CHAPTER FOUR

RESULTS AND DISCUSSION

This chapter describes the results of the research. As this study used descriptive quantitative, the researcher described the results of the research completely. The results essentially answered the research question. Also, this chapter shows the researcher's discussion to the results.

Results

Descriptive Statistic of Entire Questionnaire Items

After inputting the raw data into SPSS program, the computation and analysis of data to find the descriptive statistic of the questionnaire item was done through. Primarily, the questionnaire items were encoded as follows:

Item Number	Coding	Statement
1	Q1	I recognize the main idea shown in the whole text.
2	Q2	I recognize the way the author persuades the readers (e.g. emotional touching, reasoning, authority, etc.)
3	Q3	I recognize the debate shown in the text
8	Q4	I recognize the reasons and methods used by the author to strengthen his idea (historic, politic, scientific, etc.).
9	Q5	I am aware of the authenticity of the conclusion in the text.
11	Q6	I recognize the validity of the example used to support the main idea/theory.
12	Q7	I recognize the accuracy of the sources used in the text.
13	Q8	I recognize the relevance of the data shown to support an argument in the text.
15	Q9	I make a resume of a text I read.
16	Q10	I write an opinion (argumentative paragraph) towards the text I read.

After data analysis, descriptive statistic of this research was found as shown on Table 4.1 below.

Table 4.1. The Descriptive Statistics of Questionnaire Items.

	N	Sum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Q1	264	746	2.83	.785	-.015	.150	-.749	.299
Q2	264	733	2.78	.897	-.499	.150	.161	.299
Q3	264	693	2.62	.780	-.058	.150	-.402	.299
Q4	264	635	2.41	.822	.038	.150	-.323	.299
Q5	264	646	2.45	.866	.059	.150	-.315	.299
Q6	264	624	2.36	.787	.058	.150	-.190	.299
Q7	264	530	2.01	.836	-.171	.150	-.040	.299
Q8	264	554	2.10	.844	-.036	.150	-.360	.299
Q9	264	449	1.70	.901	.155	.150	-.057	.299
Q10	264	570	2.16	.989	.008	.150	-.371	.299
Valid N (listwise)	264							

The table above also indicates that all questionnaire items are valid and normal. The normality of items are seen from the skewness value that is in range between -0.1 to 0.1.

Frequency Analysis of Questionnaire Items

This section presents the description of the frequency table of the entire questionnaire items in sequence. Clear explanations will follow each table.

Table 4.2 shows the frequency of the questionnaire item number 1: *I recognize the main idea shown in the whole text.*

Table 4.2. Frequency on Item Number 1: *I recognize the main idea shown in the whole text.*

Q1		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Rarely	7	2.7	2.7	2.7
	Sometimes	87	33.0	33.0	35.6
	Often	115	43.6	43.6	79.2
	Always	55	20.8	20.8	100.0
	Total	264	100.0	100.0	

From the table above, seven out of 264 (2.7%) respondents rarely recognize the main idea in the text. Meanwhile, 87 out of 264 (33%) respondents sometimes recognize the main idea. Then, 115 out of 264 (43.6%) respondents often recognize the main idea in the text. Furthermore, 55 out of 264 (20.8%) respondents state that they always recognize the main idea in the text. The table also shows that all data are 100% valid.

Table 4.3 shows the result of the frequency of the questionnaire item number 2: *I recognize the way the author persuades the readers (e.g. emotional touching, reasoning, authority, etc.)*

Table 4.3. Frequency on Item Number 2

Q2		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	4	1.5	1.5	1.5
	Rarely	14	5.3	5.3	6.8
	Sometimes	76	28.8	28.8	35.6
	Often	113	42.8	42.8	78.4
	Always	57	21.6	21.6	100.0
	Total	264	100.0	100.0	

The table above indicates four out of 264 (1.5%) respondents never recognize the way author persuade readers. Then, 5.3% students are rarely, 28.8% students are sometimes, 42.8% students are often, and 21.6% students always recognize the way author persuade readers.

