

**THE CORRELATION BETWEEN STUDENTS' CRITICAL THINKING  
SKILL AND THEIR SPEAKING ABILITY AT STKIP ABDI  
PENDIDIKAN PAYAKUMBUH**

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**ABSTRACT**

*The success of speaking ability is influenced by various factors, and one of them is students' critical thinking. The application and improvement of students' critical thinking skills in learning English are considered important. This study aims to examine the correlation between students' critical thinking skills and their speaking ability. The researcher employed a quantitative approach using the correlation method. The sample consisted of students from STKIP Abdi Pendidikan Payakumbuh enrolled in the academic years 2017, 2018, and 2019. Questionnaires were distributed to 25 students to assess their critical thinking skills, while a speaking test was used to evaluate their speaking ability. The collected data were subjected to a normality test, revealing that the critical thinking skills data were normally distributed, whereas the speaking ability data were not. Data analysis was conducted using the Spearman-rho test in SPSS 2016. The obtained results showed that the significance value was 0.536 ( $> 0.05$ ), and the coefficient score was 0.133 ( $< 0.2$ ). Therefore, this study found no significant correlation between students' critical thinking skills and their speaking ability. Consequently, the alternative hypothesis ( $H_a$ ) is rejected, while the null hypothesis ( $H_o$ ) is accepted. Based on the result, it was not relation for English students department of STKIP Abdi Pendidikan to enhance their speaking ability with critical thinking, but the students realize that one of factors of speaking is critical thinking.*

Keyword: *Speaking ability, Critical thinking skill*

**INTRODUCTION**

Communication plays a vital role in our daily lives, and it can be achieved through various forms, such as oral and written communication. Among these forms, speaking is the most commonly used tool for communication and interaction. According to Zemach (in Sovianti, 2020) speaking is an important form of communication in day to day life, but it is

especially important to teach in school and university. It enables individuals to express their ideas, thoughts, and opinions, leading to improved academic achievements. Therefore, mastering speaking skills, especially in a foreign language context, is crucial.

However, developing proficiency in speaking is not an easy task, as it involves several interconnected aspects. According to Brown (in Ilinawati et al., 2021), students need to master language features including grammar, vocabulary, fluency, pronunciation, comprehension, task management, and accuracy to enhance their speaking ability. Additionally, Wang (2014) emphasizes the importance of constructing coherent sentences, processing information effectively, organizing thoughts and ideas, and cultivating confidence and self-control. Consequently, speaking ability extends beyond articulating words fluently and clearly; it also involves understanding, processing, analyzing, and organizing information, thoughts, and ideas. This holistic approach ensures that the conveyed information is meaningful and achieves the goal of interaction and communication.

To effectively process and develop ideas for speaking, individuals must possess critical thinking skills, which involve observation, evaluation, analysis, and reflection. Critical thinking skills, as defined by Warnick and Inch (in Ramezani, 2016), enable individuals to collect, analyze, integrate, and interpret data and information. Furthermore, Sezer (in Malmir & Shoorcheh, 2012) states that critical thinking skills involve observing, analyzing, and evaluating existing information before determining the appropriate course of action, whether it be conveying ideas or taking other actions. Then, Lipman (in Ali et.al, 2019) argue that critical thinking is skillfull, responsible thinking that facilities good jugment because it relies upon criteria, is self-correcting, and is sensitve to context. Critical thinking skills are closely linked to speaking ability in several ways. Firstly, critical thinking motivates and boosts students' confidence in speaking activities. Secondly, critical thinking enhances students' understanding of the subjects they learn, enabling them to convey their thoughts and ideas meaningfully and clearly.

In the context of STKIP Abdi Pendidikan Payakumbuh, preliminary research has identified certain phenomena related to speaking ability. Firstly, some students lose interest in a topic and provide irrelevant explanations despite fluency in their speech. Secondly, students struggle to process the information they possess when asked to explain their thoughts or ideas, resulting in difficulty expressing themselves. Lastly, some students remain silent and lack motivation to speak in class.

Given the insights from experts and previous research, such as the strong positive correlation between critical thinking and English speaking ability (Ramezani et al., 2016), it

becomes evident that speaking ability is closely linked to critical thinking skills. Additionally, individuals with critical thinking skills understand how to effectively express their thoughts, leading to improved communication (Hughes & Jonathan Lavery, 1993). Critical thinking empowers individuals to delve beyond surface-level information presented in conversations, enabling them to make informed decisions and enhance their speaking abilities over time (Worrel and Profetto-Mcgarth in Malmir & Shoorcheh, 2012).

