

The Correlation between Critical Thinking Skills and Vocabulary Mastery in Critical Listening and Speaking Class

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Abstract

The purpose of this research is to find out the relationship between students critical thinking and vocabulary mastery in Critical Listening and Speaking classes at a university in Yogyakarta. This research focused on knowing the relationship between students' critical thinking and vocabulary mastery of semester 4 students at a university in Yogyakarta. The population of this study were fourth semester students who were taking Critical Listening and Speaking courses. This research employed is quantitative design. In collecting data, researchers used questionnaires and tests. The research sample consisted of 15 students at an English Education Study Program. A vocabulary test using <https://www.oxfordonlineenglish.com/english-level-test/vocabulary> was used to investigate students' vocabulary mastery. Meanwhile, a formative assignment was employed to gain students' critical thinking level. To analyze the data, Pearson product moment correlation was used. The exploration discoveries show that there was a positive correlation between critical thinking skills and vocabulary mastery in CLS class with Sig. = 0.934. In this way, the alternative hypothesis (Ha) is acknowledged and null hypothesis (Ho) is dismissed. The importance of this assertion is a basic critical thinking skills impacts vocabulary mastery.

Keywords: Critical Thinking Skill, Vocabulary Mastery, Correlation

A. Introduction

Language is the most crucial communication tool in life for humans to speak with one another (Paranduk et al, 2021). Learning continues to evolve, both during the implementation process and as comprehension abilities improve. Learning in the 21st century is not limited to cognitive talents. Students are expected to develop a variety of personal and social abilities. Students must grasp critical thinking, creativity, collaboration, and communication abilities. It is crucial to cultivate one of the four abilities, notably critical thinking skills. Various studies have extensively examined critical thinking skills, such as developing critical thinking abilities through problem-solving concepts (Alfayez et al, 2022).

Critical thinking is a significant issue in modern education today. The goal of learning to think critically in science or other studies is to improve students' thinking skills, thereby preparing them better for success in the world. At school, students are required to be able to think critically. Before trying to solve a problem, make sure students must know the root of the problem being discussed. To identify and find problems, you must collect as much data as possible in the field. You have to take responsibility for the problem because it won't go away on its own. Critical thinking is a form of human reasoning that includes clear reasons and specific goals. When you think critically, you seek reasons or explanations for an event, analyse the other side of a problem, attempt to solve the problem, make conclusions, and determine a scenario based on facts (Pirozzi, 2003).

Probably, among other researchers, Ennish' (1998) This study, which stated that crucial is a logical, deliberate process that connects both talents and attitudes, would be the most appropriate definition. In his study, Ennish (1998) conceptualized critical thinking as a person's reflective action to: (1) look at an information source's credibility; (2) look for conclusions, reasons, and assumptions; (3) look at the quality of an argument, including its acceptability, reasons, and evidence; (4) form and defend an opinion on a problem; (5) ask a question to clarify information; (6) plan the experiment and look at the design of the experiment; (7) explain which terms fit the context; (8) be open-minded; (2009) carefully conclude something. Heijltjes, Gog, and Paas (2014) with their examination asserted that express guidance would function admirably when it is joined with adequate practice. The constructs for assessing students' critical thinking ability would be these elaborations.

Students must master two major factors when studying English: language skills and language components (Hampp et al, 2021). Language abilities include listening, speaking, reading, and writing, while language components include vocabulary, syntax, and pronunciation (Olii, 2021). Finnochiaro (2010), defines vocabulary as the content and function of words in a language that has been thoroughly learned so that it can be used to perform any communication act. Learning vocabulary is an important part of learning a foreign language because new words' meanings are often stressed, whether in the classroom or in books (Alqahtani, 2015). Vocabulary and critical thinking are important classroom skills for students. Critical thinking and vocabulary mastery being the significant role in learning. Today critical thinking is a significant expertise throughout everyday life, and that educators need to coordinate a portion of its critical components into their study halls (Haghgoo, 2012).