Table 4.4 shows the result of the frequency of the questionnaire item number 3: *I recognize the debate shown in the text*

Table 4.4. Frequency on Item Number 3: *I recognize the debate shown in the text*

Q3		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Rarely	17	6.4	6.4	6.4
	Sometimes	97	36.7	36.7	43.2
	Often	118	44.7	44.7	87.9
	Always	32	12.1	12.1	100.0
	Total	264	100.0	100.0	

From the table above, 17 out of 264 (6.4%) respondents rarely recognize the debate shown in the text. Meanwhile, 97 out of 264 (36.7%) respondents sometimes recognize the debate shown. Then, 118 out of 264 (44.7%) respondents often recognize the debate shown in the text. Furthermore, 32 out of 264 (12.1%) respondents always recognize the debate shown in the text.

Table 4.5 shows the result of the frequency of the questionnaire item number 4: *I recognize the reasons and methods used by the author to strengthen his idea (historic, politic, scientific, etc.).*

Table 4.5. Frequency on Item Number 4: *I recognize the reasons and methods used by the author to strengthen his idea (historic, politic, scientific, etc.).*

Q4		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	1	.4	.4	.4
	Rarely	31	11.7	11.7	12.1
	Sometimes	115	43.6	43.6	55.7
	Often	94	35.6	35.6	91.3
	Always	23	8.7	8.7	100.0
	Total	264	100.0	100.0	

The table above shows that 23 out of 264 (8.7%) respondents always the reasons and methods used by the author to strengthen his idea. Also, 94 out of 264 (35.6%) respondents often, 115 out of 264 (43.6%) respondents sometimes, 31 out of 264 (11.7%) respondents rarely, and one out of 264 (0.4%) respondents never recognize the reasons and methods used by the author to strengthen his idea.

Table 4.6 shows the result of the frequency of the questionnaire item number 5: *I am aware of the authenticity of the conclusion in the text.*

Table 4.6. Frequency on Item Number 5: *I am aware of the authenticity of the conclusion in the text.*

Q5		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	2	.8	.8	.8
	Rarely	28	10.6	10.6	11.4
	Sometimes	116	43.9	43.9	55.3
	Often	86	32.6	32.6	87.9
	Always	32	12.1	12.1	100.0
	Total	264	100.0	100.0	

From the table above, two out of 264 (0.8%) respondents never aware the authenticity authenticity of the conclusion in the text. Meanwhile, 28 out of 264 (10.6%) respondents rarely aware. Then, 116 out of 264 (43.9%) respondents sometimes aware. Furthermore, 86 out of 264 (32.6%) respondents often aware, and 32 out of 264 (32%) always that they state always aware the authenticity of the conclusion in the text.

Table 4.7 shows the result of the frequency of the questionnaire item number 6: *I recognize the validity of the example used to support the main idea/theory.*

Table 4.7. Frequency on Item Number 6: *I recognize the validity of the example used to support the main idea/theory.*

Q6		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	1	.4	.4	.4
	Rarely	30	11.4	11.4	11.7
	Sometimes	123	46.6	46.6	58.3
	Often	92	34.8	34.8	93.2
	Always	18	6.8	6.8	100.0
	Total	264	100.0	100.0	

The table above shows that 18 out of 264 (6.8%) respondents always recognize the validity of the example. Then, 92 out of 264 (34.8%) respondents often recognize, 123 out of 264 (46.6%) respondents sometimes recognize, 30 out of 264 (11.4%) respondents rarely recognize, and only one out of 264 (0.4%) respondents never recognizes the validity of the example.