While previous research has shown a strong positive correlation between critical thinking and English speaking ability (Ramezani et al., 2016), there is still a research gap that needs to be addressed. Specifically, there is a need to investigate the correlation between students' critical thinking skills and their speaking ability in the context of STKIP Abdi Pendidikan Payakumbuh. Understanding this relationship will contribute to the existing literature and provide insights into the factors influencing students' speaking proficiency.

Therefore, this study aims to investigate the correlation between students' critical thinking skills and their speaking ability. By examining this relationship, the research aims to contribute to the existing literature and validate the theoretical framework.

## **METHOD**

### **Research Design**

This study employed a correlational research design. According to Creswell & Creswell (2018), correlational research is a quantitative approach that aims to describe and measure the degree of association or relationship between two or more variables or sets of scores. In this study, the researcher aimed to establish the correlation between students' critical thinking skills and their speaking ability. The quantitative approach allowed for objective testing of theories by examining the relationships among variables, which were measured using numerical data and analyzed using statistical procedures.

### **Population and Sample**

The population of this research consisted of students enrolled in the English educational program at STKIP ABDI Pendidikan Payakumbuh. The population, as defined by Sugiyono (2018), refers to the entire group of subjects that are examined and from which conclusions are drawn. In this case, the population represents a region of generalization comprising objects/subjects with specific quantities and characteristics chosen by the researchers for study and subsequent conclusions.

According to Gay (2019), a sample refers to a group, individuals, items, or events that represent the characteristics of the larger group from which the sample is drawn. Furthermore, Creswell (2013) states that a sample is a subgroup of the target population that the researcher selects for the purpose of generalizing about the target population. In this study, total sampling technique was employed due to the smaller population size (less than 100). Therefore, the sample consisted of students from the English educational program at STKIP ABDI Pendidikan Payakumbuh who had taken the general speaking subject in the academic years 2017, 2018, and 2019.

### **Research Instruments**

To collect the data, the researcher utilized a questionnaire to assess students' critical thinking skills and a speaking test to evaluate their speaking ability. The questionnaire consisted of 21 questions adapted from Sarigoz (2012) and was administered to students in the English educational program at STKIP Abdi Pendidikan Payakumbuh. The questionnaire employed a five-point Likert scale, ranging from "1" (never) to "5" (always), to measure the responses. The questionnaire was distributed using a Google Form link via the WhatsApp application on participants' smartphones. For assessing students' speaking ability and determining their proficiency levels, an interview-based speaking test was conducted. The researcher conducted interviews with English students at STKIP Abdi Pendidikan Payakumbuh from the academic years 2017, 2018, and 2019, totaling 34 participants. The interviews were conducted using the WhatsApp application on smartphones.

Following the data collection, the researcher assessed the speaking performances based on the rubric score suggested by Brown, Harris, and Harmer (Putra, 2017). To ensure reliability and minimize bias in the assessment process, two assessors were involved: the researcher and an English lecturer at STKIP Abdi Pendidikan Payakumbuh, who taught speaking courses and served as the research thesis advisor, Hervina, M.Pd. Interrater reliability was employed to enhance the consistency of the assessment. After data collection for both variables, statistical calculations were performed using the SPSS 2016 program.

## **FINDINGS AND DISCUSSION**

### **Findings**

The study was conducted to see whether there is or no correlation between students' critical thinking skills and speaking ability at STKIP Abdi Pendidikan Payakumbuh

Academic year, 2017, 2018, and 2019. After the data both variables were collected, the researchers did the statistical calculations of the data through the SPSS 2016 program, then the results were obtained as follows.

