

CHAPTER IV

FINDING AND DISCUSSION

In this discussion, the researcher presented the finding of the research. It presented some discussions dealing with the collected data of intrapersonal intelligence students' academic self-efficacy and their engagement score. This chapter covered the description of data, hypothesis testing, and discussion.

A. The Description of Data

The descriptions of data were described by providing numbers and tables. The subjects or samples of this research were 10 students of C class of fourth semester of English Education Department which were included as intrapersonal intelligence students. The researcher distributed academic self-efficacy and student engagement questionnaires. It was done in order to obtain the necessary data related to the two variables. Presenting the data used statistic computation. The results both of them can be seen as follows:

1. Descriptive Statistic of Intrapersonal Intelligence Students

Before collecting the data of academic self-efficacy and student engagement, the researcher began with administering a kind of questionnaire developed by *Itc Publications* based on Howard Gardner's theory of Multiple Intelligence to 35 students to select the sample. As presented in previous chapter, this questionnaire provided 64 items with the 8 items for each intelligence category (see Appendix 2). Likert scale used in this questionnaire was in a range 1-5 related to the agreement.

Then, it would be ended with the total number of score was 40 for a highest one while 8 was a lowest one in each intelligence category. Students who had high score in Intrapersonal Intelligence would be selected as the sample or subjects to continue fulfilling the next kind of questionnaire. Here, the researcher showed the description of data obtained by the students who had been decided as intrapersonal intelligence thinker (see table 4.1).

Table 4.1: Descriptive Statistic of Intrapersonal Intelligence Score

Statistics		
intrapersonal intelligence		
N	Valid	10
	Missing	0
Mean		36.40
Median		35.50
Mode		35
Std. Deviation		2.547
Minimum		32
Maximum		40
Sum		364

Dealing with the table above, it could be seen that the mean score of students who had highest score of intrapersonal intelligence was 36.4. Meanwhile, the median score for the total of 10 students was 35.5 and the

mode score was 35. In instance, standard deviation showed 2.547. The last was maximum score showed 53 and minimum score was 23. Moreover, based on the interval of their score as presented on the table 4.2 students' score would be calculated in order to find out the percentage and categorization.

Table 4.2: Level of Intrapersonal Intelligence Score

Interval	Frequency	Percentage	Categorization
30 – 40	10	100 %	High
19 – 29	0	0	Average
8 – 18	0	0	Low
Total	10	100 %	

2. Descriptive Statistic of Students' Academic Self-Efficacy Score (X)

Having done collecting the data covering academic self-efficacy score and student engagement score, the researcher then comes to present them. The following scores were obtained from 10 students which had been decided to take a part as the samples and to represent the population (see Appendix 2). The next step was computing the data in order to know descriptive statistic used SPSS 16.0 program The next table showed you clearly the descriptive statistic of students' academic self-efficacy score (see table 4.3).

Table 4.3: The Descriptive Statistic of Academic Self-Efficacy Score

Statistics

efficacy

N	Valid	10
	Missing	0
Mean		38.80
Median		38.00
Mode		23 ^a
Std. Deviation		8.613
Minimum		23
Maximum		53
Sum		388

a. Multiple modes exist. The smallest value is shown

The result appeared that the total score from 10 students who fulfilled academic self-efficacy questionnaire was 388. In this case, the mean score or the average score as large as the median score was 38.80. Then, the mode score was 23. Maximum score was 53 and minimum score was 23. The last was standard deviation showed 8.613. Further, students' score can be calculated for the sake of knowing the percentage and categorization based on the interval of their score as presented on the table 4.4.

Table 4.4: Level of Students' Academic Self-Efficacy Score

Interval	Frequency	Percentage	Categorization
53 – 63	0	0	Completely high
42 – 52	3	30 %	High
31 – 41	6	60 %	Quite high

20 – 30	1	10 %	Low
9 – 19	0	0	Completely low
Total	10	100 %	

Based on the table above, the mean score lied in the range 31-41 in which 60% of the students' score existed. We know that it belonged to 3 students in high categorization. In another case, only 10% of the total students that means there is only one student lied in the range 20-30 who categorized as low score. However, no one got both of them were lowest and highest score in this test.

