

## CHAPTER IV

### RESULTS AND DISCUSSION

The purposes of this research were to find out the students' most dominant intelligence among the Multiple Intelligences, to reveal students' speaking skill and to know the correlation between the students' most dominant intelligence and students' achievement in speaking skill. Answering those three research questions, this chapter presents the results of the study.

#### Results

This part attempts to present the results of the students' most dominant intelligence among the Multiple Intelligences, students' speaking skill, and the correlation between students' most dominant intelligence and students' achievement in speaking skill statistically. A descriptive statistical analysis of the students' response to the study is provided in the following sections.

#### **Reliability, Validity, Normality, and Missing Value**

**Reliability.** The result of reliability is shown by the range of Cronbach alpha provided a coefficient of each inter-item correlation (Cohen, Manion & Morrison, 2011). The instrument of the study is categorized as valid if the range of Cronbach alpha is  $> 0.6$ . Table 4.1 shows that the reliability of this study was 0.72. It means that the questionnaire used to measure the students' most dominant intelligences was reliable.

Table 4.1		
<i>Reliability Statistic Table</i>		
Cronbach's Alpha	Alpha Based on Standardized Items	N of Items
.727	.732	30

Table 4.1 Reliability Statistic Table

**Validity.** The validity could be seen in Kaiser-Meyer-Olkin (KMO) table that represents the range of validity. Table 4.2 reveals that the KMO was 0.52. It means that the questionnaire used in this study was valid.

Table 4.2		
<i>KMO and Bartlett's Test</i>		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.525
Bartlett's Test of Sphericity	Approx. Chi-Square	636.354
	Df	435
	Sig.	.000

Table 4.2 KMO Table

**Normality.** In this study, the researcher attempts to find the normality from the skewness. Table 4.3 shows 28 items had good normality since the number of skewness was in the range -1 to 1. But, there were two items which were not included in the good criteria. Those were number 14 and 30. The skewness of those numbers was -1.47 and -1.35.

**Missing Value.** The Result of missing value in this study was presented in Table 4.3. The data showed that there was no missing value. It proved by declaration 'zero' that showed in the table 4.3. Table 4.3 also reveals the value of mean, median, and mode of the questionnaire that has been administrated. Mean is the average of the numbers that has been calculated. Median is the middle of sort list of numbers, while mode is the number which most appear in the set of list. The questionnaire which was spread consisted of 30 items which were administered to 59 participants. The results revealed that the value of mean was 2.99. The value of median was 3.00 and the value of mode was 3.00

### Data on Students' Most Dominant Intelligence

The data on students' most dominant intelligence were obtained by giving the participants a set of questionnaire to measure the most dominant intelligence of students at English Education Department. The questionnaire was administered to 59 students of EED UMY academic year 2014. A descriptive statistical analysis of their responses to the survey is presented in the following sections.

Table 4.4				
<i>Statistic of Students' Most Dominant Intelligence Table</i>				
Number of Questionnaire	4	6	14	23
N Valid	59	59	59	59
Missing	0	0	0	0
Mean	3.10	3.41	3.46	3.15
Median	3.00	4.00	4.00	3.00
Mode	3	4	4	3
Std. Deviation	.824	.773	.702	.738

Table 4.4 Statistic of Students' Most Dominant Intelligence Table

Table 4.4 shows the value of mean, median, and mode of students' most dominant intelligence. From 30 items in the questionnaire, there were four items which presented the results of students' most dominant intelligence. Those were number four, six, 14, and 23.

The mean is the most popular statistic used to describe participants' responses to the items on the instruments. Table 4.4 shows that the mean of question number four was 3.10. The mean of question number six was 3.41. The mean of question number 14 was 3.46. The mean of question number 23 was 3.15. The median is used to know the middle score of all scores on the instruments.

Based on Table 4.4, the result of median of number four was 3.00, number six was 4.00, number 14 was 4.00, and number 23 was 3.00. Mode is the items that appear frequently. The results of the modes based on Statistic Table 4.4 were 3, 4, 4, and 3.

Continuing the results presented above, the researcher tried to present participants' responses on the questionnaire. The students were asked to respond to four points scale items to measure their most dominant intelligence. Those scales were strongly disagree (1), disagree (2), agree (3), and strongly agree (4). The highest results of students' responses on students' most dominant intelligence are represented by number four, six, 16, and 23 then showed in the following points.

Table 4.5 shows participants' response on declaration number four (I am able to find unique and surprising ways to solve a personal problem). From total participant which was consisted of 59 participants, there were 17 participants chose strongly agree and 33 participants chose agree. In addition, there were two participants chose strongly disagree, and seven participants chose disagree.

