.97270335 |
| Most Extreme Differences | Absolute | .085 |
| | Positive | .085 |
| | Negative | -.073 |
| Kolmogorov-Smirnov Z | | .548 |
| Asymp. Sig. (2-tailed) | | .925 |

a. Test distribution is Normal.

⁶⁵ Julie Pallant, *SPSS Survival Manual: A Step by Step Guide to Data Analysis Using SPSS for Windows*, (Philadelphia: Open University Press, 2003), p. 54

From the table, it was known that the value of KSZ (Kolmogorov-Smirnov Z) was 0.548 and Asym. Sig. (2-tailed) was 0.925. According to Pallant, data is normal when the value of Asymp. Sig. (2-tailed) is higher than 0.05.⁶⁶ Based on the table, it was clear that Asymp. Sig. is higher than 0.05 which indicates the normality of the data. The comparison can be seen as follows.

$$0.925 > 0.05$$

I. Homogeneity of the Data

According to Siregar, the purpose of homogeneity test is to know whether the object of the research has the same variance or not. The method that is used in this test was comparing the biggest variance with the smallest one.⁶⁷ In this research, the writer assessed the normality of data by using SPSS 16.0. The result of the test can be seen as follows:

Table III.7
Test of Homogeneity of Variances

| Levene Statistic | df1 | df2 | Sig. |
|------------------|-----|-----|------|
| .004 | 1 | 40 | .948 |

⁶⁶ *Ibid*, p. 58

⁶⁷ Sofyan Siregar, *Op. Cit.*, p. 167

From the table, it was known that the value of significance (sig.) was 0.948. According to Siregar, data are normal when the value Sig. is higher than 0.05.⁶⁸ Based on the table, it was clear that Sig. is higher than 0.05 which indicates the homogeneity of the data. The comparison can be seen as follows.

$$0.948 > 0.05$$

J. Technique of Analysis Data

The writer measured the level of students' conscientiousness by using the scoring rule of Big Five Inventory (BFI), by computing the students' acquiescence score for each item⁶⁹. In this case the writer only computed the score which is given by the students for conscientiousness items. In BFI, there are 9 items of conscientiousness where 4 of them are unfavored items. The items are:

- Does a thorough job (item 3, favored)
- Can be somewhat careless (item 8, unfavored)
- Is a reliable worker (item 13, favored)
- Tends to be disorganized (item 18, unfavored)
- Tends to be lazy (item 23, unfavored)
- Perseveres until the task is finished (item 28, favored)
- Does things efficiently (item 33, favored)
- Makes plans and follows through with them (item 38, favored)

⁶⁸ *Ibid*, p. 178

⁶⁹ Oliver P. John, et. al., *Loc. Cit.*

- Is easily distracted (item 43, unfavored)⁷⁰

The writer got scores of students' English achievement through documented scores from teacher of English at State Junior High School 4 Kampar.

To analyze whether there is any correlation between these two variables (Students' conscientiousness personality and their English achievement), writer analyzed the data by using Pearson Product-Moment Formula through SPSS 16.0.

The Product Moment Correlation was obtained by considering the degree of freedom (df) = N-nr; (N = number of sample, nr = number of variable)

Statistically, the hypotheses are:

$$H_a : r_o \geq r_{table}$$

$$H_o : r_o < r_{table}$$

1. H_a is accepted if $r_o \geq r_{table}$ or there is a significant correlation between students' conscientiousness personality and their English Achievement.
2. H_o is accepted if $r_o < r_{table}$ or there is no significant correlation between students' conscientiousness personality and their English achievement.

⁷⁰ *Ibid*, p. 157-158