Ku (2009) in Mansoor and Ali say that critical thinking gives students the skills they need to deal quickly and effectively with the ever-increasing changes of the modern world. Students need to learn to develop flexible intellectual skills related to learning vocabulary in order for them to develop this level of competency instead of just memorizing what is written in textbooks (Fahim and Komijani, 2011). Kamali and Fahim (2011), discovered that participants' comprehension of unfamiliar vocabulary items was significantly improved by critical thinking. Mirzai (2008), reported that lexical inferencing and critical thinking are significantly linked. Learners' critical thinking skills were found to significantly and positively correlate with their knowledge of L2 vocabulary (Fahim and Komijani, 2011). By stating that the only capacity we can use to learn is human thinking, learning and thinking It is possible to draw the conclusion that CSL students would learn L2 vocabulary more effectively and profoundly if they utilized critical thinking skills.

Based on observations made by researchers at a university in Yogyakarta for the Critical Listening class, the researchers found that students with high critical thinking skills in class have good vocabulary mastery, whereas some students have poor vocabulary mastery and low critical thinking. In this context, low critical thinking abilities mean that students typically think in unclear, imprecise, and erroneous ways (Bassham, 2011).

Based on the explanation, the researcher is interested in performing a study that correlates critical thinking skills with vocabulary mastery. Language learners must utilise the lexicon accurately and critically. One of the most significant components of language is the lexicon, which is also known as vocabulary. Wilkins as quoted by Thornbury (2002) states that without mastering vocabulary, it is impossible for someone to convey something and communicate. These statements mean, if students do not know any vocabulary it will cause them to be unable to say anything and communicate in English. Aside from studying vocabulary, which is an important aspect of learning English as a foreign language, critical thinking is a priority in educational aims. Based on the background above, the researcher intends to examine the correlation between critical thinking skills and vocabulary mastery. Critical thinking skills tests and vocabulary mastery tests will be conducted. From the data in the form of test results, researchers want to know the correlation between critical thinking skills and vocabulary mastery.

B. Research Methodology

The researchers used quantitative research to examine the issue at hand. The review utilized the correlational plan. A connection is the estimation of the co-relationship between at least two factors utilizing correlational measurement to explore the exact level of their relationship (Latief, 2014). A scatterplot, according to Ary et al (2010), shows the direction of the association between the variables. A positive association is indicated by a scatterplot with dots running from lower left to higher right. A negative association is indicated by a graph with dots running from upper left to lower right.

The relationships between two or more variables in a single group are the focus of correlational research. The degree of the relationship is represented by the correlation coefficient, which ranges from 0 to 1, and the direction of the correlation is indicated by (-) denoting a negative correlation and (+) denoting a positive correlation. The participants of this study were the student of English Language Education Study Program in one of private universities in Yogyakarta accredited with B by National Accreditation Board for Higher Education who took the Critical Listening and Speaking (CLS) class. There will be 15 students participating in this research consisting of 3 males and 12 females.

The researcher conducted a critical thinking test to determine the critical thinking level of the students. In this research, the test consisted of 18 items essay question list about critical thinking. Before giving the test, the researcher explained the procedure for 10 minutes and continued by giving the test. All the measurement aspects were then from Ennish' (1998). The vocabulary test website can be accessed at the following link: <https://www.oxfordonlineenglish.com/english-level-test/vocabulary>. This website was chosen due to according to Alqahtani's theory (2015) regarding aspects of vocabulary mastery. To find out the scores of critical thinking skills tests owned by Critical Listening and Speaking (CLS) class students, the researchers used an assessment based on theory from Facione (2015) which includes six pairs, namely interpretation, analysis, evaluation, inference, explanation, and self-regulation.