Q4 I am able to find unique and surprising ways to solve a personal problem.		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	2	3.4	3.4	3.4
	Disagree	7	11.9	11.9	15.3
	Agree	33	55.9	55.9	71.2
	Strongly agree	17	28.8	28.8	100.0
	Total	59	100.0	100.0	

Table 4.5 Frequency of Intrapersonal Intelligence Table

Table 4.6					
<i>Frequency of Intrapersonal Intelligence Table</i>					
Q6					
I know what I am good at and try to improve my skills.		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	8	13.6	13.6	13.6
	Agree	19	32.2	32.2	45.8
	Strongly agree	32	54.2	54.2	100.0
	Total	59	100.0	100.0	

Table 4.6 Frequency of Intrapersonal Intelligence Table

Table 4. 6 shows participants' response on declaration number six (I know what I am good at and try to improve my skills.). From total participant that consist of 59 participants, there were eight participants chose disagree, 19 participants chose agree, and 32 participants chose strongly agree.

Table 4.7					
<i>Frequency of Intrapersonal Intelligence Table</i>					
Q14					
I choose jobs or projects that match with my skills, interest, and personalities.		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strony disagree	2	3.4	3.4	3.4
	Disagree	4	6.8	6.8	10.2
	Agree	18	30.5	30.5	40.7
	Strongly agree	35	59.3	59.3	100.0
	Total	59	100.0	100.0	

Table 4.7 Frequency of Intrapersonal Intelligence Table

Table 4.8					
<i>Frequency of Intrapersonal Intelligence Table</i>					
Q23 I plan and work hard toward my personal goals, i.e. at school, work, or home.		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	12	20.3	20.3	20.3
	Agree	26	44.1	44.1	64.4
	Strongly agree	21	35.6	35.6	100.0
	Total	59	100.0	100.0	

Table 4.8 Frequency of Intrapersonal Intelligence Table

Table 4.7 shows participants' response on declaration number 16 (I choose jobs or projects that match with my skills, interest, and personalities). From 59 participants there were two participants chose strongly disagree, four person chose disagree, 18 person chose agree, and 35 person chose strongly agree. While Table 4.8 shows participants' response on declaration number 23 (I plan and work hard toward my personal goals, i.e. at school, work, or home), from 12 participants chose disagree, 26 participants chose agree, and 21 participants chose strongly agree.

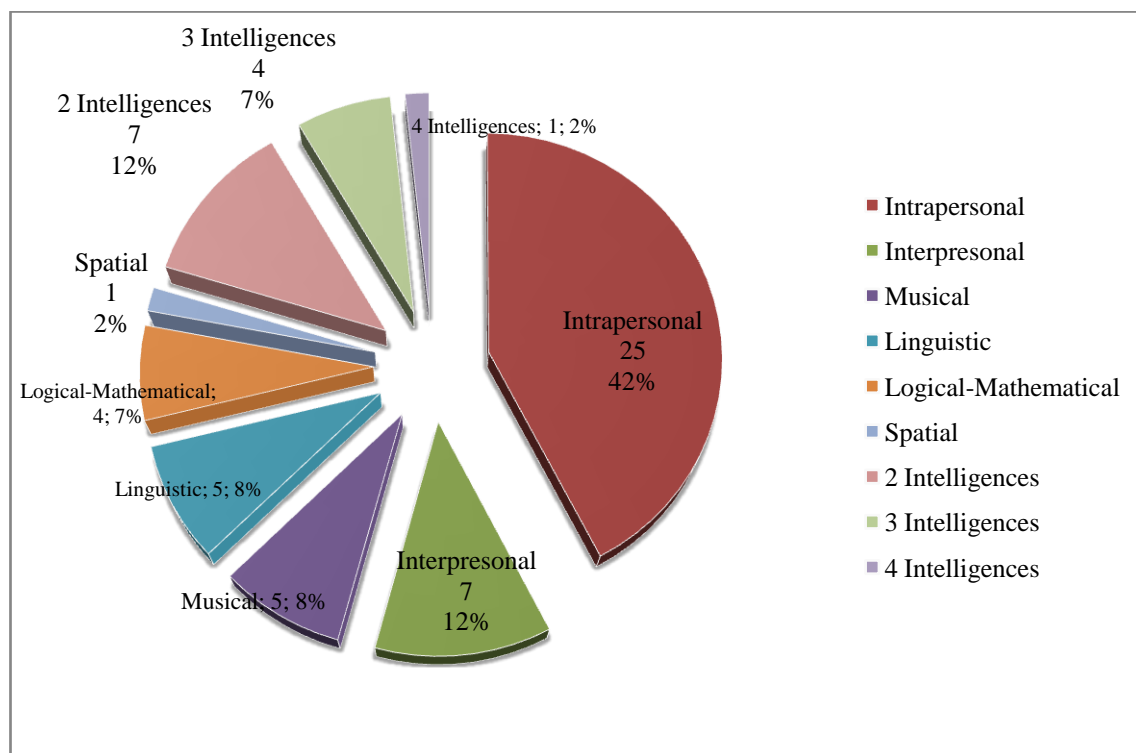


Figure 4.1 Students' Most Dominant Intelligences

No	Kind of Intelligences	N
1	Intrapersonal	25
2	Interpersonal	7
3	Musical	5
4	Linguistic	5
5	Logical-Mathematical	4
6	Visual-Spatial	1
7	2 Intelligences	7
8	3 Intelligences	4
9	4 Intelligences	1
<b>N Total</b>		<b>59</b>