Table 4.8 shows the result of the frequency of the questionnaire item number 7: *I recognize the accuracy of the sources used in the text*

Table 4.8. Frequency on Item Number 7

Q7		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	10	3.8	3.8	3.8
	Rarely	55	20.8	20.8	24.6
	Sometimes	128	48.5	48.5	73.1
	Often	65	24.6	24.6	97.7
	Always	6	2.3	2.3	100.0
	Total	264	100.0	100.0	

The table above shows that six out of 264 (3.8%) respondents always recognize the accuracy of the sources. Also, 65 out of 264 (24.6%) respondents often recognize, 128 out of 264 (48.5%) respondents sometimes recognize, 55 out of 264 (20.8%) respondents are in rarely recognize, and ten out of 264 (3.8%) respondents never recognize the accuracy of the sources.

Table 4.9 shows the result of the frequency of the questionnaire item number 8: *I recognize the relevancy of the data shown to support an argument in the text.*

Table 4.9. Frequency on Item Number 8

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	5	1.9	1.9	1.9
	Rarely	58	22.0	22.0	23.9
	Sometimes	116	43.9	43.9	67.8
	Often	76	28.8	28.8	96.6
	Always	9	3.4	3.4	100.0
	Total	264	100.0	100.0	

The table above shows that 9 out of 264 (3.4%) respondents always recognize the relevancy of the data shown to support an argument in the text. Then, 76 out of 264 (28.8%) often recognize, 116 out of 264 (43.9%) respondents sometimes recognize, 58 out of 264 (22%) respondents rarely recognize, and five out of 264 (1.9%) respondents never recognize the relevancy of the data shown to support an argument in the text.

Table 4.10 shows the result of the frequency of the questionnaire item number 9: *I make a resume of a text I read.*

Table 4.10. Frequency on Item Number 9

Q9		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	22	8.3	8.3	8.3
	Rarely	85	32.2	32.2	40.5
	Sometimes	114	43.2	43.2	83.7
	Often	36	13.6	13.6	97.3
	Always	7	2.7	2.7	100.0
	Total	264	100.0	100.0	

The table above indicates only three out of 264 (1.1%) respondents never make a resume of a reading text. Then, 28 out of 264 (10.6%) respondents rarely make resume, 116 out of 264 (43.9%) sometimes make resume, 86 out of 264 (32.6%) often make a resume, and 32 out of 264 (12.1%) respondents always make a resume of a reading text.

Table 4.11 shows the result of the frequency of the questionnaire item number 10: *I write an opinion (argumentative paragraph) towards the text I read.*

Table 4.11. Frequency on Item Number 10: *I write an opinion (argumentative paragraph) towards the text I read*

	Q10	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	11	4.2	4.2	4.2
	Rarely	53	20.1	20.1	24.2
	Sometime	108	40.9	40.9	65.2
	Often	67	25.4	25.4	90.5
	Always	25	9.5	9.5	100.0
	Total	264	100.0	100.0	

The table above shows that 25 out of 264 (9.5%) respondents always write an argumentative paragraph towards reading text. Also, 67 out of 264 (25.4%) respondents often write an argumentative paragraph towards reading text. Then, 108 out of 264 (40.9%) respondents sometimes write an argumentative paragraph. Moreover, 53 out of 264 (20.1%) respondents rarely write an argumentative paragraph. Furthermore, 11 out of 264 (4.2%) never write an argumentative paragraph.

Critical Reading Levels of PBI UMY Students

This section revealed the distribution of PBI UMY students' critical reading levels. Firstly, the frequency table of total score from each levels was emerged. The frequency was explained in detail on Table 4.12 below.

Table 4.12. Frequency Table of Total Scores

		Total analyzing score	Total evaluating score	Total creating score
N	Valid	264	264	264
	Missing	0	0	0
Mean		10.63	8.92	3.86
Std. Deviation		2.245	2.457	1.641
Skewness		.007	.091	.029
Std. Error of Skewness		.150	.150	.150
Kurtosis		-.343	.169	.175
Std. Error of Kurtosis		.299	.299	.299
Sum		2807	2354	1019
Percentiles	20	9.00	7.00	2.00
	40	10.00	8.00	4.00
	60	11.00	10.00	4.00
	80	13.00	11.00	5.00

From Table 4.13 above, students who passed 60% is written in bold letter. The bold ones referred to exact numbers of students in that level. After that, the percentage of each levels were accumulated as the result of the population.

