The Correlation between Critical Thinking and Students' Writing Descriptive Text

Siti Hamidah

English of Education Study Program,Social and Education Faculty Universitas Potensi Utama Medan

Article Info	Abstract
Article History: Received: September 18, 2023 Accepted: November 27, 2023 Publisehd: December 31, 2023	The purpose of this research is to identify whether there is a significant correlation between critical thinking and students' writing descriptive text. And to determine whether there is a significant influence of students' critical thinking on students' writing descriptive text. This research was conducted through a non-experimental quantitative
Keywords: correlation, critical thinking, writing descriptive text, regression analysis	research design. The subjects of this study were the seventh-grade students at SMPS Al- Washliyah 26 consisting of 30 students. The instrument used to collect quantitative data was to provide 44 multiple choice questions as a testing of students' critical thinking and writing essays as a testing of students' abilities in writing descriptive texts. Based on the analysis of the correlation coefficient, a weak relationship was found
Corresponding Author: Name: Siti Hamidah Institution: UPU Medan Email: <i>hsiti5151@gmail.com</i>	based on the unarysis of the correlation coefficient, a weak relationship was found between critical thinking and students' writing descriptive text with Pearson correlation value of .328. With p. value was higher than p. table (.076 > .05), no significant correlation was found between critical thinking and students' writing descriptive text. It means there is also no influence of critical thinking on students' writing descriptive text. This is proven based on the regression analysis which shows that r. value was less than r. table (1,840 < 2,048). Thus, it can be concluded that there is no significant correlation between critical thinking and students' writing descriptive text of the seventh-grade students in SMPS Al-Washliyah 26.

INTRODUCTION

Writing is the process of expressing the ideas, information, knowledge or experience and understand of writing to acquire the knowledge or some information to share and learning (White, 1986:10). It means, writing is an activity that has progressive to explore students' idea and experience into written.

Expressing thought in writing is not easy for most students. Because, many students can express their mind by spoken, but most of them get hard to express their mind in writing. In addition, Elbow (1973) in Brown (2001:336) says that writing is two step processes. The first process is figuring out the meaning and the second process is putting the meaning into language. It means, in writing process the students are representing what their think on a text and make it clear in the correct writing text.

So, dealing with the explanation above, one of writing text that students must important to practice is writing descriptive text. From writing descriptive text, the students can learn how to express their mind and figuring out the meaning into the text by something that they look or listen. It supported by Gerot and Wignell (1994:208) states that "descriptive text is a text type we use when we want to tell how something looks, smells, feels, acts, tastes, sound, etc." It also there are four indicators of descriptive text

that students must know, they are generic structure (identification and description), grammatical features (simple present tense, adjective, action verb, figurative language), vocabulary and mechanics.

Based on the researcher's observation during internship on the seventh-grade students in SMPS Al-Washliyah 26 Medan. The researcher has found out students' problem in learning descriptive text. On the seventh-grade, the students had learned about describing a person. The students are asked to describe their family into a descriptive text. The researcher found out that there are some mistake on use grammatical features in students' writing. For example, the student wrote about his/her Mother "*My mother beautiful. She have skin white, hair black and tall...*" from those sentences, the researcher found out that the student did not understand the function of tenses and uncorrectness words in writing descriptive text. So, the correct sentence is "*My mother is beautiful. She has white skin, black hair and tall...*". Another example, the student is asked to describe the personality of his/her family, and the student wrote "*My name is Raka. I am a student. I live with my parents. My mother like cooking and my father like reading a newspaper..*" From those sentences, the student did not describe a personality of his/her family but the student desribe about the daily activity of his/her family.

So, from all that mistake and problem, the researcher concludes that in writing descriptive text, the students did not only focus to understand about grammatical features but also needed to choose the correct word to get the clear meaning that related to the topic in writing descriptive text.

Fell and Lukianova (2015) also states that the main cause of the low quality of academic writing of foreign students, especially in making essays, disertations and theses, is the low ability to think critically. Think critically or critical thinking is the ability to effectively analyze information and form a judgment. By think critically, the students can hone their writing skill to compose the clear and correct sentence of information that they get. Besides that, critical thinking also can make students more creative to develop their ideas about any topic, become broad-minded and process information properly in writing descriptive text. For all cases and explanations above, the researcher decided to make a research entitle "The Correlation between Critical Thinking and Students' Writing Descriptive Text."