**Table 1: The Result of STATISTICS**

Statistics		Critical_Thinking_Skill	Speaking_Ability
N	Valid	24	24
	Missing	0	0
Mean		82.08	11.83
Median		83.50	10.50
Mode		85	10
Std. Deviation		9.899	2.869
Variance		97.993	8.232
Minimum		67	8
Maximum		109	18
Percentiles	25	74.50	10.00
	50	83.50	10.50
	75	87.00	13.75

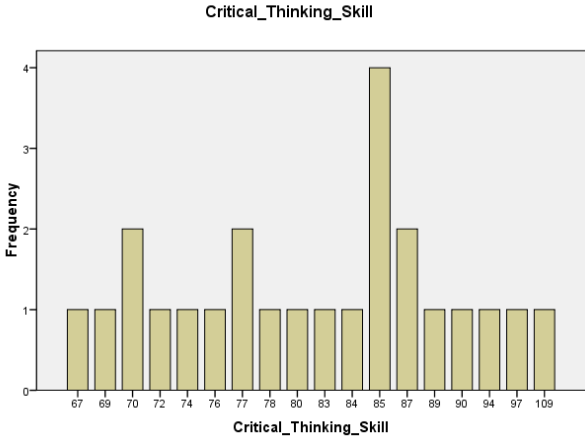
Based on the statistical table above, the participants both variables are the same, namely 24. From the data of the participant, the mean value for critical thinking skill is 82.08 and for speaking ability, the mean value is 11.83. Then, the median value of critical thinking skill is 83.50 and for speaking ability is 10.50. while for the critical thinking skill mode, the score is 85 and speaking is 10. Furthermore, the standard deviation score for critical thinking skills is 109, and speaking ability is 18. Meanwhile, the maximum critical thinking ability score is 109, and speaking ability is 18. Meanwhile, the minimum critical thinking ability score is 67, and speaking ability is 8.

Next, to see the distribution of data on each variable, the researcher divides the data into four parts, called Q1, Q2, and Q3. First, for critical thinking skills, Q1 = 25% of the data lies between 67-74.50, Q2 = 50% of the data lies between 83.50-87.00, and Q3 = 75% lies between 87.00-109. It can be concluded that the distribution of data from critical thinking skills tends to be normal and the data tends to spread between Q2 and Q3 which is at a value of 83.50-87.00 which indicates that the value for critical thinking skills tends to be above average. Second, for speaking ability Q1=25% of the data lies between 8-10, Q2=50% lies between 10.5-13.75 and Q3=75% lies between 13.75-18. It can be concluded that the

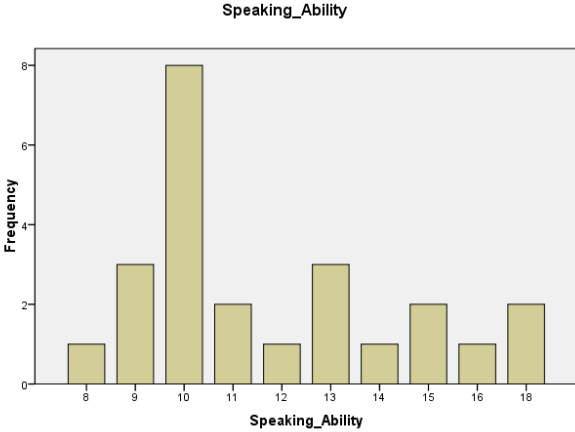
distribution of data from critical thinking skills tends to be abnormal and the data tends to be dominant between Q1 and Q2, namely the value of 10.00-10.5 which indicates that the score for students' speaking ability tends to be below average.

The distribution of data on each variable can be seen in the following diagram below:

**Figure 1: Critical Thinking Skill Diagram**



**Figure 2: Speaking Ability Diagram**



Before finding out the correlation between students' critical thinking and speaking ability, the researcher did testing normality to see whether data was distributed normally or not. This test used SPSS 2016. It found that the data for critical thinking skills are normally distributed, while the data for speaking skills are not normally distributed.

**Table 2: The Result of Testing Normality**

**Tests of Normality**

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Critical_Thinking_Skill	.101	24	.200*	.952	24	<b>.304</b>
Speaking_Ability	.239	24	.001	.882	24	<b>.009</b>

a. Lilliefors Significance Correction

\*. This is a lower bound of the true significance.

Because one of the data in this study is not normally distributed and refers to (Tanner, 2012) that said Pearson product-moment is used if both of the data are normally distributed, otherwise it is permissible to use other alternatives such as data transformation or spearman-rho. Furthermore, Schober et al (2018) argue that for nonnormally distributed continuous data, for ordinal data, or for data with relevant outliers, a Spearman rank correlation can be used as a measure of a monotonic association. So based on the expert opinion above and to avoid errors in the correlation test, the researcher chose Spearman-rho as an alternative to performing a correlation test rather than data transformation. After collecting and calculating data on each variable, the researcher applied SPSS Program to calculate the spearman's rho. The result can see in the table below.

