

**THE EFFECT OF LEARNING STRATEGY AND CRITICAL THINKING
ON EXPOSITION WRITING ABILITY IN 6TH GRADE ELEMENTARY
SCHOOL**

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Article Info	Abstract
History: Submitted June 1 th , 2021 Revised October 22 th , 2021 Accepted November 9 th , 2021	<p>This study aims to determine the effect of the use of problem-based learning, inquiry learning strategies, and critical thinking skills on exposition writing ability. The research method used is an experimental method, in two different study groups. The research design used was factorial design. Data grouping is distinguished through two treatments, namely learning strategies and critical thinking called factors or main effects and differences in each treatment called levels. Based on the results of the calculations, the research results obtained that: (1) There are differences in the ability to write expositions between students who study using problem-based learning strategies and inquiry strategies. (2) There are differences in the ability to write an exposition of students who have high critical thinking skills with students who have low critical thinking skills. (3) For students who have high critical thinking skills, the ability to write expositions is better using problem-based learning strategies than using inquiry strategies. (4) For students who have low critical thinking skills, the ability to write exposition is higher using an inquiry strategy than using a problem-based learning strategy. (5) There is an interaction effect between the use of problem-based learning strategies and students' critical thinking on the ability to write expositions.</p> <p>Keywords: Problem Based Learning; Critical Thinking</p>

A. Introduction

Language is the most effective means of communication, which is expressed in spoken and written form. Widjono (2007:14), says that language is a symbol system of speech sounds used in various environments, levels, and diverse interests. Through language, humans can correspond (communication), share experiences, learn from each other, and can improve intellectually.

Based on the results of observations and interviews conducted by the author with the 6th grade teacher of SDN Labuan 3, in conducting the writing activities, the students often face various difficulties, considering that writing is a complex activity. Some obstacles experienced by students in writing generally are that students do not use Indonesian properly and correctly in accordance with the enhanced spelling rules. Besides that, students have difficulty in expressing the ideas they want to be informed about and do not understand the problems they want to write about. This deficiency is further exacerbated by the lack of students' ability to understand the

problems they want to write, difficulties in expressing ideas, and even developing ideas into coherent paragraphs. Especially in the writing exposition learning which in fact is a complex essay that requires the author to express an argument against the problem based on the previous analysis.

Sagita (2014:1-2) states that problem-based learning is a learning process that begins with problems that occur in the work environment. Meanwhile, Agus (2012:12) states that problem-based learning is closely related to critical thinking skills. Meanwhile, Fakhriah (2014:95) says problem-based learning is a learning model that uses real problems encountered in the environment as a basis for acquiring knowledge and concepts through critical thinking and problem-solving skills. The self-learning inquiry model can affect thinking skills with a percentage score of critical thinking skills are 55% in the experimental group and the control group at 27% (Jupriyanto dan Sari, 2019).

The problem formulation in this research is “How are the Influence of Learning Strategies and Critical Thinking on the Ability to Write Exposition in 6th Grade Elementary School?”

Tan in Rusman (2010:232) says problem-based learning is the use of various kinds of intelligence needed to confront real-world challenges, the ability to face everything new and existing complexities. Prof. Howard Barrows and Keelson in Amir (2013:21) said that problem-based learning is a set of subjects taught in educational institutions and learning systems. In the curriculum, things are arranged which require students to gain meaningful understanding, make them proficient in solving problems, have their own learning strategies, and have the skills to participate in teams.

Hidayati (2009:24) says that critical thinking skills are important in language learning. Language is often called a tool of thinking, although it is more commonly referred to as a tool of social interaction. Furthermore, Ennis in Fisher (2009:4) says that a reasonable and reflective view that

focuses on deciding what to believe or do is the definition of critical thinking.

While Glaser in Fisher (2009:3) defines critical thinking as an attitude that wants to think deeply about problems and things within the scope of one’s experience, knowledge of observational techniques and rational reasoning, and skills to apply strategies.

