# Chapter Four

## Findings and Discussion

This chapter describes the findings and discussion of three research questions. The findings section provides the results of data analysis using statistics calculation. Then, the discussion section provides the answer to three research questions.

### Findings

This part described the results of the study by calculation. The results were about the three research questions of this study. The first question is "How is the students' conscientiousness trait". The second question is "How is the students' academic achievement level?". Then, the last question is "Is there any correlation between students' conscientiousness trait and students' academic achievement?".

**Students' conscientiousness trait.** The researcher used SPSS to find out the descriptive statistic of students conscientiousness and the researcher categorized the students' conscientiousness level with class interval formula by Supranto (2000) to determine the category of students' conscientiousness trait based on the questionnaire result. From the formula, it showed that the interval was 9.8. The level of students' conscientiousness was divided into 5 categories such as very low, low, moderate, high and very high.

**Descriptive Statistics**

|  | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| Questionnaire | 79 | 55 | 104 | 80.25 | 10.100 |
| Valid N (listwise) | 79 |  |  |  |  |

Table 4.1 *descriptive statistic of questionnaire*

The descriptive statistical analysis of 23 questionnaire items for the respondents was shown above. The highest score is 104 and the lowest score is 55. The mean of conscientiousness trait's score respondents is 80.25 and the standard deviation is 10.100. Thus, the categorizations of students' conscientiousness level were very low, low, moderate, high and very high.

| Scale | Description | Frequency | Percent |
|---|---|---|---|
| $55 \leq x < 64.8$ | Very Low | 5 | 6.3 |
| $64.8 \leq x < 74.6$ | Low | 21 | 26.5 |
| $74.6 \leq x < 84.4$ | Moderate | 21 | 26.5 |
| $84.4 \leq x < 94.2$ | High | 24 | 30.3 |
| $94.2 \leq x < 104$ | Very High | 8 | 10.1 |
| **TOTAL** |  | **79** | **100** |

Table 4.2 *the result of students' conscientiousness trait*

Based on the table above, there were five students (6.3%) with "very low" conscientiousness trait. There were twenty one students (26.5%) classified as "low" and "moderate" category. Then, twenty four students (30.3%) in the "high" category and eight students (10.1%) have "very high" level of conscientiousness. From the result, the highest frequency was 24 students and it indicated on high level. So, the result pointed out that the level of students' conscientiousness is high.

**Students' academic achievement level**. The Grade Point Average (GPA) was used to measure the students' academic achievement. It consisted of 79 respondents. The descriptive statistical analysis is shown in the table below.

**Descriptive Statistics**

| | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| GPA | 79 | 1.95 | 3.91 | 3.3430 | .45672 |
| Valid N (listwise) | 79 | | | | |

Table 4.3 *descriptive statistic of students' GPA*

The highest GPA is 39.1 and the lowest is 1.95. The mean of GPA score for the respondents is 3.34 and the standard deviation is 0.45672. It means the GPA of the students is categorized as high level. The researcher divided the rate of students' GPA based on the book of *Panduan Akademik* UMY 2018/2019.

| Scale | Description | Frequency | Percent |
|---|---|---|---|
| 3.51 – 4.00 | Very High / With honors | 36 | 45.5 |
| 3.01 – 3.51 | High / Very Satisfactory | 30 | 37.9 |
| 2.76 – 3.00 | Moderate / Satisfactory | 2 | 2.5 |
| 2.75 – 2.00 | Fair | 10 | 12.6 |
| Less than 2.00 | Low | 1 | 1.2 |
| **Total** | | **79** | **100** |

Table 4.4 *the result of students' GPA*

Based on the table above, the result showed that there was only one student (1.2%) in the "low" category. There were ten students (12.6%) categorized as "fair". The two students (2.5%) found to be in "moderate" level. Then, thirty students (37.9%) were high and thirty six students (45.5%) in the category of "very high".
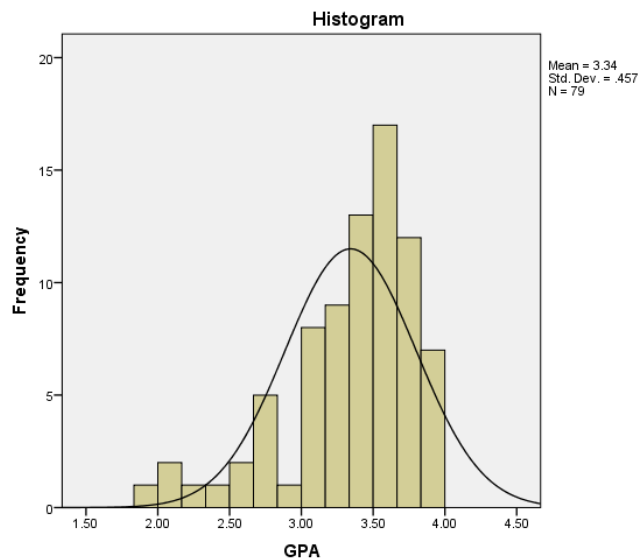
Figure 1. *Students' GPA frequency*

As the result showed, the students with GPA from 3.34 to 3.75 have high frequency. It means the students' GPA was on "high" level. The figure showed that the students' academic achievement is high.