**Table 3: The Result of Correlational Test**

Correlations

		Critical_Thinking_Skill	Speaking_Ability
Spearman's rho	Critical_Thinking_Skill	1.000	.133
	Correlation Coefficient	.	.536
	Sig. (2-tailed)	24	24
Speaking_Ability	Speaking_Ability	.133	1.000
	Correlation Coefficient	.536	.
	Sig. (2-tailed)	24	24

Based on the correlation test table above, the value of the rho coefficient is 0.133 and sig. the score is 0.536. if this result is compared with the confidence level that is 0.05 so that sig. score  $0.536 > 0.05$  and also refers to table above interpretation of correlation, coefficient score that is  $0.133 < 0.2$  so the correlation between critical thinking skill and speaking ability is negligible.

Based on the statement and table above, it can be concluded that there is no significant correlation between students' critical thinking and speaking ability of the English Students Department in STKIP Abdi Pendidikan Payakumbuh registered the year 2017, 2018, 2019. So  $H_a$  or the alternative hypothesis in this study is rejected while  $H_o$  or the null hypothesis is accepted.

## **Discussion**

Students' critical thinking plays a significant role in the success of their speaking abilities. It is crucial for students to apply and enhance their critical thinking skills while learning English. When engaging in speaking tasks, individuals must possess thinking skills that emphasize observation, evaluation, analysis, and reflection, collectively referred to as critical thinking skills. A critical thinker, as described by Dewey in Sarigoz Sarigoz (2012), exhibits several characteristics: active thinking, careful evaluation of evidence and outcomes, openness to change and growth, self-reflectiveness, and controlled thinking. These criteria outline the qualities that contribute to effective critical thinking in language learning and speaking tasks.

After calculating and describing the data, it is found that the data of critical thinking skill is spread in the range of values of 83.50-87. 50 it means that the students' speaking ability tends to be high. Meanwhile, for speaking ability, 50% of the data spread under the range of 10.00-10.50, which means that students' speaking ability tends to low. Furthermore, after the correlation test was carried out on both of the data, it could be seen that sig. the score is  $0.536 > 0.05$  as the level of confidence, while the coefficient score is 0.133 which is between 0.00 – 0.2 (see the interpretation correlation table). It means that the correlation between critical thinking skills and speaking ability is negligible.

In analyzing the data, it can be concluded that there is no correlation between critical thinking skills and the speaking ability of English students at STKIP Abdi Pendidikan Payakumbuh in the academic years 2017, 2018, and 2019. This finding supports the rejection of the research hypothesis ( $H_a$ ), which stated that there is a correlation between students'

critical thinking skills and speaking ability. Conversely, the null hypothesis ( $H_0$ ) stating no correlation between critical thinking skills and speaking ability is accepted.

These results differ from previous theories and research that suggest a strong positive correlation between critical thinking and the ability to speak English. For example, Ramezani et al. (2016) found a significant positive correlation, indicating that an increase in critical thinking level leads to improved English speaking ability. Furthermore, Worrel and Profetto-Mcgarth in Malmir & Shoorcheh (2012) asserted that critical thinking promotes speaking ability and enhances judgmental power in real-world conversations. Critical thinking enables individuals to move beyond surface-level information presented by others, make independent decisions during conversations, and improve their speaking abilities in the long run. Additionally, individuals with critical thinking skills understand how to effectively express their thoughts, contributing to better communication.

Based on the findings and theories mentioned above, it can be concluded that the results of this study, which indicate no correlation between critical thinking skills and speaking ability among English students at STKIP Abdi Pendidikan Payakumbuh in the academic years 2017, 2018, and 2019, differ from existing theories. Several factors, such as mindset, learning approaches, and the research location, may have contributed to this disparity. Dewey (cited in Fisher, 2011) emphasized that critical thinking is an active process rather than a passive one. It requires students to actively engage in problem-solving, finding solutions, analyzing information, and effectively conveying and defending arguments. However, in the current educational context, many students still exhibit passivity, waiting to receive information from teachers rather than actively participating in problem-solving and finding solutions. This passivity hinders their ability to present and defend arguments effectively. Moon (2008) supported this notion by highlighting the importance of creating a comfortable classroom environment that encourages students to take risks, express their opinions, and engage in critical thinking and speaking activities. The classroom environment plays a crucial role in facilitating the improvement of both critical thinking skills and speaking ability.