Meanwhile, Mustafa in Hidayati (2009:24) conveys several definitions of critical thinking as follows:

- a. the activity of carefully and deliberately considering whether to accept, reject, or withstand the judgment.
- b. the activity to understand the meaning of statements, feel ambiguity, measure the truth of conclusions, and assess the acceptability of statements.
- c. a process that emphasizes an attitude of postponing the judgment, involving logical judgment and problem-solving which leads to well-calculated decisions and actions.

Critical thinking demands a great effort to examine every belief or assumptive knowledge based on the supporting evidence and the further conclusions that resulted from it. Critical thinking is not only limited to thinking about something without proof of solution but being able to analyze problems and provide solutions to the problems encountered.

Yaumi (2012:67) says critical thinking is the knowledge (cognitive) ability to say something with confidence because it relies on logical reasons and strong empirical evidence. Critical thinking is a person's ability to think rationally and reflectively by emphasizing making decisions about what to believe or do. There are important aspects that must be implemented in critical thinking before drawing a conclusion from a problem. As Dike said in Diyasa (2012:26), critical thinking skills have 3 aspects, namely the definition and classification of problems, assessing and processing information related to the problems, and providing solutions or making conclusions and solving problems. The first thing is

to define the problem or clarify the problem. Second, after the problem clarification stage is completed, someone starts searching for information related to the problem either through observation or interviews. The three data or information are compiled and sorted so the conclusions and solutions are appropriate and in accordance with the problems encountered. The important thing from critical thinking activities is to look for various information and sources based on the problem, then the information is analyzed with the basic knowledge that students already have to make the conclusions.

Sumadira (2004:vi) defines writing as a productive and expressive activity of the intellectuals. He further stated that writing is important to fulfill three things, first, as a vehicle for discussion and dissemination of ideas; second, contribute thoughts in the framework of finding a solution to a problem; and third, as a means of self-actualization and existence. It is said to be self-actualization and existence because with writing we can show how much ability and

knowledge we have about the things we write about. That way, the author's existence will appear and be seen. Meanwhile, according to Tarigan (2008:22), writing describes a language that is understood by someone, so other people can read the symbols and graphics.

The definition of exposition is conveyed by Semi (1990:37), exposition is the essay that aims to explain and provide information about something such as those contained in the instructions of using something, textbooks, the process of making food, and the treating something. Meanwhile, Atmazaki (2006:92) proposes exposition as an essay that explains something or tells

something so the reader understands what is written. While Keraf (1982:3) states that an expository essay is an essay that only aims to explain a problem and the reader will give an assessment of the essay. Mariskan in Dalman (2015:121), states that there are three kinds of exposition, the first is an exposition of exposure using the painting, so the exposition is more alive; the second is exposition that describes or explains the process of something happening; the third, comparative exposition, in clarifying the exposition often uses a comparison between two or more things. Two or more things are sought for differences and similarities.

B. Research Methodology

This research method is an experimental method, which emphasizes the treatment in two different study groups. The treatment given is in the form of using problem-based learning strategy and critical thinking, study groups that use

problem-based learning strategy are called the experimental group, and study groups that use inquiry learning strategy are called the control group. The design of this research is presented in table 1 below:

Table 1. Research Design 2 x 2

	Learning Strategies (A)
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Learning Motivation (B)	Problem Based Learning Strategy (A1)	Inquiry Strategy (A2)
High (B1)	A1B1	A2B1
Low (B2)	A1B2	A2B2

Description:

A1 : Groups of students who are taught using problem-based learning strategies.

A2 : Groups of students who are taught using inquiry learning strategy.

B1 : Group of higher critical thinking students.

B2 : Group of lower critical thinking students.

A1B1: Groups of students who learn using problem-based learning strategy and higher-level thinking.

A1B2: Groups of students who learn using problem-based learning strategy and low-level thinking.

A2B1: Groups of students who learn using inquiry strategy and higher-level thinking.

A2B2: Group of students who learn using Inquiry strategy and low-level thinking.