In this research, several problem formulations have been studied, as follows: 1. Is there any significant correlation between critical thinking and students' writing descriptive text ?, 2. Is there any significant influence of critical thinking on students' writing descriptive text ?. The research objectives areas follows: 1. To find out if there is a significant correlation between critical thinking and students' writing descriptive text, 2.To find out if there is a significant influence of critical thinking on students influence of critical thinking on students' writing text, 2.To find out if there is a significant influence of critical thinking on students' writing text.

METHOD

This study would be conducted by using correlational research. According to Fraenkel and Wallen (2009), correlational research is research which purpose to find out the relationship between two or more variables and their cause and effect. Correlational research is similar to descriptive survey in that is non experimental, consisting of only one group of individuals and two or more variables that were not manipulated or controlled by the researcher.

According to Cresswell (2012), a correlation is a statistical test to determine the tendecy of pattern for two (or more) variables or two sets of data to vary consistently. This study has two variables, X variable and Y variable. X variable is as critical thinking and Y variable is as students' writing descriptive text measured through tests. Then the correlation, and the influence between variables was analyzed through Statistical Package for Social and Science (SPSS) 20.00 based on the results of the critical thinking test and writing descriptive essay test.

According to Gay (2016) the sample for a correlational study is selected by using an acceptable sampling method and a minimally acceptable sample size is generally 30 participants. In this research,

the researcher was take 30 students from the classes by using simple random sampling. Simple random sampling is a method conducted by taking the sample randomly from the population without further classifications (Sugiyono, 2018:82). Based on that statement, the researcher had taken the lottery method to get the 30 students from 108 students in the school as the population of the research.

The critical thinking test used in this research is Cornell Critical Thinking Test (CCTT) that developed by Robert Ennis (1985). The Cornell Critical Thinking Test series offers two levels of testing: level X for grades five through twelve and level Z for grades ten through twelve. So, in this research, the researcher was use CCTT in level X, because the sample of this research was the seventh-grade of students. Level X includes 44 items, 60 minutes, questions that evaluate student skill in Induction, Deduction, Credibility, and Identification of Assumptions. It was multiple-choice test with three answer options (YES, NO, MAYBE). Then, for writing descriptive test, the researcher was using writing essay test. The students were asking to describe people by picture. The students' writing descriptive test was measured by using the rubric for writing descriptive text from Brown (2007).

The researcher analyzes the correlation between critical thinking and students' writing descriptive through Pearson-*Product Moment Correlation*. And to identify the influence of critical thinking toward students' writing descriptive text, the researcher was using *Regression analysis* and *R*-square to show the percentage of how far critical thinking influenced students' writing descriptive text.

RESULTS AND DISCUSSION

After analyzing the data, the researcher found out the data description of critical thinking and writing descriptive text score. The data were presented minimun score, maximum score, mean score and standard deviation. Critical thinking minimum score was 43 and the maximum score was 84. Critical thinking's mean score was 58,17 and the standard deviation was 8,292. There were score distribution of critical thinking that there 0,3% students who had very high critical thinking, 86% had medium critical thinking, and 1% had low critical thinking. Meanwhile, writing descriptive test minimum score was 25 and maximum score was 92. The mean score of writing descriptive test was 60,40 and the standard deviation was 17,824. Then, the descriptive data that there were score distribution of writing descriptive text, 33% had average writing descriptive text, 17% had poor writing descriptive text, and 0% had very poor writing descriptive text.

Based on the distribution data of students' critical thinking and students' writing descriptive text. The researcher did correlation and regression analysis to demonstrate the research objective that researcher has formulates, to identify there is any significant correlation between critical thinking and students' writing descriptive text, also to identify there is any significant influence of critical thinking toward students' writing descriptive text.