Table 4.9 The Result of Students' Most Dominant Intelligences

### Data on Students' Intelligence

Based on the statistic frequencies that shown by Table 4.3, the researcher tried to count the students' most dominant intelligences used Microsoft Excel then

the results were presented in the Figure 4.1 and Table 4.9. Figure 4.1 shows that the students' most dominant intelligence was intrapersonal intelligence. From total participants, the intrapersonal intelligence achieved the most significant result 42%. In line with the result of Figure 4.1, Table 4.9 also shows the highest achievement was gained by the intrapersonal intelligence. From 59 total participants, 25 other participants had the intrapersonal intelligence.

Seven other students had interpersonal intelligence, while five other participants were in linguistic intelligence and five other people were in musical intelligence. Four other participants were in logical-mathematical intelligence and only one student was in visual-spatial intelligence.

The results indicated that there were seven other participants who had two dominant intelligences. For example they had intrapersonal and interpersonal intelligence which obtained the same score. The results showed there were four students who had three dominant intelligences. For instance a student had intrapersonal, logical-mathematical, and musical intelligence as the dominant intelligence. The results also showed one of the total participants had intrapersonal, interpersonal, linguistic, and visual-spatial intelligences as the dominant intelligence.

### **Data on Students' Speaking Skill**

The data on students' achievement in speaking skill was measured by the teachers of Listening and Speaking for Career Development classes at EED UMY. In measuring the students' ability of speaking skill, the teachers assessed three components. Those three components were fluency, accuracy, and readiness of the



student. In order to make the score easier to analyze, the researcher presented the score in total score as seen in Table 4.10. Then, the score was used to know the correlation between the independent and the dependent variable of this study.

No.	Name	Speaking skill score	No.	Name	Speaking skill score	No.	Name	Speaking skill score
1	A	16	22	W	15	43	AS	15
2	B	14	23	X	16	44	AT	16
3	C	14	24	Y	16	45	AU	19
4	D	14	25	Z	16	46	AV	16
5	E	16	26	AB	18	47	AW	16
6	F	16	27	AC	15	48	AX	16
7	G	16	28	AD	16	49	AY	16
8	H	17	29	AE	16	50	AZ	15
9	J	14	30	AF	15	51	BA	15
10	K	14	31	AG	15	52	BC	18
11	L	16	32	AH	15	53	BD	15
12	M	17	33	AI	15	54	BE	19
13	N	15	34	AJ	18	55	BF	18
14	O	15	35	AK	15	56	BG	16
15	P	17	36	AL	16	57	BH	16
16	Q	16	37	AM	15	58	BI	16
17	R	16	38	AN	16	59	BJ	15
18	S	15	39	AO	15			
19	T	17	40	AP	15			
20	U	15	41	AQ	16			
21	V	16	42	AR	15			

Table 4.10 Students' Speaking Achievement Score Table

Table 4.11 <i>Categories of Speaking Score Table</i>		
<b>No.</b>	<b>Interval</b>	<b>Category</b>
1	0-4	Very Low
2	5-9	Low
3	10-14	Fair
4	15-16	Good
5	17-20	Very Good

Table 4.11 Categories of Speaking Score Table

To know students' level of speaking skill, the researcher used the result of speaking score by counting the mean, median, and mode of the score. After counting, it could be founded that the value of mean was 16. While the value of median was 16 and mode was 19. Then, the researcher used the value of mean as a way to determine students' speaking skill. Because mean was 16, it could be concluded that participants of this study were in good level.

### **The Correlation between the Independent Variable and the Dependent Variable**

In determining the correlation between the students' most dominant intelligence and students' achievement in speaking skill, the researcher used the statistical analysis in SPSS using Pearson Product Moment correlation ( $r$ ). But, before analyzing the correlation between those two variables, the requirement analysis test needs to be conducted. The requirement analysis test included test of normality.