The scale had a Cronbach Alpha coefficient of .863, indicating that its internal consistency validity was very high (Pallant, 2016). Researchers used the SPSS 25.0 application to test the correlation between Critical Thinking Skills (X) and Vocabulary Mastery (Y). The basis for the decision is if the value of Sig. < 0.05, then it is correlated. If the value of Sig. > 0.05, then it is not correlated. For the degree of relationship, if the Pearson Correlation value is 0.00-0.20, it means there is no correlation. If the Pearson Correlation value is 0.21-0.40 then the correlation is weak. If the Pearson Correlation is

0.41-0.60 then the correlation is moderate. If the Pearson Correlation is 0.61-0.80 then the correlation is strong. If the Pearson Correlation is 0.81-1.00 then the correlation is perfect.

Previous research was carried out by Mansoor Fahim and Ali Komijani (2005), tried to measure the connection between L2 Vocabulary Learning Strategies, L2 Vocabulary Knowledge, and Critical Thinking Ability. The outcome of the review showed that there is positive connection among the factors. F_{observe} is greater than F_{table} as a result of the measurement. It indicated that the null hypothesis was rejected and the alternative hypothesis was accepted. Then, the research by Noushin Boroushaki (2016) entitled "Critical Thinking Ability and Vocabulary Learning Strategy Use: The Case of EFL Learners in an ESL Context". The findings demonstrated a significant connection between the application of vocabulary learning strategies and critical thinking. The focus on critical thinking and similarities between this and previous studies are similar to correlational studies. However, there are also some differences, such as the fact that previous researchers found a correlation between English proficiency and other language elements. As a matter of some importance, Lazuardy Wulan Mulia (2021) entitled "The Correlation Between Critical Thinking Skill and Vocabulary Mastery of the Tenth Graders of SMA N 2 Semarang". The findings of this study are the normal analyse test scores for critical thinking were 0.096 and 0.094 for vocabulary mastery. It is obvious that H_0 is acceptable for critical thinking because $0.096 > 0.05$. Thus, both critical thinking data distribution and vocabulary mastery were normal. Then, linearity revealed that the sign is 0.136, indicating that H_0 is accepted for linearity because $\text{sign } 0.136 > 0.05$. As a result, the relationship between dependent and independent variables was more definite. The linearity analysis was linier as a result of the regularly variable data distribution. As a result, the association in this study will be examined.

Thinking critically in terms of a particular quality is basically good thinking that meets certain accuracy and adequacy criteria (Lai, 2011). As factors, Facione proposes six cores of critical thinking Interpretation, Analysis, Evaluation, Inference, Explanation, and Self-Regulation (Facione, 2011).

C. Results and Discussion

Before the researchers took the data, there were some activities conducted in the classroom First, the researcher made initial observations. In this observation, the researcher found that in the Critical Listening and Speaking (CLS) class, students

who had critical thinking skills tended to have good vocabulary mastery and students who lacked critical thinking skills tended to lack vocabulary mastery. Furthermore, after knowing the conditions in the field the researcher conducted a vocabulary test. The test was conducted using the web from oxford.com. The researcher distributed a link containing a vocabulary mastery test and students were given instructions for doing the test. On the website the test will automatically provide scores, levels and percents after students have finished working on the vocabulary mastery test. The next procedure that the researcher carried out after the vocabulary mastery test was to conduct a critical thinking ability test for CLS class students. The researcher made a blueprint for this test based on Ennish' (1998) theory to determine the level of students' critical thinking skills. After carrying out both tests, the researcher obtained data in the form of scores and levels of students' vocabulary mastery and scores of students' critical thinking skills. After obtaining the two data, the researcher conducted a data normality test and a data linearity test to fulfill the requirements in order to be able to carry out a correlation analysis between critical thinking skills and vocabulary mastery. To get the correlation, the researchers used the SPSS 25.0 application with pearson correlation analysis.

1. Results

Table 1. Test of Normality

	Shapiro-Wilk		
	Statistic	df	Sig.
Vocabulary Mastery	.914	15	.155
Critical Thinking Skill	.892	15	.072

The table above shows the results of the Shapiro-Wilk normality tests. This study looked at Shapiro-Wilk because the participants were <100 students' vocabulary skills, namely (0.155). Meanwhile, students' critical thinking skills are (0.072) as shown in sig. It can be said that the data is normally distributed because $N > 0.05$. Because of that, Inferential statistical procedures can be performed to see if the X and Y variables are correlated with each other.

