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The Influence of Teacher Competence on Students' Critical Thinking Skills (A Survey at SMK Daarul Uluum, South Jakarta)

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KEYWORDS

Critical Thinking Skills, Pedagogical Competence, Teacher Competence

ABSTRACT

The role of teacher competence in the education system is a major pillar in character formation, knowledge enhancement, and the development of a competent young generation. Amid the dynamic changes in the world of education, the role of teachers holds a very crucial position in guiding students to achieve good academic performance and shape good character as well. One of the primary roles of teachers is developing pedagogical competence to improve learning discipline. This study was motivated by the observation that students' critical thinking skills are influenced by teachers' pedagogical competence in classroom teaching, aiming to measure the extent of teacher competence's influence on the critical thinking skills of students at SMK Daarul Uluum, Karet Kuningan, South Jakarta. The sample consisted of 30 students, and the study employed a descriptive analytical correlational method. By analyzing the data using the product moment correlation, the results show that the product moment coefficient (r_{xy} or r_o) is 0.225. This indicates that r_o is lower than r_t at a significant level of 5% (0.367) and at a significant level of 1% (0.470). Thus, since $r_o < r_t$ at both significance levels, the null hypothesis is accepted, while the alternative hypothesis is rejected, meaning that there is a low influence of teacher competence on the critical thinking skills of students at SMK Daarul Uluum, South Jakarta.

INTRODUCTION

Education serves as a vital intellectual tool that is continuously needed, facilitating the development of critical-analytical thinking and the generation of innovative ideas (Гуцало et al., 2024). This dynamic process is essential for the advancement of various scientific disciplines, including religion and theology (Dewey, 1933). By fostering habits of reflection and moral contemplation, education enables individuals to make informed decisions grounded in ethical considerations (Noddings, 2015). The integration of critical thinking within educational frameworks not only enhances cognitive abilities but also contributes to the cultivation of moral values, which are integral to the educational process (Pauzi, 2024). Moreover, the application of

emancipatory pedagogy encourages learners to critically examine their beliefs and the social structures influencing their lives, promoting active participation in the learning process (Giroux, 2001). Through such transformative educational approaches, individuals are equipped with the intellectual tools necessary to navigate and contribute to a just and equitable society

Education is a multifaceted and continuous process that transcends time and place, deeply embedded in the fabric of human life. It serves as a dynamic mechanism for developing the intellectual (head), emotional (heart), and physical (hand) dimensions of individuals, thereby fostering holistic growth (Müller, 2021). This tripartite development is essential for cultivating well-rounded individuals capable of critical thinking, empathy, and practical skills. Moreover, education functions as a conduit for transmitting values, adapting to societal changes to reflect evolving norms and beliefs (Gauttam, 2024). It addresses fundamental human challenges such as ignorance, poverty, and social inequality by equipping individuals with the knowledge and skills necessary to navigate and improve their circumstances (Masino & Niño, 2016). Approaching education through a systems perspective reveals its complexity and interconnectedness, where each component—be it individual learners, educators, or institutions—plays a vital role in the overall educational ecosystem (Candia et al., 2022). This systems approach underscores the necessity of viewing education as an integrated whole, where changes in one part can significantly impact the entire system.

Education as a system consists of subsystems such as goals, educators, students, curriculum, methods, media, environment, and evaluation. The purpose of education is very important because it determines its direction. Education aims to develop human beings, both educators and students, through the provision of skills and personalities. The content of education includes teaching, guidance, and training. Therefore, there needs to be a competent educator—an ability that a person has in doing something that aims to achieve success. The competencies that teachers have cannot be separated from the four competencies that teachers must possess, namely personality competence, pedagogic competence, professional competence, and social competence.

Education in Islam is based on the Qur'an, Hadith, and other sources, with teaching as an important part that focuses on knowledge transfer and cognitive aspects. Although teaching focuses on the intellectual, mentorship is more related to personality and moral development. Both must be done by educators through varied methods and media so that the educated develop good intelligence, morality, and morals. In the modern era, it is important for educated people to be able to think critically so that the knowledge conveyed can be understood well.

The role of teacher competence in shaping students' critical thinking skills has been widely explored in educational research. Previous studies, such as those by Mursabdo et al. (2022) and Nurliana et al. (2023), highlight the significance of pedagogical competence in fostering students' analytical abilities. However, these studies often focus narrowly on pedagogical skills without considering the interplay of other competencies, such as professional or social competence. For instance, Pratiwi et al. (2022) emphasize the importance of pedagogical competence in improving student discipline but overlook its direct correlation with critical thinking. This narrow focus

creates a gap in understanding how holistic teacher competencies collectively influence students' higher-order thinking skills, particularly in vocational education settings where practical and theoretical knowledge intersect.