The Correlation between Critical Thinking and Students' Writing Descriptive Text

The researcher used Pearson Product Moment Correlation Coefficient to answer the first question. Based the correlational coefficient of the test was 0.328 in which based on Cohen, Manion, and Marrison (2015) states that correlation coefficients below 0.35 show weak relationship between variables. Moreover, from the statistical analysis, it was also shown that the p-value was 0.076 which was more than 0.05 (0.076 > 0.05). If p-value less than 0.05 it means there was a significant, but the data of this research shown that the p-value was more than 0.05. The correlation between those variables was obtained that there was not significant correlation between critical thinking and students' writing descriptive text of the seventh-grade students in SMPS Al-Washliyah 26 Medan.

The positive direction means the higher critical thinking skill level the students have, the higher their

score of writing descriptive text. Therefore, since the data provided that there was not significant correlation between the variables, it means also there was not significant influence of critical thinking into students' writing descriptive text. But, to measure it, the further analysis was conducted in the term of finding the significant influence between the variables.

The Influence of Critical Thinking toward Students' Writing Descriptive Text

Regression analysis was used to find out if students' critical thinking skill influenced their writing descriptive text. The result indicated that the students' critical thinking skill not significantly influenced writing descriptive text with t-value (1.840) was lower than t-table (2.048) with sig. value (.076) was higher than probability (.050). It means that there was no significant influence of critical thinking toward students' writing descriptive text.

The researcher used R-square analysis to make sure how far the critical thinking influence the students' writing descriptive text in percent. R-square values range from o to 1. An R-square value of o means that the model explains of predicts o% of the relationship between the dependent and independent variables. A value of 1 indicates that the model predicts 100% of the relationship, and a value of 0.5 indicates that the model predicts 50% and so on. Based on the result of R-square analysis of this research, it shown that the adjusted R-square was 0.076 that means critical thinking influence toward the students' writing descriptive text was 0,76%. According to the standards for a good R-square can be much higher, such as 0.4 until 0.9. So, it means 0.076 was very low correlation and low influence of critical thinking toward students' writing descriptive text of the seventh-grade students in SMPS Al-Washliyah 26 Medan.

CONCLUSION

Refering to the research findings finally the conclusions of this research can be stated as follows :1. Based on the data analysis by using Product Moment Correlation Coeficient, there was not significant correlation between critical thinking and students' writing descriptive text of the seventh-grade students in SMPS Al-Washliyah 26 Medan. 2. Based on the statical of regression analysis that there was not significant influence of students' critical thinking toward students' writing descriptive text of the seventhgrade students in SMPS Al-Washliyah 26 Medan.

FIGURE AND TABLES



Figure 1. Conceptual Framework of The Correlation Between Critical Thinking and Students' Writing Descriptive Text (Siti Hamidah, 2023)



Figure 2.	Reasearch De	sign by C	Creswell (2012. pp.	115-116)
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Class	Number of Students
VII-1	37
VII-2	34
VII-3	37
Total	108

Table 1. The Distribution of Population

No	Content	Indicator	Test Number in The Instrument	Total Of Test Item
1	Induction	The students are able to generalize and explain the arguments	1,2,3,4,5,6,7,8,9,10 11,12,13,14	14
2	Deduction	The students are able to make decision and conclusion about the arguments	15,16,17,18,19,20, 21,22,23,24,25,26,27, 28,29	15
3	Credibility	The students are able to assess the credibility of sources of information and claims they make	30,31,32,33,34,35,36, 37,38,39,40,41	12
4	Identification of assumption	The students are able to identify assumptions, reason, examine the arguments	42,43,44	3
Т	otal	-		44

Table 2. Specification of Critical Thinking Test

No	Aspect of Writing	Definition	Percentage
1	Content	The substance of the writing, the idea	20%
		expressed	
2	Organization	The form of content (coherence)	20%
3	Vocabulary	The selection of word that suitable	20%
		with the content	
4	Grammar	The employment of grammatical	20%
		forms and syntactic patterns	
5	Mechanic	The conventional devices used to	20%
		clarify the meaning	