Table 2. Linearity Test

Model	B	Std. Error	Beta	t	Sig.
(Constant)	5.750	1.727		3.330	.005
Critical Thinking	.901	.095	.934	9.454	<.001

The hypothesis that I propose in this simple linear regression analysis is:

Ha: There is a positive significance correlation between Critical Thinking Skills (X) and Vocabulary Mastery (Y).

H0: There is no positive significance correlation between Critical Thinking Skills: (X) on Vocabulary Mastery (Y).

Based on the output above, it was known that the significance value (Sig.) $<.001$, $<$ probability 0.05, it can be concluded that H0 is rejected and Ha is accepted, which means that "There is a positive significance correlation between Critical Thinking Skills (X) and Vocabulary Mastery (Y)".

Table 3. The Correlation

		Critical Thinking Skills	Vocabulary Mastery
Critical Thinking Skill	Pearson Correlation	1	.934**
	Sig.		$<.001$
	N	15	15
Vocabulary Mastery	Pearson Correlation	.934**	1
	Sig.	$<.001$	
	N	15	15

Based on the table above, the correlation coefficient of .934 indicates a strong positive relationship between " Critical Thinking Skills" and " Vocabulary Mastery." As one variable increases, the other variable also tends to increase. The significance level of less than 0.001 (Sig. $<$ 0.05) suggests that this relationship was not likely due to chance, and the correlation was statistically significant.

2. Discussion

From According to the findings described above, the ability to think critically had a correlate with language mastery. The correlation had a positive and a perfect degree of correlation. The obtained correlation coefficient, or Sig. is 0.934, It was within the Pearson Correlation range of 0.81 to 1.00. be a result, the relationship was referred to be a perfect correlation. The alternative hypothesis (Ha) was accepted, while the null hypothesis (H0) was rejected. According to the research findings, the alternative hypothesis, which stated that there were a correlation between critical thinking skills and vocabulary mastery in Critical Listening and Speaking classes, was accepted, whereas the null hypothesis, which states that there is no significant correlation between critical thinking skills and vocabulary mastery in Critical Listening and Speaking classes, was rejected. In other words, the better the students' critical thinking skills, the greater their vocabulary mastery. The sign value is 0.934, which

indicates that there were a perfect correlation between pupils' critical thinking and vocabulary mastery.

According to the idea, students' critical thinking skills are favourably and strongly connected with their L2 vocabulary knowledge. Learners' critical thinking skills were found to significantly and positively correlate with their knowledge of L2 vocabulary (Fahim and Komijani, 2011). Second, consider if learning foreign vocabulary items has a critically significant effect on participants' understanding of the text. Students need to learn to develop flexible intellectual skills related to learning vocabulary in order for them to develop this level of competency instead of just memorizing what is written in textbooks (Fahim and Komijani, 2011). Third, there is a strong link between critical thinking and lexical inference Mirzai (2008), reported that lexical inferencing and critical thinking are significantly linked. Students with strong critical thinking abilities can actively participate in mastering terminology.

D. Conclusion and Suggestion

The overall calculation of variables X (student critical thinking) and Y (vocabulary mastery) results in a totally correlated positive correlation. It suggests that there were a substantial association between pupils' critical thinking and vocabulary mastery. r had a value of 0.934. This indicates that the Alternative Hypothesis (H_a) had been accepted and the Null Hypothesis (H_o) had been rejected. As a result, there were a considerable positive association between the two variables. In this situation, students have a perfect critical thinking relationship or influence on their vocabulary mastery. In the following study, a more in-depth investigation of students' critical thinking will be conducted. Looking for things that can have a big impact on understudies' basic thinking abilities and tracking the impact of each on their vocabulary mastery. The extra scientist proposed developed the appropriate, used different portions of the vocabulary mastery test, and used different tests, not just polls and tests, but also interviews.

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