The population in this research was the 6th grade students of SDN 3

Labuan with 78 students divided into 3 groups. The sample used consisted of two groups. VI-C class as the experimental group and VI-A class as the control class. Sampling using random sampling technique with the following stages: **first**, determining SDN 3 Labuan as the research site; **second**, determining the 6th grade students of SDN 3 Labuan which consists of three study groups as the research objects with a random sampling technique; **third** determining the VI-C class as the experimental group using the problem-based learning strategy and the VI-A class as the control class using the inquiry learning strategy; **fourth**, grouping students in each class into two parts, namely the higher critical thinking and lower critical thinking groups; **fifth** determining the members of each group in each cell. The total of students in this research sample was 28 students consisting of

14 students in the experimental group and 14 students in the control group. After being tested through the critical thinking instruments and ranked, 27% stated as the high group students while 27% as the low group students. It was stated so, based on the data in this research, it was determined that 7 sample students for the high group and 7 students for the low group in the experimental and control groups.

Table 2. Determination of Treatment from Each Group of Each Class

Tingkat	Treatment Action	
	Problem-Based Learning Strategy	Inquiry Strategy
Higher Groups	7	7
Lower Groups	7	7
Total	14	14

Exposition writing ability test designed and used to determine the extent of students' ability in exposition writing. This writing ability test was used during the pretest and post-test in the experimental and the control groups. A pre-test was conducted to determine the students' initial ability in writing exposition before they were given treatment. Meanwhile, the post-test was to determine the students' ability in

exposition writing after they were given treatment in the form of the problem-based learning and inquiry strategy.

The critical thinking skill test aims to measure critical thinking skills in expository writing activities simultaneously with the exposition writing test. The pretest was conducted to determine students' critical thinking skills before they were given treatment. While the post-test was to determine students' critical thinking skills in writing exposition after they were given treatment in the form of the problem-based learning strategy in the experimental group and the inquiry strategy in the control group.

Pros Data Collection Procedures in this research were designed using experimental research with a paired pretest and post-test control design model (matching pre-test - post-test control group design).

The data analysis method in this research is the validity test of the research test and the test of data analysis requirements. The data analysis requirements test is carried out through the normality test,

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homogeneity test, and hypothesis test.

The statistical hypotheses in this research are:

Hypothesis₁: $H_0 = \mu A_1 - \mu A_2 = 0$

$H_1 = \mu A_1 - \mu A_2 \neq 0$

Hypothesis₂: $H_0 = \mu B_1 - \mu B_2 = 0$

$H_2 = \mu B_1 - \mu B_2 \neq 0$

Hypothesis₃: $H_0 = \mu A_1 B_1 - \mu A_2 B_1 = 0$

$H_3 = \mu A_1 B_1 - \mu A_2 B_1 > 0$

Hypothesis₄: $H_0 = \mu A_2 B_2 - \mu A_1 B_2 = 0$

$H_4 = \mu A_2 B_2 - \mu A_1 B_2 > 0$

Hypothesis₅: $H_0 \text{ Int} = \text{Interaction } A \times B = 0$

$H_5 \text{ Int} = \text{Interaction } A \times B \neq 0$

C. Result and Discussion

Based on the hypothesis test using two-way ANOVA, it states that there is an interaction effect between learning strategies and critical thinking skills on the ability to write expositions which allows for further tests using the Tukey test with the

same number of samples. Profile plot showing the Hypothesis testing using the Tukey test is used to compare groups with the interaction effect of the use of learning strategies and critical thinking on the ability to write expositions.

Table 3. Two Way Anova

Dependent Variable: Exposition Writing Ability

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	2843.000 ^a	3	947.667	41.699	.000
Intercept	146595.571	1	146595.571	6.451E3	.000
Learning strategies	531.571	1	531.571	23.390	.000
Critical thinking	185.143	1	185.143	8.147	.009
Critical Thinking Learning Strategy *	2126.286	1	2126.286	93.561	.000
Error	545.429	24	22.726		
Total	149984.000	28			
Corrected Total	3388.429	27			

a. R Squared = .839 (Adjusted R Squared = .819)