**The correlation between students' conscientiousness trait and students' academic achievement**. Before analyzing the correlation between the two variables, the researcher tested the normality of data. One-Sample Kolmogorov-Smrinov test was used to see the normality of the instruments.

**Normality test.** The researcher did normality test to find out the normality data distribution whether the two variables were normal or not. The criteria of normality test is when the significance value is higher than 0.05 ($\alpha > 0.05$). Meanwhile, the data does not have normal distribution when the significance value is

lower than 0.05 (α < 0.05). After being analyzed, the result showed that the data

distribution was normal based on the result of normality test.

**One-Sample Kolmogorov-Smirnov Test**

|  |  | Questionnaire | GPA |
|---|---|---|---|
| N |  | 79 | 79 |
| Normal Parameters[a,b] | Mean | 80.25 | 3.3430 |
|  | Std. Deviation | 10.100 | .45672 |
| Most Extreme Differences | Absolute | .095 | .153 |
|  | Positive | .068 | .107 |
|  | Negative | -.095 | -.153 |
| Test Statistic |  | .095 | .153 |
| Asymp. Sig. (2-tailed) |  | .074[c] | .000[c] |

a. Test distribution is Normal.

b. Calculated from data.

Table 4.5 *the result of normality test*

Based on the table above, the significance value of this research data was

0.074. It means that the significant value of 0.074 is higher than 0.05 (0.074>0.05), so

the data of this research is normal. The significance value of GPA was 0.00 because

there was no data distribution on GPA, it only consisted of students' GPA.

**Hypothesis test.** This test is to answer the hypothesis about the correlation

between students' conscientiousness trait and students' academic achievement. This

test was to prove the hypothesis of this study. The correlation between two variables

was identified using Pearson Product Moment Correlation (r). The correlation result

is presented below:

**Correlations**

| | | Questionnaire | GPA |
|---|---|---|---|
| Questionnaire | Pearson Correlation | 1 | .303[**] |
| | Sig. (2-tailed) | | .007 |
| | N | 79 | 79 |
| GPA | Pearson Correlation | .303[**] | 1 |
| | Sig. (2-tailed) | .007 | |
| | N | 79 | 79 |

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4.6 *the result of hypothesis test*

Based on the table above, it was shown between two variables with total sample (N) was 79, the Pearson correlation value (r-value) was 0.303, and significance value ($\rho$-value) was 0.007. The hypothesis testing was analyzed by comparing significance value ($\rho$-value). Referring to Cohen, Manion, and Morrison (2011), coefficient statistics are statistically and significantly correlated at the $\rho <$ 0.05 levels. The result showed that significant value ($\rho$-value) was 0.007 which was lower than 0.05 (0.007 < 0.05). However, the hypothesis was shown that students' conscientiousness and students' academic achievement was accepted. It means that there was a positive and significant correlation between students' conscientiousness trait and students' academic achievement.

According to Sugiyono (2011), there is a criteria correlation value such as very low, low, moderate, strong, and very strong. The detail criteria are shown in the table below;

| Interval Coefficient | Correlation Level |
|---|---|
| 0.00 – 0.199 | Very Low |
| 0.200 – 0.399 | Low |
| 0.400 – 0.599 | Moderate |
| 0.600 – 0.799 | Strong |
| 0.800 – 1.000 | Very Strong |

Table 4.7 *the correlation criteria*

Based on the table above, the Pearson correlation value (r-value) showed the value of 0.303 on the criteria "low" level (0.200 – 0.399). It can be concluded that there was a positive and significant correlation between students' conscientiousness trait and students' academic achievement, and the strength of the correlation was categorized as a low correlation.

**Discussion**

This part described the discussion based on the result of three research questions in this study. The first question is about the students' conscientiousness level. The second question is about students' academic achievement level. Then, last question is about the correlation between students' conscientiousness level and students' academic achievement.