To analyze this, the data from frequency table of overall levels' summary was collected (see Table 4.13). After that, only for those who gained average score higher than 60% of the maximal score was categorized as students who occupied in particular levels. The categorizing that took 60% of maximal score was not only based on percentile in the table of frequency, but also, the value indicated that students were often and/or always doing critical reading.

Table 4.13. Total Scores of Each Level

Total Analyzing Scores			Total Evaluating Scores			Total Creating Scores		
Valid	Frequency	Percent	Valid	Frequency	Percent	Valid	Frequency	Percent
5	3	1.1	2	1	.4	0	8	3.0
6	7	2.7	3	1	.4	1	8	3.0
7	8	3.0	4	10	3.8	2	41	15.5
8	24	9.1	5	8	3.0	3	42	15.9
9	43	16.3	6	23	8.7	4	78	29.5
10	47	17.8	7	30	11.4	**5**	**50**	**18.9**
11	39	14.8	8	37	14.0	**6**	**25**	**9.5**
12	**39**	**14.8**	9	47	17.8	**7**	**5**	**1.9**
13	**22**	**8.3**	10	45	17.0	**8**	**7**	**2.7**
14	**19**	**7.2**	**11**	**26**	**9.8**			
15	**12**	**4.5**	**12**	**19**	**7.2**			
16	**1**	**.4**	**13**	**7**	**2.7**			
			14	**5**	**1.9**			
			15	**3**	**1.1**			
			16	**2**	**.8**			
Total	264	100.0	Total	264	100.0	Total	264	100.0

Students at the Analyzing Level. Students in this level were the students who surpassed the analyzing level in Bloom's Taxonomy. Specifically, the percentage of students who were at the analyzing level of critical reading was 93 : 264 x 100% = 35.23%. It implies that in PBI UMY, the percentage of students who were at the analyzing level of critical reading was 45.83% out of the whole PBI UMY student population.

Students at the Evaluating Level. Students in this level were the students who surpassed the analyzing level in Bloom's Taxonomy. Based on the Table 4.13, the percentage of students who were at the analyzing level of critical reading

was 62 : 264 x 100% = 23.48%. It implies that in PBI UMY, the percentage of students who were at the evaluating level of critical reading was 23.48% out of the whole PBI UMY student population.

Students at the Creating Level. Students in this level were the students who outstripped the analyzing and evaluating levels in Bloom's Taxonomy. Based on the Table 4.13, the percentage of students who were at the creating level of critical reading was 87 : 264 x 100% = 32.95%. It implies, in PBI UMY, the percentage of students who were at the creating level of critical reading was 32.95% out of the whole PBI UMY student population.

Figure 4.1 below is the graphic of critical readers' population at PBI UMY. The straight line indicates the population of students at the analyzing level. The dashed line indicates the population of students at the evaluating level. Meanwhile, the dotted line indicates the students' population at the creating level.

