

THE CORRELATION BETWEEN CRITICAL THINKING SKILL AND ARGUMENTATIVE WRITING SKILL OF THE SECOND YEAR STUDENTS OF ISLAMIC SENIOR HIGH SCHOOL AULIA CENDEKIA PALEMBANG

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Abstract

This research aimed to describe the relationship between critical thinking skill and argumentative writing skill of Islamic Senior High School Aulia Cendekia Palembang in academic year 2017-2018. The population of the study was 60 active second year students. By using total population sampling technique, there were 60 students involved as participants in this research. The data were obtained by using two instruments which were Cornell Critical Thinking Test (CCTT) and argumentative writing test. To answer the first problem, Pearson Product Moment Correlation Coefficient was used. From the data analysis, it was found that there was significant correlation between students' critical thinking skill and their argumentative writing skill with correlation coefficient .695, and the p-value was (.000) lower than significance value ($.000 < .005$). Since there was a significant correlation, Regression Analysis was used. As the result, critical thinking skill has 48.4 % contribution in students' argumentative writing skill. In short, critical thinking skill had correlation to argumentative writing skill, and gave 48.4 % contribution to the students' argumentative writing skill of the second year students of Islamic Senior High School Aulia Cendekia Palembang.

Keywords: critical thinking skill, argumentative writing skill

INTRODUCTION

Writing skill plays an important role in learning English as a foreign language. It is considered as an important skill needed for both academic purposes and lifetime learning (Asgari, 2012; Ifanti, 2012). The definitions of writing are variously stated by some experts. According to Rivers (1981, p. 294), writing is conveying information or expression of original ideas in a consecutive way in the new language. It is also supported by Akkaya & Kirmiz (2013, p. 1138) who claim that writing is the expression of feelings, thoughts, desires and plans in black and white.

As an important tool, writing has so many benefits. As stated by Mandal, (2009), students who are good at writing will bring many benefits. Firstly, writing is a good way to help develop students' ability of using vocabulary and grammar, increasing the ability of using language. Secondly, writing is an essential tool to support other skills. If a student has good writing ability, they can speak and read the text more effectively.

Thirdly, writing is a way to approach modern information technology as well as the human knowledge.

As one of the basic skills in English, compared with listening and speaking skills, writing is more complex skill that it involves constructing a new text rather than dealing with an already created one (Mohammadnia & Ayaz, 2014). Writing ability is only learnable with the help of formal and organized instruction (Emig, 1997). In addition, Hiew (2015, p. 27) claims that writing requires students to be able to write smoothly as the ideas flow through their mind. Jarvis (2000) also emphasizes that many students do not enjoy writing because they feel that if they cannot do it correctly at the first time then they will never get it. Even though low and average proficiency students are recommended to write freely without worrying about their spelling and grammar, they still find it hard to express their thoughts and feelings due to the lack of vocabulary knowledge, writing practice and reading (Muslim, 2014, p. 105).

Meanwhile, Alwasilah (2005, p. 1) argues that writing is the most neglected skill in language education in Indonesia. Then, writing habit in Indonesia is lower than reading habit (Khak, 2011). This situation is basically supported by the fact that Indonesia is in a far move to consider English as the foreign/ second language in the country. Moreover, Scopus and Scimago as the indexers of many journals in the world note that in 2013, there were only 3.231 journal publications in Indonesia (Arradian, 2014). This number is far from satisfying compared to Malaysia and Singapore's. Thus, as stated in *Surat Dirjen Dikti No. 152/E/T/2012*, there is a rule from Directorate General of Higher Education of Indonesia that students have been required to write a research article and publish it in a journal as a requirement for graduation since August 2012. Masduqi (2011, p. 186) argues that the limited use of critical thinking skills and meaningful activities are the reasons why students in Indonesia tend to be ineffective in exchanging ideas and writing in English.

According to Lowenberg (2000), In Indonesia, there are various types of writing that should be learnt by the students including expository, narrative, descriptive, recount and argumentative. Richards and Schmidt (2010) define argumentative writing as composition which the writers give their opinion and arguments as well as evidence in order to support or defend position. In line with this, Zhu (2011, p. 34) describes argumentative writing as the act of forming reasons, making inductions, drawing conclusions, and applying them to the case in discussion; the operation of inferring

propositions, not known or admitted as true, from facts or principles known, admitted, or proved to be true.

Writing argumentative is not an easy task. It is supported by Amalia (2016) who argues that all of those skills are useful for students, however; the ability of argumentative writing seems to be the most crucial one. It is because the ability of argumentative writing is used more in field of education and workplace than other. It is needed for writing article and essay, conducting research and applying scholarship and etc. Moreover, Saito (2010) also claims that argumentative writing skill as the most difficult among other writing skill. It is because composing argumentative writing requires students to have a critical thinking, scientific ideas, and argumentative expression.