Speaking is important for learners in the learning process especially in achieving academic success and developing their thinking. In line with Goh & Burns (2012), the importance of speaking is divided into two aspects: First, the learning process, Mastering speaking can facilitate learners to participate in class and the learning of the subject matter. Speaking also makes Learner initiate and maintains a conversation in group discussion, describe feelings and acceptably give reason, and ask for more information or assistance. Second, the thinking process, speaking as an important tool for helping learners explore,

develop, consolidate, and investigate ideas, as well as evaluate propositions, all of are crucial thinking processes.

Next, Khadidja (in Analia: 2015) states in a communicative approach, speaking was given more importance since oral communication involves speech where learners are expected to interact verbally with other people. Moreover, the teacher's talk will be reduced, that is to say, learners are supported to talk more in the classroom. Speaking is important for an academic setting, where the student should be active in their classroom to discuss the topic and get knowledge from them.

Crystal (in Nazara: 2011) states that speaking in English is the main gate to get a greater job, especially in multinational company. It also will improve economic prospects. To expand the horizon both literally and figuratively to be a global citizen. It is clear that speaking is important to expand your career in the real world. Based on experts' opinion above, the researcher can conclude that speaking is importance in any aspect, first to success in academic achievement, to develop the thinking process, and get the best career in the real world.

Meanwhile, Paul et. al. (2014) characteristics of critical thinking are raise vital questions and problems, formulating them clearly and precisely, gather assesses relevant information, using the abstract ideas to interpret them effectively, comes to well-reasoned conclusions and solutions, testing them against relevant criteria and standards, think open-mindedly within an alternative system of thought, recognizing and assessing, as need be, assumptions, implications, and practical consequences and communicates effectively with others in figuring out solutions to a complex problem. In line with Paul (2018) states that there are twelve characteristics of critical thinking, as they follow: clarity, precision, specify, accuracy, relevance, consistency, logicalness, depth, completeness, significance, fairness, adequacy. Characteristics of critical thinking are thinking deeply, logically, consistency, and fairness. Characteristics of critical thinking are always found in vital questions and problems to solve them, seek relevant information from an issue or idea, be reasonable in conclusion and solutions, and open-minded.

Furthermore, based on the expert opinions characteristics of critical thinking are logicalness, reasonableness, and depth, and always open-minded about another issue or relevant information to solve the problem, using evidence and fact to make an argument or conclusion, organize thought coherently, and concisely. In addition, clarity in stating questions, diligence in seeking information, and reasonableness in selecting and applying criteria are important. Then, should be objective and consider in making decisions.

In conclusion, critical thinking skills and speaking ability are active processes in learning, involving analysis, problem-solving, finding solutions, and interpreting beliefs with relevant evidence. Therefore, an active learning approach and conducive learning environment significantly influence the development of students' critical thinking skills and speaking ability. It is important to note that the differences between the research findings and existing theories do not undermine the significance of critical thinking skills and speaking ability in language education and other fields. Both abilities are crucial for students, aiding them in problem-solving, information analysis, decision-making, effective communication, and their future careers. Therefore, it is essential to continuously improve and enhance these abilities throughout the teaching and learning process.

## **CONCLUSION AND SUGGESTION**

While some related research suggests a strong positive correlation between students' critical thinking and their speaking skills, the generalization of these findings to the entire population indicates no significant correlation. This outcome could be influenced by several factors, including the students' overall English proficiency and the conditions in which the speaking tests were conducted. Additionally, the relatively low number of samples used in the research may have impacted the results. Therefore, further investigation is required to explore this topic in more depth. To address these limitations, future researchers are advised to conduct a more comprehensive analysis of students' critical thinking. Moreover, they should consider developing appropriate and diverse assessments that cover various aspects of speaking abilities. By employing a wider range of speaking tests, researchers can gather more robust and reliable data for a more accurate understanding of the relationship between critical thinking and speaking skills.

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