Table 3. Specification of Writing Descriptive Test

Level of Critical Thinking	Raw Score
High	71-100
Medium	50-70
Low	0-49

Table 4. The Classification Score of Critical Thinking Test

Aspect	Score	Performance description	Weightning
Content	4	The topic is complete, clear and the details	
(C)		are relating to the topic	
30%	3	The topic is complete and clear but the	
- Topic		details are almost relating to the topic	2
- Details	2	The topic is complete and clear but the	JX
		details are not relating to the topic	
	1	The topic is not clear and the details are not	
		relating to the topic	
Organization	4	Identifiation is complete and descriptions	
(0)		are arranged with proper connectives	
20%	3	Identifiation is almost complete and	2
- Identification		descriptions are almost arranged with proper	2X
- Description		connectives	
	2	Identifiation is not complete and	
		descriptions are arranged with few misuse	
		proper connectives	

	1	Identifiation is not complete and	
		proper connectives	
Grammar	4	Very few grammatical or agreement	
(G)		inccuaracies	
20%	3	Few grammatical or agreement inccuaracies	
- Use present		but not effect on meaning	$\mathcal{O}_{\mathbf{Y}}$
tense	2	Numerous grammatical or agreement	28
- Agreement		inccuaracies	
	1	Frequent grammatical or agreement	
		inccuaracies	
Vocabulary	4	Effective choices of words and word forms	
(V)	3	Few misuse of vocabularies, word forms,	
15%		but not change the meaning	
	2	Limited range confusing words and word	1,5x
		forms	
	1	Very poor knowledge of words, word forms,	
		and not understandable	
Mechanics	4	It uses correct spelling, punctuation, and	
(M)		capitalization	
15%	3	It has occasional errors of spelling,	
- Spelling		punctuation, and capitalization	1 5v
- Punctuation	2	It has frequent errors of spelling,	1,5X
- Capitalization		punctuation, and capitalization	
	1	It is dominated by errors of spelling,	
		punctuation, and capitalization	

Table 5. Rubric for Assesing Writing Descriptive Test

No	Score Range	Categories
1	81-100	Very good
2	61-80	Good
3	41-60	Average
4	21-40	Poor
5	0-20	Very Poor

Table 6. The Classification Score of Wri	ing Descripive Test from	Cohen (1994:328)
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0
Correlations

		СТ	WDT
СТ	Pearson Correlation	1	,328
	Sig. (2-tailed)		,076
	Ν	30	30
WDT	Pearson Correlation	,328	1
	Sig. (2-tailed)	,076	
	Ν	30	30

Table 7. Pearson Correlation Analysis

ANOVA^a

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	Model	Sum of Squares	Df	Mean Square	F	Sig.
	Regression	994,132	1	994,132	3,387	,076 ^b
1	Residual	8219,068	28	293,538		
	Total	9213,200	29			
		a. Deper b. Predi	ndent Variabl ctors: (Consta	e: WDT ant), CT		
			Coefficients			
Model		Unstandardized Co	efficients	Standardized Coefficients	Т	Sig.
	_	В	Std. Error	Beta		
1	(Constant)	19,331	22,535		,858	,39
	СТ	.706	,384	,328	1,840	.07
	-	a Deper	dent Variabl	e' WDT	,	y
				Analysis		
			(cgi cosion	Anarysis		
		М	odel Summa	rv		
Model	R	R Square Adju	sted R	Std. Error of	the Estimate	
		Sq	uare			
1	,328ª	,108	,076			17,133
		a. Predie	ctors: (Consta	ant), CT		
		Table 9.	R-square /	Analysis		
Level of Critical Thinking		ng Raw Sco	re	Number of Students	Per	cent
					(%	(0)
	High	71-100)	1	0	.3
	Medium	50-70		26	8	6
	Low	0-49		3	1	<u> </u>
	Total			30	10	00
	т	able 10 Score Di	stribution	of Critical Thinking		
	I					
No	Score Ran	σe (Categories	Number	of I	Percent
110	Score Mall	8-		Student	s I	(%)
1	81-100		Very good	6		2
2	61-80		Good	9		3
3	41-60		Average	10		33
4	21-40		Poor	5		17
5	0-20		Very Poor	0		0
	Total			30		100

Table 11. Score Distribution of Writing Descriptive Test

APPENDIX

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C MAYBE

Name : AMANDA

Suppose you know that

All the cars in the garage are Mr.