In L1 context, Crowhurst (1991) reviewed the previous studies on argumentative writing and found that even native English speakers have poor performance in writing an argumentative discourse throughout the school system. The problems in argumentative writing identified in those studies were writing shorter texts than narration, insufficient content and ideas, failure to support the point of view, poor organization due to a lack of knowledge concerning argumentative structure and stylistic inappropriateness.

In Indonesian context, there are many explanations accounting for students' difficulties in writing an argumentative essay. According to Rahmatunisa (2014), it is noted that Indonesian students are more familiar with narration, such as writing about their experiences in journals or diaries than any other types of writing. Thus, even when they are assigned to write an argumentative essay, they tend to produce narration and construct their own pattern to write an argumentation. Besides, Al-Khasawneh (2010) clarifies Indonesian students lack implicit knowledge about argumentative conventional pattern. Consequently, they do not know how to write a good argumentative essay.

Regarding the problem above, studies have been undertaken to investigate the correlation between students' critical thinking skill and students' argumentative writing skill. The findings from the previous studies take an important role in designing this research. On the other hand, Assadi, Davatgar, and Jafari (2013) showed that integrating current issues of critical thinking activities improved students' writing.

From the problems occurred above, the writer believes that the level of the students' critical thinking skill is the cause of these problems. There will be an investigation about the correlation between critical thinking skill and argumentative writing skill and to see how critical thinking skill influences argumentative writing skill. Therefore, in this study, the writer intended to investigate whether or not there is a

correlation between critical thinking skill and argumentative writing skill of the second year students of Islamic Senior High School Aulia Cendekia Palembang, and also the writer wanted to know if critical thinking skill influence their argumentative writing skill.

THE CONCEPT OF CRITICAL THINKING SKILL

Nikou, Bonyadi, and Amirikar (2015) explain that the definitions of the concept of critical thinking are broad, the definitions range from multiple perspective: philosophical, psychological, and educational. Some of definitions given by experts are sometimes different. However, it is important to gather the serious definition to construct the definition of critical thinking. Critical thinking can be defined as the ability to identify and analyze problems as well as seek and evaluate relevant information in order to reach an appropriate conclusion (Watson and Glaser, 2012). Good conclusion can be reached by identifying, analyzing, and evaluating the matter issues. Critical thinking is also called as “reasonable thinking”. It means that having good and logical reason is the major characteristic of critical thinking skill needed when drawing conclusion or making decision. Paul and Elder (2008) define critical thinking as the art of analyzing and evaluating thinking with a view to improving it. In line with Paul and Elder opinion, Freeley and Steinberg (2007) describe critical thinking as the ability to analyze, criticize, and advocate ideas, to reason inductively and deductively, and to reach factual or judgemental conclusions based on sound inferences drawn from unambiguous statements of knowledge of belief. Critical thinking is about analyzing, evaluating, and criticizing something (knowledge, information, problem, and issue) in order to find good conclusion and judgment. Meanwhile, Wasshburn (2010) points out that critical thinking relates to the activity to criticize people or things both in terms of negative side of them that may lead to the comprehension and best judgment about them.

THE CONCEPT OF ARGUMENTATIVE WRITING SKILL

Sweat (2012) stated that argumentative writing is a genre of writing that allows writers to express their opinion on a topic and support that opinion with strong logic and evidence. The main purpose of argumentative writing is to convince the readers that the writer’ particular view or opinion on a controversial issue is correct and to persuade the audience to take some sort of action (Langan, 2008). In argumentative writing, a writer attempts to support or defend a position or difference point on with his/her logical arguments, ideas, and opinions. In argumentative writing, some data, example, and

other's opinion are needed in order to support the argument. Good argumentation is required because it can help the writer easily convince and persuade the reader. Therefore, the writer should truly know the issue, his/her position, knowledge in order to give good argumentation.

RESEARCH METHODOLOGY

In this study, the writer used correlational study. Correlational study was applied since the writer mainly intended to find out the correlation among variables. The population of this study was all of the second years students of Islamic Senior High School Aulia Cendekia Palembang in the academic year 2017/2018. The total number of the population was 60. The writer chose the sample using total population sampling.

The data were collected by using a Cornell Critical Thinking Test (CCTT) and argumentative writing test. To measure the students' critical thinking skill, there were 72 questions in the Cornell Critical Thinking Test (CCTT) which was taken from Ennis (2012). The last instrument was argumentative writing test taken by asking the students to make argumentative text consist of maximum 250 words and the topic came from their English text book.