3. Student Engagement Score (Y)

This part discusses the result of the calculation of the student engagement score (see Appendix 2) to find the descriptive statistic used SPSS 16.0 program. For the result as the next table (see table 4.5).

Table 4.5: Descriptive Statistic of Student Engagement Score

Statistics		
engagement		
N	Valid	9
	Missing	0
Mean		47.44
Median		47.00
Mode		47
Std. Deviation		4.503
Minimum		39
Maximum		55
Sum		427

Based on the calculation, it resulted 47.44 as average or the mean score. Median score as large as mode score was 47. In this test, the students' minimum score was 39 and maximum score was 55. The standard deviation was 4.503. Besides, finding out the percentage and categorization based on the interval of students' score, the data can be calculated as follows (see table 4.6).

Table 4.6: Percentage of Student Engagement Score

Interval	Frequency	Percentage
65-75	0	0
55-64	1	10%
45-54	6	60%
35-44	3	30%
15-34	0	0
Total	10	100%

Regarding the calculation above, students' average score in their engagement test was in the range 45-54. Here, we know that the score belonged to most of students (6 students) in this range. It also lied in the highest percentage of students' score which exactly 60% of the total samples. Meanwhile, there are 30% of students lied in the range 35-44 and there is only 10% of students lied in the range 55-64. Nevertheless, the data showed that no one lied either in the lowest range or the highest one.

4. Homogeneity Testing

This testing was used related to know if the samples taken in this study have equal variances. In this case, it should be done to understand the basic of homogeneity analysis. When the Sig. value was higher than

$\alpha = 0.05$, it could be said that the variance of two or more groups of sample was equal. Meanwhile, When the Sig. value was lower than $\alpha = 0.05$, it could be said that the variance of two or more groups of sample was not equal. Thus, the researcher expected to verify that assumption by calculating data using Homogeneity Analysis that would be presented in the table 4.7.

Table 4.7: Homogeneity Analysis

Levene's Test of Equality of Error Variances^a

Dependent Variable:score

F	df1	df2	Sig.
2.028	1	18	.172

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + variable

Derived from the table above, it showed the Sig. value was higher than 0.05 which meant the variance of academic self-efficacy and student engagement score was equal.

5. Linearity Testing

Another analysis that should be done clearly before calculating data to find out the correlation between two variables was Linearity analysis. Before conducting correlational testing, it should be done also to analyze linearity with the aim to know if two variables have linear

relationship by significantly. Two variables could be concluded that they had linear relationship when the significance value of *deviation from linearity* was higher than $\alpha = 0.05$. By using SPSS 16, the researcher calculated the data in *Test for Linearity* to verify that assumption (see table 4.8).

Table 4.8: Linearity Analysis

ANOVA Table

			Sum of Squares	df	Mean Square	F	Sig.
student engagement * self-efficacy	Between	(Combined)	390.100	6	65.017	1.849	.328
	Groups	Linearity	226.161	1	226.161	6.431	.085
		Deviation from Linearity	163.939	5	32.788	.932	.560
	Within Groups		105.500	3	35.167		
	Total		495.600	9			

By concerning the table above, it presented the *sig. of deviation from linearity* was higher than 0.05. Thus, the researcher might verify the assumption that two variables (academic self-efficacy and students' engagement of intrapersonal intelligence thinkers) had linear relationship significantly.

6. Correlational Testing

As the researcher said in advance, all analysis of this research mainly employed the computation process using SPSS 16.0 program. One of the roles of SPSS 16.0 was finding out the correlational significance

using *Pearson Product Moment*. Having completely collected the data, researcher ran the program which finally got the result of coefficient correlation as presented the following table (see table 4.9). The result of correlational testing arose two important interpretations covering the strength of the correlation and the direction of the correlation itself.