Figure 4.1. The Critical Readers' Population and Distributions

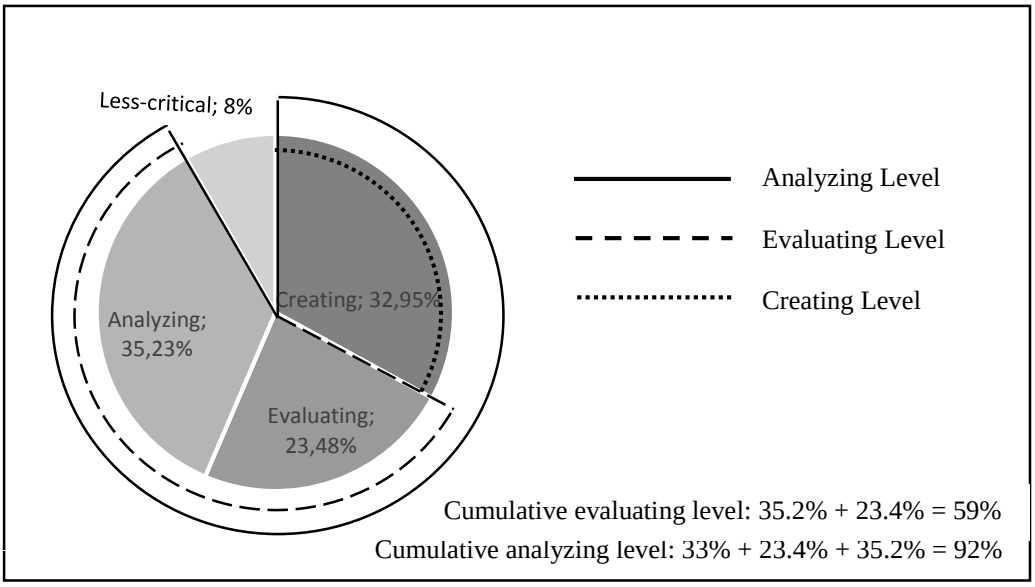

Figure above revealed the population of PBI UMY students' critical reading levels. In analyzing level, that was the cumulative percentages of creating, evaluating, and analyzing level. Meanwhile, the evaluating level was the accumulation of analyzing and evaluating. The result indicated that students of PBI UMY who were in analyzing level, which also were considered as critical readers, were 92% out of total population. Also, the students who were in evaluating level are 59% out of total population. Then, the students who were in creating level are 33% out of total population. Unfortunately, there were still 8% of PBI UMY student population that were below the standard levels of being critical readers.

Students' Ability of Critical Reading

The levels of critical reading were classified in three highest levels as stated in revised Bloom's Taxonomy. They were *analyzing, evaluating,* and *creating.* Table 4.14 shows the total and average score of every levels taken from the questionnaire.

Table 4.14. Overall score for critical reading levels

		Overall analyzing score	Overall evaluating score	Overall creating score
N	Valid	264	264	264
	Missing	0	0	0
Mean		10.63	8.92	3.86
Std. Deviation		2.245	2.457	1.641
Skewness		.007	.091	.029
Std. Error of Skewness		.150	.150	.150
Sum		2807	2354	1019

The percentage of critical reading levels in PBI UMY was taken from the mean of each category (*analyzing*, *evaluating*, and *creating*). Then, the mean score was divided by the maximal score of each category.

Ability at the analyzing level. Based on Table 4.14, the percentage of PBI UMY students' ability at the analyzing level was 10.53 : 16 x 100% = 66.45%. This assumed that a PBI UMY student had an ability in analyzing level equally 66.45%.

Ability at the evaluating level. Based on Table 4.14, the percentage of PBI UMY students' ability at the evaluating level was 8.92 : 16 x 100% = 55.73%. This assumed that a PBI UMY student had an ability in evaluating level equally 55.73%.

Ability at creating level. Based on the Table 4.12, the percentage of all PBI UMY students' ability at the creating level was 3.86 : 8 x 100% = 48.25%. This assumed that a PBI UMY student had an ability in creating level equally 48.25 %.

Figure 4.2. Students' Abilities in Critical Reading

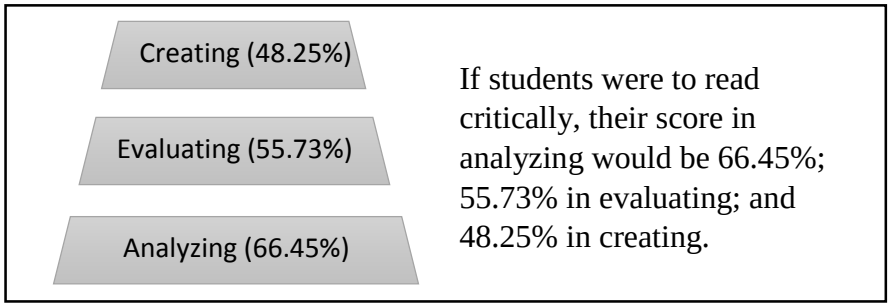

Figure 4.2 shows the levels of PBI UMY students' critical reading abilities. It was shown that students' ability at the analyzing level was 66.45%, while the ability at the evaluating level was 55.73%, and ability at the creating level was 48.25%.