The data collected from the Cornell Critical Thinking Test (CCTT) and the argumentative writing test that were analyzed by SPSS 20. To explain the data, descriptive statistics was presented. Then, it was applied the normality and linearity test. To see the correlation between variables, Pearson product-moment correlation coefficient was applied. Furthermore, to see the influence of predictor variables toward criterion variable, regression analysis was applied.

RESULTS

First of all, the result of critical thinking presented. Critical thinking skill minimum score was 55 and the maximum score was 93. Critical thinking skill's mean score was 74.65 and the standard deviation was 9.010. The last, argumentative writing skill minimum score was 62 and maximum score was 88. The mean score of argumentative writing skill was 75.65 and the standard deviation was 6.903.

Table 1
Score Distribution of Critical Thinking Skill

Level of Critical Thinking Skill	Range Score	Number of Students	Percent (%)
High	71 – 100	35	58
Medium	50 – 70	25	42
Low	0 – 49	0	0
Total		60	100

Based on table 1, the descriptive data revealed that the majority of students, 35 out of 60 (58%), had high critical thinking skill and as much as 25 students out of 60 (42%), had medium critical thinking skill. Last but not least, there was no one categorized as low critical thinking skill.

Table 2
Distribution of Students' Argumentative Writing Skill

Categories of Argumentative Writing Skill	Score Interval	Number of Students	Percent (%)
Excellent	86 – 100	5	8
Good	71 – 85	24	40
Average	56 – 70	31	52
Poor	41- 55	0	0
Very Poor	0 - 40	0	0
Total		60	100

Secondly, it can be seen from the table 2 that for each category, 5 students had excellent argumentative writing skill. 24 students had good argumentative writing skill, 31 students had average argumentative writing skill and there was no students had poor argumentative writing skill.

Based on the results of normality test, it was found that the significance value of critical thinking skill was 0.418, and the significance value of argumentative writing skill was 0.779. Since all of the significance values are higher than 0.05, it can be concluded

that the data are normally distributed. Therefore, the data could be used for further analysis.

Next, the results of linearity showed that, the deviation from linearity between critical thinking skill and argumentative writing skill was 0.229. To sum up all the data were linear for each correlation and regression.

Table 3
The Correlation between Students' Critical Thinking Skill and Argumentative Writing Skill

Correlations		VAR00001	VAR00002
Critical thinking skill	Pearson Correlation	1	.695**
	Sig. (2-tailed)		.000
	N	60	60
Argumentative Writing Skill	Pearson Correlation	.695**	1
	Sig. (2-tailed)	.000	
	N	60	60

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

Based on the table 3 showed that the correlation coefficient or the r – obtained (0.695) was higher than r -table (0.05) ($n-2=58$). Then the level of probability (p) significance (sig.2-tailed) was .000. It means that p value (.000) was less than 0.05. Thus, for the first hypotheses, H_1 was accepted and H_0 was rejected, it means that there was significant correlation between critical thinking skill and argumentative writing skill of the second year students of Islamic Senior High School Aulia Cendekia Palembang. Therefore, since the data provided that there was a significant correlation between the variables, the further analysis was conducted in the term of finding the significant influence between the variables

Table 4
R-square Analysis

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.695 ^a	.484	.475	5.003

a. Predictors: (Constant), Critical Thinking Skill

Table 4 revealed that the R-square was .484. It means that the students' critical thinking skill gave significant effect in the level of 48.4% toward argumentative writing skill, and 51.6% was unexplained factors value. Then, for the second hypotheses, H1 was accepted and H0 was rejected, means that critical thinking skill significantly influence argumentative writing skill of the second year students of Islamic Senior High School Aulia Cendekia Palembang.

DISCUSSIONS

There are some discussions of this study. First, in this study most of the students had high level of critical thinking skill. The explanation to support this finding is that from the beginning of their life, the students had been involved in critical thinking process. From they were born, they use critical thinking to analyze, evaluate, and criticize something (knowledge, information, problem, and issue) in order to find good conclusion and judgment. Wasshburn (2010) points out that critical thinking relates to the activity to criticize people or things both in terms of negative side of them that may lead to the comprehension and best judgment about them. It means that before making decision or judgment, a critical thinker has to think critically about what should to do or believe in order to make a good and reasonable judgment and decision. Critical thinking skill is obviously indispensable used in many field such as in education, research, finance, social, politics, management or other aspects of life.