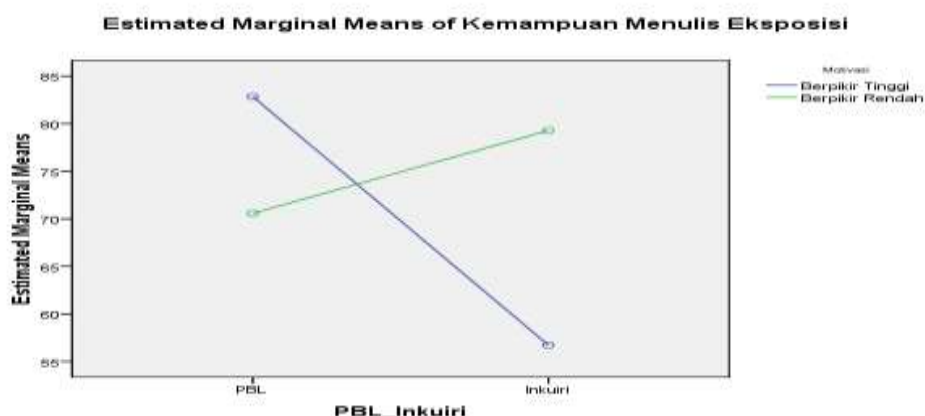


Figure 1 Profile Plot

Table 4. Advanced hypothesis testing with Tukey test
Multiple Comparisons

Exposition Writing Ability
Tukey HSD

(I) Strate (J) Strategi	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
				Lower Bound	Upper Bound	
PBL_ Tinggi	PBL_ Rendah	12.29*	2.548	.000	5.26	19.32
	Inkuiri_ Tinggi	26.14*	2.548	.000	19.11	33.17
	Inkuiri_ Rendah	3.57	2.548	.511	-3.46	10.60
PBL_ Rendah	PBL_ Tinggi	-12.29*	2.548	.000	-19.32	-5.26
	Inkuiri_ Tinggi	13.86*	2.548	.000	6.83	20.89
	Inkuiri_ Rendah	-8.71*	2.548	.011	-15.74	-1.68
Inkuiri_ Tinggi	PBL_ Tinggi	-26.14*	2.548	.000	-33.17	-19.11
	PBL_ Rendah	-13.86*	2.548	.000	-20.89	-6.83
	Inkuiri_ Rendah	-22.57*	2.548	.000	-29.60	-15.54
Inkuiri_ Rendah	PBL_ Tinggi	-3.57	2.548	.511	-10.60	3.46
	PBL_ Rendah	8.71*	2.548	.011	1.68	15.74
	Inkuiri_ Tinggi	22.57*	2.548	.000	15.54	29.60

Based on observed means.

The error term is Mean Square(Error) = 22.726.

*. The mean difference is significant at the .05 level.

Based on the results of testing the research hypotheses through two-

way ANOVA, it can be described that hypothesis testing are:

1) There are differences in the ability to write expositions between students who learn using the problem-based learning strategy and inquiry learning strategy. The first hypothesis testing for truth-tested is:

$$H_0 = \mu A_1 - \mu A_2 = 0$$

$$H_1 = \mu A_1 - \mu A_2 \neq 0$$

Based on the results of hypothesis testing using two-way ANOVA, it is known that the F-count value of the problem-based learning (PBL) strategy category is 23,390, which means > from the F-table which is 7.21, so it can be concluded that there are differences in the ability to write expositions between students who learn using the problem-based learning (PBL) strategy and inquiry learning strategy, in other words, H_0 is rejected and H_1 is accepted. If compared to science students using an inquiry strategy in the learning process, students are very active in finding and discovering their own answers (Nana, Syachruraji & Hermawilda, 2017).

2) There are differences in the ability to write expositions between students who have high thinking

skills and students who have low thinking skills. The second hypothesis testing for truth-tested is:

$$H_0 = \mu B_1 - \mu B_2 = 0$$

$$H_2 = \mu B_1 - \mu B_2 \neq 0$$

Based on the calculation of the hypothesis testing results with two-way ANOVA, it is known that the F-count for the thinking skills category is 8.147 which means > from the F-table which is 7.21, it is stated that there is a difference in writing ability between students who have high thinking skills and students who have low thinking skills. In other words, H_0 is rejected and H_2 is accepted. In the research of Bilqis, et al (2016), it can be concluded that there are differences in the cognitive learning outcomes of students who use problem-based learning models by using direct learning models and the cognitive learning outcomes of students who use problem-based learning model are higher than students who use the direct learning model.