Despite the abundance of research on teacher competence, there remains a lack of empirical evidence on its specific impact on critical thinking skills in vocational schools (SMKs). Studies like those by Rizki and Aminuyati (2023) and Febi Salsabila (2021) primarily examine academic outcomes, such as test scores, rather than cognitive skills like critical thinking. This gap is particularly evident in contexts like *SMK Daarul Uluum*, where vocational training demands both technical proficiency and problem-solving abilities. The absence of localized studies in such settings limits the applicability of broader findings, underscoring the need for targeted research to address this disparity and provide actionable insights for vocational educators.

The urgency of this research lies in the evolving demands of the 21st-century workforce, which prioritizes critical thinking and adaptability. As noted by Sulaiman and Syakarofath (2018), critical thinking is a cornerstone of lifelong learning and professional success. Yet, the low correlation (25.5%) found in this study between teacher competence and students' critical thinking skills suggests that current pedagogical approaches may be insufficient. This discrepancy calls for immediate attention, as vocational students—who often enter the workforce directly after graduation—require robust critical thinking skills to navigate complex industrial challenges. Addressing this issue is crucial for aligning educational outcomes with labor market needs.

This study introduces novelty by examining the relationship between teacher competence and critical thinking skills in a vocational school context, a rarely explored area in existing literature. Unlike previous research that isolates pedagogical competence, this study acknowledges its limitations and highlights the need for a multifaceted approach to teacher development. By employing a quantitative methodology with Pearson correlation analysis, the research provides empirical data to validate the weak influence of teacher competence on critical thinking, offering a fresh perspective on the complexities of educational effectiveness in vocational training.

The contribution of this research extends to both academic and practical realms. Academically, it enriches the discourse on teacher competence by revealing its limited impact on critical thinking, challenging assumptions about its centrality in cognitive development. Practically, the findings urge policymakers and school administrators to redesign teacher training programs, incorporating diverse competencies beyond pedagogy. For instance, integrating professional and social competence training could enhance teachers' ability to nurture critical thinking, ultimately improving student preparedness for the workforce.

The primary objective of this study is to measure the influence of teacher competence on students' critical thinking skills at *SMK Daarul Uluum*, South Jakarta, using a correlational approach. By identifying the strengths and weaknesses of current teaching practices, the research aims to provide evidence-based recommendations for enhancing teacher training and classroom strategies. The benefits of this study include empowering educators with actionable insights, improving student outcomes, and contributing to the broader goal of aligning vocational education

with global competency standards. Ultimately, this research seeks to bridge the gap between theory and practice, ensuring that vocational students are equipped with the critical thinking skills necessary for success in an increasingly complex world.

Therefore, the researcher will examine the problem of the influence of teacher competence on students' critical thinking skills in improving achievement through education. The educational research methodology focuses on the influence of teacher competence through Islamic religious education on students' critical thinking skills.

MATERIALS AND METHOD

The researchers used descriptive statistics to measure and analyze research data, aiming to describe the characteristics of the data to support conclusions (Thompson, 2009). The study employed a quantitative method, which is rational and based on empirical observations. It involved 100 grade XI students of *SMK Daarul Uluum*, South Jakarta. Probability Sampling and Simple Random Sampling techniques were applied to ensure a representative and unbiased sample, resulting in a sample size of 30 students. Statistical hypotheses were tested to examine the relationship between variables, such as the influence of teacher competence on students' critical thinking skills. The hypotheses tested included descriptive, comparative, associative, and causal types. The research was conducted over six months, starting July 26, 2023.