**The students' conscientiousness trait.** The first research question of the study was about how is the students' conscientiousness trait. Based on the results, the data was collected from 79 respondents using 23 questionnaire items. The researcher also found that there were 5 students (6.3%) with "very low" level of conscientiousness. About 21 students (26.5%) were classified as students with "low" level of conscientiousness. There were also 21 students (26.5%) in "moderate" level. Then, 24 students (30.3%) in the "high" category and 8 students (10.1%) identified as students with "very high" level of conscientiousness. From the result, most of students had high level of conscientiousness.

Based on the finding, the students had high level of conscientiousness. It means that students have good conscientiousness trait level. Students with high level of conscientiousness are defined as hard workers, responsible for their task and achievement oriented. This is in line with McCrae and John (1992) who mentioned that people with high level of conscientiousness are associated with adjectives like organized, reliable, self-disciplined, meticulous, hard worker, perseverant and ambitious. In addition, conscientiousness is linked from an early age to persistence in the effort and desire to learn (Colquitt and Simmering, 1998). Thus, students with conscientiousness tend to set their goal in life high and succeed in the job they do.

As an aspect of trait, Tellegen and Waller (1987) have identified that conscientiousness student is seen most clearly in the need for achievement and dedication for work and they are known for their diligence and extremely attentive to

details and mindfulness. It shows that students with conscientiousness have the ambition to be good in every task and they seek for achievement but they still remain to be diligent and pay attention without missing the detail and being careful to achieve their will.

According to Tait and Entwistle (1996) conscientiousness students have their own way of studying. Students with high level of conscientiousness are aware of their own act and they have strategy to succeed in studying because they have time management and monitoring their own growth of academic achievement. In fact, students with high level of conscientiousness are categorized as people that are good at handling tasks. They are aware and responsible of their works and they try as best as they can to achieve their goal with a good result.

**The students' academic achievement level.** The second research question of this study is about how the academic achievement level of students. The result showed that there was only one student (1.2%) in the "low" category. There were ten students (12.6%) categorized as "fair". The two students (2.5%) found to be in "moderate" level. Then, thirty students (37.9%) were "high" and thirty six students (45.5%) in the category "very high". The mean value of students' GPA was shown 3.34 so it was on "high" level. It means that most of the students had "high" level of academic achievement.

Academic achievement is something that people acquire after learning activity. According to Klassen (2004) someone's belief in their academic ability is thought to be an important factor to their academic success. It means that one should have trust in their skill, knowledge, ability and a purpose to accomplish their desired grade. Also, academic achievement could be a motivation for students to do their task better because when the result is higher than student's expectation it would make them strive for a better result on the next test. It is in line with Wahab (2015) the academic achievement level achieved from the students' efforts can give emotional satisfaction and a will to do the job better. In conclusion, academic achievement is the best measure to know students' learning success

**The correlation between students' conscientiousness trait and students' academic achievement.** The last research question is about "Is there any significant correlation between students' conscientiousness trait and their academic achievement?" The significance value of data normality was on 0.074. The value of 0.074 is greater than 0.05 (0.074>0.05), so the data of this research is normal.

The correlation result between two variables with total sample (N) of 79 showed that the Pearson correlation value (r-value) on 0.303, and the significance value (ρ-value) on 0.007 which was lower than 0.05 (0.007 < 0.05). The hypothesis showed that students' conscientiousness trait and students' academic achievement was accepted. It means there is a positive and significant correlation between students' conscientiousness trait and their academic achievement. Based on the

criteria level of correlation, the Pearson correlation value of this study was on 0.303 which means it categorized as "low" correlation. Thus, it can be concluded that there was a significant correlation between students' conscientiousness trait and students' academic achievement but the correlation was categorized as low correlation. In this case, it can be explained that the low correlation happened because some of the students who have high GPA are in the "moderate" to "low" level of conscientiousness (see appendix B).

This research extends prior related studies by developing an analysis of the relation between conscientiousness trait and academic achievement. Consistent with previous literature, in which Kappe and Flier (2012) mentioned that there was a positive correlation between conscientiousness trait and academic achievement, the result of this study conform the previous study. The positive correlation happened because students' conscientiousness trait and students' academic achievement was on the same level. Therefore, when the value of students' conscientiousness increases, the value of students' academic achievement will also increase. It was related to O'Connor and Paunonen (2007) who stated that from the Big Five personality traits, only conscientiousness has been consistently associated with academic achievement.

According to Costa and McCrae (1992) conscientiousness is a useful element for people especially student to enhance their ability because conscientiousness is the strongest trait to predict academic achievement and success later in life. The students' conscientiousness trait might be seen as a tool for helping to identify the success of

students in academic performance that can positively impact students' academic achievement in the future. It is also said that conscientiousness is a key to success for students' academic achievement because conscientiousness has been known as the best predictor of academic achievement (Busato, Prins and Hamaker, 2000).