Discussion

Critical Reading Levels: Population and Distribution.

The population referred to overall students in PBI UMY, while the distribution referred to the exact percentages of students who were capable of analyzing, evaluating, and creating. As seen from Figure 4.1, the students who were at the creating level, was 33%. Therefore, it could be categorized that population of PBI UMY students who were able to create (write) a text based on a reading was low. Meanwhile, the population of students who were at the evaluating levels was 59%. So, this means that students who were able to evaluate text are in moderate population. Furthermore, students' population at the analyzing level was 92%. It was categorized that PBI UMY had very high population of students who were in this particular level. Since the requirement of being critical reader was to occupy analyzing level (Kurland, 2010; Huijie, 2010; Duncan, 2014), the result also indicated that most PBI UMY students were critical readers regardless their particular abilities. Therefore, if linked with other previous studies, most students of PBI UMY might be able to create an argumentative writing (Ramadani et al., 2013). Also, PBI UMY students might get a better achievement due to their critical reading (Jannah, 2011).

Certainly, the population of less-critical readers were also revealed in this research. The less-critical readers were those who were not reaching analyzing level. The percentage of PBI UMY students that are less-critical readers was actually 8% which also was addressed as a very low population. This could happen for several probabilities. First, it was the students themselves who might

not have a high level of thinking or reading comprehension, or, second, lecturers in PBI UMY probably have not implemented learnings that can encourage students' critical reading. In addition, it could be the combination of those two. Also, the population of critical readers which was very high indicated several likelihoods. It was whether students themselves who possessed a higher order of thinking or, probably, the learning process in PBI UMY, which forced students to read extremely much as the assignments, had successfully driven the students to be critical readers. Otherwise, it could be the combination of those two. The assumptions above which tell the probabilities affecting the levels of critical reading was not particularly explored further in this research. From beginning, this research was focused only in investigating students' critical reading levels' population and abilities.

Critical Reading Levels: Abilities

From Figure 4.2, the results showed that PBI UMY students' ability in analyzing was 66.45%. Also, students' evaluating ability were 55.73%. Meanwhile, the level of creating ability of PBI UMY students was 48.25%. This results were revealed through the questionnaire items which were investigating students' critical reading level. Indeed, the respondents mostly chose 'rarely' and 'sometimes' in answering the questionnaire.

To categorize those levels, the table of scoring index for classifying critical reading levels was applied (see Table 3.2). In analyzing text (Figure 4.2), students of PBI UMY had a high ability. This clarified that most of students at PBI UMY had high ability to analyze the text. It implied that they had high ability

to identify main idea (Surjosuseno & Watts, 1999), to recognize the authors' motives to persuade readers (Duncan, 2014), and to recognize author's perspective (Paul, 1990). In evaluating text, students of PBI UMY were categorized in moderate level. It implied that if the students were to evaluate the authenticity of the text (Gunawan & Palupi, 2012), to recognize the origin of the sources, and to recognize the relevancy of the supporting data in a text (Duncan, 2014), their ability was moderate. Meanwhile, in creating level, students' ability was categorized as low. This meant that students' ability to make an argumentative text to express their opinion and to summarize a reading text was low. In other words, they might be able to create responses, but their ability was low.

The whole results indicated that higher levels of critical reading were generally more difficult to master. This was precisely linked to Bloom's Taxonomy's postulate that to achieve higher level, the more complex skill is needed (Gunawan & Palupi, 2012). Mustadi (2010) also says that to read critically needs more complex comprehension. Huijie (2010), as well as Paul (1990), states that critical reading needs higher level of thinking.