All Mr. Smith's cars are Fords.

All of the cars in the garage are Fords.

At least some of John's pencils are not

Then would this be true?

2 Suppose you know that

All John's pencils are blue.

Then would this be true?

Class : VII-1

Smith's.

A YES

B. NO

blue

A YES X NO

C MAYBE

XMAYBE

You should have circled B. "NO". If the sparrow is over the hawk, then the hawk can't be over the sparrow. It can't be true.

3.Suppose you know that All the books about sailing are Bill's. All the green books are Bill's. Then would this be true? At least some of the green books are about sailing.

K YES B. NO C. MAYBE

4 Suppose you know that None of Jane's dolls have hats. Then would this be true? None of the dolls that have hats are Jane's

B. NO C. MAYBE

> All the red books are John's All the red books are John's Then would this be true? All John's books are red.

A. YES B. NO X. MAYBE

 6/Suppose you know that All of Mary's books are about horses.
 None of the books on the shelf are about horses.
 Then would this be true?
 At least some of Mary's books are on the shelf.

.

A. YES K. NO C. MAYBE

Suppose you know that All Jean's pencils are red.

All the pencils on the table are red. Then would this be true? At least some of the pencils on the table are Jean's.

A. YES ØNNO C. MAYBE

X Suppose you know that None of Sue's books are about animals Then would this be true? None of the books about animals are Sue's.

A. YES B. NO CMAYBE

X Suppose you know that At least some of Kate's pencils are blue. All the pencils in the box are blue. Then would this be true? At least some of Kate's pencils are in the box.

A. YES A. NO C. MAYBE 10 Suppose you know that All Z's are Y's. All Y's are X's. Then would this be true? All Z's are X's.

MLYES B. NO C. MAYBE

11 Suppose you know that None of the fifth grade boys are on the football team. John is a fifth grade boy. Then would this be true? John is not on the football team.

X. YES B. NO C. MAYBE

A Suppose you know that All the members of the school band have been in Boston. No one in Frank's class has been in Boston. At least some members of the school band are in Frank's class.

A. YES B. NO Q' MAYBE

13. Suppose you know that All the second grade children are out on the playground. Then would this be true? All the children out on the playground are in the second grade.

A. YES B. NO C. MAYBE

X Suppose you know that None of my shii ts are wool. None of the shirts hanging up in the closet are wool. Then would this be true? At least some of my shirts are hanging up in the closet.

A. YES B. NO X. MAYBE

N. Suppose you know that All of the boys in the class collect stamps. All students who are not members of the Stamp Club also do not collect stamps. Then would this be true? At least some of the boys in the class are not members of the Stamp Club.

A YES B. NO C. MAYBE

IX Suppose you know that All of the band members are working. Then would this be true? Everyone who is not working is also not in the band. A. YES X NO C. MAYBE

X. Suppose you know that All the people who live on Main Street were born in Milltown. None of the students in Room 352 live on Main Street. Then would this be true? None of the students in Room 352 were born in Milltown. A. YES B. NO X. MAYBE

18/Suppose you know that All Y's are X's. No Z's are Y's. Then would this be true? No Z's are X's.

A. YES B. NO C. MAYBE

12 Suppose you know that All Z's are Y's. No X's are Y's. All T's are Z's. Then would this be true? No X's are T's.

A. YES Ø. NO C. MAYBE

20, Suppose you know that All students who do not have a star are also not swimmers. Frances is a swimmer. Then would this be true? Frances does not have a star.

A. YES ÆNO C. MAYBE

21 Suppose you know that All the people in the auditorium are watching a movie. All students in the senior play are in the auditorium. Esther is a student in the senior play. Then would this be true? Esther is not watching a movie.

A. YES 08, NO C. MAYBE

22 Suppose you know that All of the red pencils are broken. Emil's pencil is not broken. Then would this be true? Emil's pencil is not red.