Table 4.12							
<i>Tests of Normality Table</i>							
	X	Kolmogorov-Smirnov <sup>b</sup>			Shapiro-Wilk		
		Statistic	Df	Sig.	Statistic	Df	Sig.
Y	11	.292	3	.	.923	3	.463
	12	.292	3	.	.923	3	.463
	13	.236	11	.089	.866	11	.069
	14	.276	14	.005	.853	14	.024
	15	.248	20	.002	.812	20	.001
	16	.184	7	.200*	.887	7	.258

Table 4.12 Normality table

In this research, the researcher found the normality from Shapiro-Wilk that presented in Table 4.12. The result of normality test was 0.213. The normality was accepted if the range of the Sig. > 0.05. In vice versa the normality was rejected if the range of the Sig. < 0.05. In this study, the normality was 0.21. It means that the data was normal.

Table 4.13	
<i>Coefficient Correlation Interpretation</i>	
Standard $r_{x,y}$	Interpretation
0.00- < 0.20	Very weak correlation
>0.21 - < 0.40	Low or weak correlation
>0.41 - < 0.70	Medium or Enough correlation
>0.71 - < 0.90	High or strong correlation
>0.91 – 1.00	Very high correlation

Table 4.13 Coefficient Correlation Interpretation Table

Table 4.14		
<i>The Correlation Statistic Table</i>		
	Students' speaking skill	Students' intelligence
Pearson Correlation	1	.031
Sig. (2-tailed)		.817
N	59	59
Pearson Correlation	.031	1
Sig. (2-tailed)	.817	
N	59	59

Table 4.14 Correlation Statistic Table

The correlation coefficient ( $r$ ) measures the strengths and direction of a linear relationship between two variables of this study. The value of ( $r$ ) in table 4.14 showed that there was a correlation between students' most dominant intelligence and students' achievement in speaking skill. There was a weak correlation which was showed by the value of Pearson Product Moment correlation ( $r = 0.03$ ,  $n = 59$ ).

### **Discussion**

This part discusses the analysis of the statistical data that had been demonstrated in section above in order to answer the research questions of this study. There were three purposes of this research namely investigating the students' most dominant intelligence, students' speaking skill and the correlation between students' most dominant and students' achievement in speaking skill.

The result on students' most dominant intelligence at EED UMY academic year 2014 had been presented in Figure 4.1 and Table 4.9. Figure 4.1 shows that 42% participants had the intrapersonal intelligence as the most dominant intelligence. Table 4.9 also reveals that from 59 participants there were 25 students who had the intrapersonal intelligence. Intrapersonal intelligence is the

ability to understand oneself. The people who have this intelligence know their strengths, weakness, ability, and achievement well (Gardner, 2006). Thus, the result showed that students at EED UMY 2014 were students who knew their capability well.

However, it did not mean that EED UMY students 2014 only had a specific intelligence. The results also showed there were seven participants with the interpersonal intelligence, five students with linguistic intelligence, five people with musical intelligence, four students with logical-mathematical intelligence and one person with visual-spatial intelligence (see Table 4.9). These results proved that other intelligences were also owned by EED UMY students 2014.

The other data found by the researcher was the score on students' achievement in speaking skill. The score was measured by the lecturer of listening and speaking of career development class. In addition, in order to make score easier to analyze, the researcher had presented the score as seen in Table 4.10. The value of mean on student achievement in speaking skill was 16. It means that the capability of speaking skill at EED UMY students 2014 was good.

The statistic analysis of the correlation between students' most dominant intelligence and students' achievement in speaking skill was determined by the value of coefficient correlation in Pearson Product Moment ( $r$ ). The value of ( $r$ ) in this study revealed there was a weak correlation between students' most dominant intelligence and students' achievement in speaking skill. Table 4.13 tells the coefficient correlation for low or weak correlation is 0.21 -0.40 and the criteria for

perfect correlation is 0.91 – 1.0. The result of ( $r$ ) in this research was 0.03. Thus, there was a weak correlation.

A weak correlation between those two variables might happen because the students' most dominant intelligence of EED UMY 2014 was intrapersonal intelligence. The correlational result probably will be different if the students' most dominant intelligence was linguistic or interpersonal intelligence.

As mentioned in the theory earlier, the interpersonal and the linguistic intelligence almost had an equal characteristic with the criterion of speaking skill which typically engaged students to speak effectively (McCharty, 1998). This statement was supported by Yamanci (2013) who argued about the definition of interpersonal intelligence. He stated that interpersonal intelligence is the ability to understand and to interact effectively with other.

Verbal-linguistic intelligence was sensitivity to speak and to write language (Gardner, 2006). The correlational result probably will show a high correlation if the students' most dominant intelligence was interpersonal or linguistic intelligence. Since those two intelligences almost had an equal characteristics with the criteria in speaking skill.

To sum up, since the result of this research showed there was a weak correlation between students' most dominant intelligence and students' achievement in speaking skill, hence the hypothesis of  $H_1$  was accepted. On the contrary, the hypothesis of  $H_0$  which intended there was no correlation between students' most dominant intelligence and students' achievement in speaking skill was rejected.

