

## READING IMPLICATION: CORRELATIONS BETWEEN CRITICAL READING SKILLS AND SCIENTIFIC ARTICLE WRITING SKILLS

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**Abstract:** This study aimed to describe the relationship between the critical reading skills and the scientific articles writing skills for the primary education students. This study used purposive sampling which carried out 27 students. Data were collected through objective tests and performance test. The objective tests were used to determine the results of the critical reading skills; meanwhile, performance tests were conducted to determine the results of scientific article writing skills. The data analysis and discussion were descriptive correlational to find out the great relationship between the critical reading skills and the scientific article writing skills. Based on the results of the study, the researcher concluded that the primary education students' critical reading skills were sufficient, an average of 77.44. Moreover, the primary education students' scientific articles writing skills were in sufficient categories, 67.29. Furthermore, the significant correlation between the two skills was 0.023.

**Keywords:** relationship, critical reading skills, scientific article writing skills, students

## 1. Introduction

Life continues to develop, people must enhance their insights to compete with the demands of their life to achieve a better life. One of the attempts to reach that point is by reading to get the latest information in life. This will help them to compensate for their lives with their competencies or potential. Through reading, education can run perfectly. The importance of reading was also expressed by Mortin J Adler (1972) who stated that reading is the basic tool in the living a good life. This means that reading is the main tool to make a better life. If someone wants to improve his life, he must improve their reading ability since the great reading skills can help someone to get the most accurate information in his life. The improvement in reading skills also aims to make literate human beings, those who can read and apply the meaning of what they have read. When someone reads critically and understands a reading, he will think and connect the basic concepts of the knowledge he has with the information he reads. Therefore, someone who does critical reading automatically connects his reading activities with his critical thinking skills. According to Catherine Wallace (2003, p. 42) critical reading is a reading activity focusing on one's cognitive skills. This is in line with the opinion of Tarigan (2008, p. 9) which states that it is necessary to think and be critical when someone does critical reading since critical reading makes the reader process the reading material critically and analytically. Thus, the critical reading activities can be defined as a strategy to explore the contents of the reading based on the rational judgment by the reader with a deeper involvement with the researcher's thoughts contained in the reading.

In the academic sphere in higher education, the educators and the students must master the critical reading skills. Critical reading by students in higher education is expected not only as an activity to disclose insights and increase knowledge but also as a driver of the development of the science through researches, which are the output of the critical reading and thinking about the new sciences that have been read. The critical reading process requires the reader to have a high level of cognition, which requires the reader to be wise, full of grace, deep thinking, evaluative, and analytical. According to B Oliveras (2014), the critical reading is an active process of building meaning based on text. The critical reading is a process to read the text in depth then the researcher gives meaning to the text he reads. The critical reading process includes evaluation and analysis carried out by the reader to find out the purpose of the reading completely. It is necessary for the researcher to help him provide an assessment of readings that have been read. Through critical reading, a person will have a lot of knowledge that can be put into new ideas in the form of writing, including the scientific articles. The language theory and skills have implications for one's writing skills (Dostal & Wolbers, 2014). Writing scientific papers requires the findings of the experts' theories from the results of the reading activities, therefore the researcher conducted a correlation study to find out the relationship between the critical reading and the scientific articles writing skills by the primary education students.

## 2. Literature Review

Critical reading is a reading approach by considering at the researcher's motives, then evaluate it. Critical reading means the ability to read analytically by giving an assessment (Maltepe, 2016). While, according to Tarigan (2008), critical reading is a kind of reading that is done wisely, full of grace, depth, evaluative, and analytical, and not just looking for mistakes. Based on the previous experts' definition of critical reading, it can be concluded that critical reading is very useful for readers who aim to know the contents of a reading through the process of reading evaluating and analyzing. In doing the critical reading, the reader will recognize and interrogate the researcher's assumptions, points of view, or goals. Thus, in doing the critical reading, the reader will look at the rationalization of reading, reflective, testing assumptions, digging facts and giving judgments (Brookfield, 1987 quoted in Karabay, 2012).