A. YES
B. NO
C. MAYBE
23. Suppose you know that
All Z's are Y's.
All Things that are not X's are also not Y's.
Then would this be true?

At least some Z's are not X's.

PL YES B NO C MAYBE

24. Suppose you know that At least some of Mrs. Brown's flowers are not roses. At least some of the flowers in the flower show are not roses. Then would this be true? At least some of Mrs. Brown's flowers are in the flower show.

X YES B. NO C. MAYBE

Suppose you know that All the pencils in the box are yellow. None of the broken pencils are yellow. All Dick's pencils are in the box. Then would this be true? None of the broken pencils are Dick's.

A. YES B. NO J& MAYBE

26 Suppose you know that At least some of the boys in the class have bicycles. All those who are not here also do not have bicycles. Then would this be true? No boys in the class are here.

A. YES B. NO C. MAYBE

A. YES B. NO C. MAYBE 27 Suppose you know that All the pets of the Greens won some prize in the pet show. Fido is one of the Greens' pets. Then would this be true? Fido won a prize in the pet show.

A, YES B. NO C. MAYBE

Suppose you know that No animals are dogs. Then would this be true? No dogs are animals.

A. YES B. NO C. MAYBE

29 Suppose you know that Eileen is one of the children on the playground. Then would this be true? Eileen is not one of the children on the playground.

A. YES J. NO C. MAYBE

30' Suppose you know that All cats can fly. All animals that can fly are black. Then would this be true? All cats are black.

ALYES B. NO C. MAYBE

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37. Suppose you know that None of Bob's books are on the table, but there are books on the table. Then would this be true? At least some of the books on the table are not Bob's

A YES B. NO C. MAYBE

Suppose you know that All Mary's pencils are yellow. Then would this be true? At least some of Mary's pencils are not yellow.

A. YES B. NO C. MAYBE

Suppose you know that
 At least some of the green pencils are Dick's.
 Then would this be true?
 All Dick's pencils are green.

A. YES M.NO C. MAYBE

.31/Suppose you know that No X's are Y's. Then would this be true? No Y's are X's.

A. YES B. NO C. MAYBE

Suppose you know that

All the cookies Jane made for the fair had nuts in them. All the cookies with nuts in them were sold. Then would this be true? All the cookies Jane made for the fair were sold.

A. YES B. NO JC_MAYBE

96. Suppose you know that All members of the football team weigh over 150 pounds. Henry does not weigh over 150 pounds. Then would this be true? Henry is on the football team.

X-YES B. NO C. MAYBE

3 Suppose you know that All the papers in the box are torn. None of John's papers are in the box Then would this be true? None of John's papers are torn.

A. YES B. NO R. MAYBE

38. Suppose you know that All of the boys are singing. Then would this be true? All of the people who are not singing are also not boys.

X. YES B. NO C. MAYBE

Suppose you know that All the pencils in the box are green. Technology Innovation on Language Learning: Unlocking the Ingenuity of Local Wisdom, Connecting the World through Technology

All Sue's pencils are sharp. All the green pencils are Sue's. Then would this be true? At least some of the pencils in the box are not sharp.

A. YES B. NO C. MAYBE

40, Suppose you know that None of my shirts are wocl. None of the shirts hanging up in the closet are wool. Then would this be true? At least some of my shirts are hanging up in the closet.

X YES B. NO C. MAYBE

X Suppose you know that All X's are Y's. Then would this be 'rue? All things that are not Y's are also not X's.

A. YES JKNO C. MAYBE

Suppose you know that All of the red pencils are broken. Emil's pencil is not broken. Then would this be true? Emil's pencil is not red.

A. YES B. NO Ç. MAYBE 13 Suppose you know that At least some of Mrs. Brown's flowers are not roses. At least some of the flowers in the flower show are not roses. Then would this be true? At least some of Mrs. Brown's flowers are in the flower show.

A. YES B. NO C. MAYBE

Suppose you know that All the pencils in the box are yellow. None of the broken pencils are yellow. All Dick's pencils are in the box. Then would this be true? None of the broken pencils are Dick's.

A. YES ANO C. MAYBE



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