Next, for argumentative writing skill the data distribution shows there was the small amount of percentage of the students who were in excellent level as the students who were in average level of argumentative writing skill. It could happen due to the lack of vocabulary, limited idea, and difficulty in expressing their though trough writing. However, there was no one in poor and very poor level of argumentative writing skill. It might be because the students of Islamic Senior High School Aulia Cendekia Palembang are aware of their critical thinking skill, students can easily use their ability in analyzing, evaluating, and criticizing to make argumentative writing from a certain topics. They assess themselves of how capable they were to accomplish a given task. Critical thinking skill could affect their judgement and opinion which is necessary in making argumentative writing. Student with high critical thinking skill would give great reason and evidence when facing difficulties or problems, they probably look for strong evidence to support their opinion. On the other words, the critical thinking skill level effects argumentative writing activity. Moreover, level of critical thinking skill, in fact,

gives different performance in argumentative writing skill. Students with high critical thinking skill can provide a strong evidence to support their idea and make a rational reason about the problem. In the other words, the higher critical thinking skill level the students have, the more they easily to make an argumentative writing. It means students with high critical thinking skill can be more easily to gather their ideas than students with low critical thinking skill. It can be assumed that critical thinking skill is crucial in composing writing. It is because each process of writing requires some thinking skills. Therefore, without being able to think and also write critically, the writers can not result a piece of good writing. Besides, argumentative writing requires mental discipline and close attention to the set of logical rules which is include in critical thinking (Langan, 2007).

The finding in the study was in line with the study of Assadi, Davatgar, and Jafari (2013). They found that students satisfaction critical thinking skill had significant positive correlations with writing skill. Results of this study show that students with higher critical thinking skill are more likely to receive higher scores in writing. Ruggiero (2004) stated that it can be due to the fact that critical thinking in general can help students to participate in tasks, and students with high critical thinking skill set higher goals and engage themselves in tasks which require considerable fact and evidence (Tays, 2007).

Rashid and Hashim (2008) also revealed the existence of positive and significant relationships among critical thinking ability and language proficiency in foreign language learner. They found that there was a statistically significant positive relationship between critical thinking ability and language proficiency. Students who had high critical thinking ability also achieve at least a satisfactory level of proficiency in the target language.

Besides, Agustina (2013) found that there was relationship reading attitude, critical thinking, and self-determination, in a college sample. Critical thinking as the predictor is used in the model to measure of academic reading attitude, although social self-determination is also shown to have a significant effect. Such a theory would predict that students with high levels of critical thinking are generally higher achievers than those who have lower levels of critical thinking.

Nikou, Boyadi, and Amirikar (2015) also show the existence of a significant positive correlation between critical thinking skill with the quality of argumentative writing. Therefore, the students who have good critical thinking skill, they must have good writing skill as well, particularly in argumentative writing. Meanwhile, the students

who lack of the critical thinking skill, they usually have poor argumentative writing skill. Because having critical thinking skill make the students be able to develop the idea critically and creatively.

On the contrary, Sugianto (2014) could not find any significant effect between critical thinking skill and writing skill. It indicates that the differences of means between high critical thinking skill and low one are not significant. Even though college-students with higher critical thinking skill also perform higher in writing activity, in fact, the differences between high and low critical thinking are not quite significant in writing activities. The level of critical thinking skill either low or high, surprisingly does not give significant effect in writing activities though students with high critical thinking could make better writing. This indicates that high critical thinking does not automatically emerge and initiate students to make better writing task. This is contrary to research by Helix (2015) which showed a large significant positive correlation between critical thinking and writing of students in Florida State University; in writing activities for college students of Florida State University, students' level of critical thinking skill affect students' ability in writing.

However the unexplained factors also had contribution on students's argumentative writing skill. The findings of this study may have some pedagogical implications for teachers, students, and next researcher. Finally, this study was successful in investigating the correlation and the influence between critical thinking skill and argumentative writing skill of the second year students Islamic Senior High School Aulia Cendekia Palembang.

CONCLUSION

The finding indicated that the alternative hypothesis was accepted while the null hypothesis was rejected as the correlation coefficient was .695 and the p-value was .000 which was less than .05 ($.000 < .05$). It can be implied that there was significant correlation between students' critical thinking skill and argumentative writing skill of the second year students of Islamic Senior High School Aulia Cendekia Palembang. This result also means that the students with high level of critical thinking skill also has good argumentative writing, and students who has low level of critical thinking skill tends to have poor argumentative writing skill as well. Futhermore, critical thinking skill gave 48.4 % contribution in the students' argumentative writing skill. It can be concluded that the more critical they think, the more creative and critical they are in developing the ideas in making good argumentative writing. Therefore, future studies are expected to consider

whether teaching method, teaching strategy, or teaching technique related to develop students' critical thinking skill, and also to correlate with other variables since there are many unexplained factors that affect students' argumentative writing skill.

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