### Writing skill

Writing skill is an ability to express thoughts, ideas, opinions about something, responses to a desire statement, or the expression of feelings by using written form. According to Henry Guntur Tarigan (2008), writing skill is one of the productive and expressive language skills used to communicate indirectly and not to face to face with other parties. A person's writing skills will be slightly influenced by his knowledge and reading attitudes (Graham & Abbott, 2012). The better the quality of someone's reading skill, the better the style of writing, as well as the knowledge that will also affect the quality of writing.

### 3. Method

This study was quantitative research by using descriptive method. This study was quantitative research since the data were in the form of scores and analyzed by using SPSS 19. This was in line with the statement of Borg & Gall (2003) which stated that quantitative research used numbers starting from the data collecting, data interpreting, and the result displaying. The descriptive method in this study used to describe the relationship between the critical reading skill and the scientific article writing skill of the primary education students in Indonesia University of Education.

The population of this study was the sixth semester of the primary education students of science education faculty of Indonesia University of Education. This study used purposive sampling to carry out the sample based on the proportion of the classroom members. The sample of this study was the students focusing on language namely 27 students.

This study used two instruments, objective test and performance text. The objective test was used to measure the critical reading skill, meanwhile the performance test was used to measure the scientific article writing skill. The critical reading skill was measured by using the multiple-choice objective test, five alternative answers (A, B, C, D, and E).

The indicators used to measure the critical reading were based on the theory proposed by Catherine Wallace (2003). They are (1) the ability to remember and recognize, (2) the ability to interpret the implicit meanings, and (3) the ability to apply the concepts in reading, and (4) the ability to analyze the contents of the reading, (5) the ability to make a synthesis, and (6) the ability to assess the contents of the reading. While the indicators in writing scientific papers, the researcher adjusts to the stages or systematics of scientific writing according to Isah Cahyani et al. (2018).

### 4. Results

Based on the results of the data analysis, the mastery of the critical reading skills of primary education students can be categorized in sufficient categories. This study found the average score of the students' critical reading skills, namely 77.44% with qualifications from sufficient in the range of 100%. The calculation of the level of the students' critical reading skills was obtained from the results or the students' scores of their objective questions answers after doing the critical reading of the arguments in the passages that the researcher has given. While the average score of students in writing scientific articles was 67.29 with the sufficient qualifications in the range of

100%. The average score for the writing scientific articles was obtained from the performance score in the form of scientific articles written by the students after conducting critical reading activities from reading the arguments. Explanation of the average score of the critical reading and the scientific writing by the students in table 1.1 as follows,

Table 1.1 the average scores of the primary education students' critical reading and scientific writing

Descriptive Statistics			
	Mean	Std. Deviation	N
Critical_Reading	77,4444	14,29183	27
Scientific_Article_Writing	67,2963	15,43925	27

Furthermore, the next step after knowing the average value of the critical reading and scientific writing of the primary education students was the test of the correlation between the scores of reading ability and writing ability. The researcher conducted a correlation test using the SPSS Product Moment Test 19. The correlation test results between the scores of the critical reading skills and scientific articles writing skill of the primary education students showed a significance of

0.023. In the provisions of the correlation test, it can be stated that there was a relationship between both variables if the correlation test results show a significance of less than 0.05 (sig <0.05) and cannot be stated that there was a relationship between both variables if the correlation test results showed a significance of more than 0.05 (sig > 0.05). Explanation of the correlation test of critical reading skills and scientific writing by the primary education students in table 1.2 as follows,

Table 1.2 the results of the correlation test of the primary educations

		Critical_Reading	Scientific_Article_Writing
Critical_Reading	Pearson Correlation	1	,437*
	Sig. (2-tailed)		,023
	N	27	27
Scientific_Article_Writing	Pearson Correlation	,437*	1
	Sig. (2-tailed)	,023	
	N	27	27

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

## 5. Conclusion

Based on the result of this study, the researcher concluded that the primary education students' critical reading skills were sufficient, average 77.44. Meanwhile, their scientific writing skills were sufficient also, average 67.29. Furthermore, the study showed that there was a correlation between their critical reading and scientific writing skills, a significant score was 0.023.

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