Table 4.9: Pearson Product Moment

		engagement	efficacy
engagement	Pearson Correlation	1	.645*
	Sig. (2-tailed)		.044
	N	10	10
efficacy	Pearson Correlation	.645*	1
	Sig. (2-tailed)	.044	
	N	10	10

*. Correlation is significant at the 0.05 level (2-tailed).

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.645 ^a	.416	.343	3.291

a. Predictors: (Constant), efficacy

The correlation coefficient value between academic self-efficacy and student engagement showed by *Pearson Product Moment* was resulting 0.645. According to Creswell (2012: 347) that had been discussed in the previous chapter, when correlations fall into the range

0.35 –0.65, they are useful for limited prediction and many correlation coefficients for bivariate relationships fall into this area. The correlation itself belonged to the positive correlation or directional correlation as the *Pearson Product Moment* value was in the positive number and was not in the negative one.

As attached in the previous chapter, this study used explanatory design of correlational research which the researcher is interested in the extent to which two variables (or more) co-vary, that is where changes in one variable are reflected in changes in the other.

Under the *Pearson Product Moment*, the extent of how far academic self-efficacy (X) contributes intrapersonal intelligence students' engagement (Y) in English class could be seen by knowing the *Adjusted R Square* available on the table of Model Summary (see table 4.9). Thus, it was found that the *Adjusted R Square* value was 0.343. In order to know the percentage of contribution, this number should be divided into 10 as the total number of subjects, then it timed 100% by dealing with the formula $\frac{\text{Sig.}(2\text{-tailed})}{N} \times 100\%$. The last point came up in the table was the number of the involved sample. It showed 10 which means that all samples or their scores had been included into the calculation.

B. Hypothesis Testing

To find out whether or not the null hypothesis was accepted, the researcher consulted the decision to the similar table used to know the correlation value. Both the coefficient correlation and r_{count} appeared in the

table, and then it would be analyzed based on the hypothesis in the research.

The hypotheses involved were:

- 1) H_a : there is positive significant correlation between academic self-efficacy of intrapersonal intelligence students and their engagement in English department.
- 2) H_0 : there is no significant correlation between academic self-efficacy of intrapersonal intelligence students and their engagement in English department.

The analysis of which hypothesis was accepted refer to the significance value ($\alpha = 5\%$). Alternative hypothesis (H_a) would be accepted when the r_{count} was higher than 0.05; $r_{count} > 0.05$. Meanwhile, when the r_{count} was lower than 0.05; $r_{count} < 0.05$, it could be marked that null hypothesis (H_0) was the accepted one.

Looked at the output of correlation value from SPSS 16.0, it marked by *Pearson Product Moment* was 0.645. This was obviously higher than the level of significance (5% or 0.05). Hence, it automatically indicated that alternative hypothesis (H_a) **“there is positive significant correlation between academic self-efficacy of intrapersonal intelligence students and their engagement in English department”** was accepted while H_0 was automatically rejected.

C. Discussion

In the last part of this chapter, the researcher would fully review the result of this research dealing with the finding up to the hypothesis testing. As expected in the first chapter, this study aimed to figure out whether there was correlation between intrapersonal intelligence students' academic self-efficacy and their engagement in English class and how far academic self-efficacy contributed to the intrapersonal intelligence students' engagement in English class. Therefore, after finishing in selecting subjects by distributing a kind of questionnaire to measure Intrapersonal Intelligence students, the researcher continue to collect the data by administering a kind of questionnaire to investigate the level of their academic self-efficacy.

This discussion derived from the analysis of the findings. The analysis had been accomplished in order to answer the research problem. From the analysis, the researcher would like to discuss the result of the test. First, the writer found that the average level of academic self-efficacy of the intrapersonal intelligence students was in a range 31-41 which according to table 4.4 could be described as quite high, while the average score of their engagement in English class was in a range 45-54, which was good. Further, after having completely collected data, the researcher continued to analyze the normality, homogeneity, and linearity of the data as prerequisite to verify the correlation between two variables in this study.