3) For students who have higher thinking skills, the ability to write expositions is better when learning

using the problem-based learning strategy than the inquiry strategy. The third hypothesis testing for truth-tested is:

$$H_0 = \mu A_1 B_1 - \mu A_2 B_1 = 0$$

$$H_3 = \mu A_1 B_1 - \mu A_2 B_1 > 0$$

Based on the calculation of the advanced test through the Tukey test, it is stated that the ability to write exposition for students who have higher thinking skills is better when using the problem-based learning strategy compared to the inquiry learning strategy in learning. In other words, H_0 is rejected and H_3 is accepted. This is based on the calculation which states that the mean difference or the average difference is 26.14 and the significance level is $0.000 < \text{table significance } 0.01$.

4) For students who have lower thinking skills, the ability to write exposition is higher when using the inquiry strategy in learning than using the problem-based learning strategy. The fourth hypothesis testing for truth-tested is:

$$H_0 = \mu A_2 B_2 - \mu A_1 B_2 = 0$$

$$H_4 = \mu A_2 B_2 - \mu A_1 B_2 > 0$$

Based on the calculation of the advanced test through the Tukey test, it is stated that the ability to write exposition for students who have lower thinking skills is higher when using the inquiry learning strategy in learning compared to the problem-based learning strategy. In other words, H_0 is rejected and H_4 is accepted. This is based on the calculation that states the mean difference or the average difference is 8.71. The second hypothesis testing for truth-tested is also increased. Seen from the empirical data of the research results, it can be said that there is a relationship between school leadership and teacher performance. Based on the results of data processing interpretation, there is a relationship between school leadership and teacher performance, while the closeness level of the relationship is in the moderate category. Furthermore, the magnitude of the school leadership contribution to the teacher performance is 18.2% and the remaining 81.8% is a contribution from other factors. The significance level is $0.000 < \text{table significance } 0.01$.

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5) There is an interaction effect between the use of problem-based learning strategy and students' critical thinking on the ability to write expositions. The fifth hypothesis testing for truth-tested is:

$$H_0 \text{ Int= Interaction A x B} = 0$$

$$H_s \text{ Int= Interaction A x B} \neq 0$$

The research of Inggriyani and Fazriyah (2017) shows that critical

thinking has an influence on the ability to write narratives for 5th-grade students at SDN Lengkong District, Bandung City. The teacher designs learning by providing problems that involve students' thinking skills and involve the process of analyzing based on actual problems (Nafiah, 2014). In this case, the teacher plays a very important role in designing students learning.

D. Conclusion

There are differences in the ability to write expositions between students who learn by using problem-based learning strategies and by using inquiry learning strategies. There are differences in the ability to write expositions between students who have high critical thinking skills and students who have low critical thinking skills. For students who have high critical thinking skills, the ability to write expositions is better when learning using problem-based learning strategies than using inquiry learning strategies. For students who have low critical thinking skills, the ability to write expositions is better when learning using inquiry learning

strategies than using problem-based learning strategies. There is an interaction effect between the use of problem-based learning strategies and students' critical thinking on the ability to write expositions.

The strategies of Problem-based learning and inquiry are an alternative that can be used in Indonesian learning in elementary schools. Problem-based learning and inquiry learning strategies can be used in Indonesian language learning, especially exposition writing learning because this strategy is able to stimulate students' critical thinking skills, students are directly involved in solving real problems, and finding

real solutions. Teachers can implement problem-based learning strategies and inquiry in learning as a choice of learning strategies that can provide space for students to explore critical thinking skills. For further research, problem-based and inquiry-based learning strategies can be developed for other subject matter,

such as writing reports, anecdotes, or complex procedures because the characteristics of problem-based learning strategies empower students to play an active role in learning, this is in accordance with the 2013 curriculum, namely learning-centered.

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