Firstly, began with the discussion in chapter 3 about normality testing, the researcher found the *Asymp. Sig. (2-tailed)* was 0.871 which means it was higher than 0.05. In this case, the data collected in this study was in a normal distribution. Secondly, the researcher had also found out the result of homogeneity analysis. It had been presented in previous part that the *Sig. value* was higher than 0.05 which meant the variance of academic self-efficacy and student engagement score was equal. Thirdly, by concerning the table of linearity (see table 4.8), it presented the *sig. of deviation from linearity* was higher than 0.05. Thus, the researcher might verify the assumption that two variables (academic self-efficacy and students' engagement of intrapersonal intelligence thinkers) had linear relationship significantly. Finally, the researcher continued to figure out the correlation result between academic self-efficacy of intrapersonal intelligence students and their engagement in English class which was 0.645. Related to Creswell (2012: 347 in chapter 3), that had been discussed in the previous chapter, when correlations fall into the range 0.35 – 0.65, they are the typical values used to identify variable membership in the statistical procedure of factor analysis and many correlation coefficients for bivariate relationship fall into this area.

As attached in the previous chapter, this study used explanatory design of correlational research which the researcher is interested in the extent to which two variables (or more) co-vary. In addition, alternative hypothesis (H_a) was accepted because it had been found that r_{count} (0.645)

was higher than significance level ($\alpha=0.05$), while for null hypothesis (H_0) was automatically rejected. Thus, the correlation itself belonged to the *positive correlation or directional correlation* as the *Pearson Product Moment* value was in the positive number and was not in the negative one.

However, this study was also expecting to find out the extent of how far academic self-efficacy contributes intrapersonal intelligence students' engagement in English activity. In dealing with this purpose, seeing the *Adjusted R Square* available on the Model Summary table (see table 4.9) would help the researcher to propose the data. Thus, it was found that the *Adjusted R Square* value was 0.343. In instance, by dealing with the formula of percentage that had been discussed above, it could be seen that intrapersonal intelligence students' engagement in English department was contributed 3.4% by academic self-efficacy and another 96.6% was influenced by other factors. Considering the case that these kind of people were good at self-correcting and had understood well about how to learn from the experiences, their engagement in the classroom could not be simply judged by only seeing their high level of self-efficacy. As attached in the chapter II, there are several factors affecting student engagement. Hence, the researcher concluded that academic self-efficacy is not the single factor affecting intrapersonal intelligence student engagement.

Therefore, as the writer had explained in a first chapter, there are many literature reviews conveyed about a very fundamental relationship between academic self-efficacy and students' engagement. Cited in

Mullen & Schunk (2012:220), some experts explain that a higher sense of self-efficacy can positively affect learning achievement, self-regulation, and motivational outcomes such as individuals' choices of activities, effort, persistence, and interests. Conversely, they added, a lower sense of self-efficacy for learning and performing well in school can negatively affect students' motivation and engagement, increasing the risk of underachievement and dropout.

This study also proved to be relevant to the previous study about academic self-efficacy related to student engagement that have been conducted by Anggraini, et al., (2014). Their research showed the result that the coefficient correlation of two variables; self-efficacy and students' engagement in English speaking class; was 0.384 and it was significant where $r\text{-value is } (0.384) > r\text{-table } (0.254)$. Nevertheless, this study was done clearly with a critical difference. It was also found that students' academic self-efficacy contributed 14.8% to their engagement in speaking English class. Derived from the weaknesses of previous study had been presented in the first chapter, the researcher conducted this kind of research with the improvement of taking a specific character of subjects related to their intelligence or personality that had not been discussed in previous study.

Based on the description above, the writer could conclude that there was a positive significant correlation between academic self-efficacy of intrapersonal intelligence students and their engagement in English

department. However, this variable contributes 3.4% to another which meant that it was not the only cause. Low motivation or bad condition could also be the factors affecting their quality of being engaged in a classroom. What students' feel or think about themselves will influence their own actions and behavior (Bandura, 1997; Pajares, 1997, in Dodds: 19).