RESULTS AND DISCUSSIONS

Variable Frequency Distribution (X) Influence of Teacher Competency

Table 1. Variable Distribution X

No	Interval Classes		F	Middle Value
1	124	127	1	125,5
2	128	131	5	129,5
3	132	135	4	133,5
4	136	139	8	137,5
5	140	143	6	141,5
6	144	148	6	146
Sum	**804**	**823**	30	**813,5**

Variable Frequency Distribution (Y) Students' Critical Thinking Ability

Table 2. Variable Distribution X

No	Interval Classes		F	Middle Value
1	95	100	3	97,5
2	101	106	5	103,5
3	107	112	7	109,5
4	113	118	8	115,5
5	119	124	5	121,5
6	125	131	2	128

No	Interval Classes		F	Middle Value
Sum	**660**	**691**	**30**	**675,5**

Finding *the Mean*

N	=	30
∑X	=	4128
∑Y	=	3364
∑X2	=	569062
∑Y2	=	379306
∑XY	=	463264

Variable X = $\frac{\sum X}{n}$ **4128 138**
30

Variable Y = $\frac{\sum Y}{N}$ **3364 112**
30

Correlation Index Numbers between Variable X and Variable Y (rxy)

Table 3. Rxy value

$$rxy = \frac{n.\sum XY - (\sum X.\sum Y)}{\sqrt{[n.\sum X2 - (\sum X)^2]\,[n.\sum Y2 - (\sum Y)^2]}}$$

$$= \frac{30.463264 - (4128.3364)}{\sqrt{[30.569062 - (4128)^2]\,[30.379306 - (3364)^2]}}$$

13897920	13886592	**11328**				
17071860	-	17040384	X	11379180	-	**11316496**
31476			X	62684	=	
						1973041584
444189327						
0,2550317	**=**	**0.255**				

Correlation Coefficients	=	25,50%
Coefficient of Determination	=	**0,065041168**

In the calculation table, the analysis uses the Pearson product moment correlation which is used to calculate the correlation in data variations. The correlation calculates the data as it is does not rank the data on its diversity. On pearson correlation is used precisely for parametric statistical calculations. The results of the calculation using non-parametric SPSS with the following results:

Data Analysis

Table 4. Data Analysis Results using SPSS

Descriptive Statistics			
	Mean	**Std. Deviation**	**N**
Students' Critical Thinking Skills	112,00	84.88	30
Teacher Competence	138,00	60,149	30

It is known that the values (mean) of two variables, namely Variable X (Influence of teacher competence), the average mean is 60.140 and Variable Y (Critical thinking ability) the average mean is 84.88.

Analysis of the Correlation of Variable X to Variable Y

Table 5. Analysis of the Correlation of Variable X to Variable Y

Correlations			
		Students' Critical Thinking Skills	**Teacher Competence**
Pearson Correlation	Students' Critical Thinking Skills	**1,000**	**0,255**
	Teacher Competence	**0,255**	**1,000**
Teacher Competence	Students' Critical Thinking Skills		**0,48**
	Teacher Competence	**0,48**	
N	Students' Critical Thinking Skills	**30**	**30**
	Teacher Competence	**30**	**30**

Correlation is significant at the 0.01 level (2-tailed).

Based on the output results in table 5, it can be seen that the resulting correlation value is 0.255% or 25.5%. This shows that there is an influence of teacher competence on students' critical thinking skills. With a value (R *adjusted*) of 25.5%, which is the value of the correlation coefficient. Which concludes that teacher competence affects the critical thinking ability of students in vocational schools. Daarul Ullum, South Jakarta.

Table 6. Results of Correlation Analysis of Variable X to Variable Y

Type	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.255a	0,65	0,638	9057

a. Predictor: (Constant), the influence of teacher competence

1. (R) Called correlation coefficient

The value of R is the level of relationship between the independent variable X and the dependent variable Y. can be determined based on the table of the value of the coefficient of coefficient of 0.255. In the calculation of parametic statistics that can be seen in table 4.7, which means that the influence of teacher competence on students' critical thinking skills is 25.50%.

2. R square is called the coefficient of determination

The coefficient of determination is how much variation Y is caused by X from table 4.10 of the value of the square (R2) is 0.255. The value of the determination coefficient can be produced by squaring the correlation value $(0.255)^2$ (0.255 squared) = 0.65 or 6.5 %

This means that the variation that occurs affects the critical thinking ability of students by 6.5% due to the influence of teacher competence and the rest is influenced by other variables that are not used in this study by 93.5% (100%-6.5%), in other words, the influence of teacher competence (pedagogic) on students' critical thinking ability is 6.5%. The rest of the influence, 93.5% is from other influencing factors such as professional competence, personality competence, social competence and other competencies such as innovative and creative competence, information and communication technology (ICT) competence.

Data Interpretation

The results of the calculation and hypothesis testing showed that there was no synergistic relationship between the quality of teacher service and the ability of students of SMK Daarul Ullum Class XI to understand the learning material. Although teachers have pedagogic competence, their contribution to students' critical thinking abilities is proven to be low, with an rxy correlation coefficient value of 0.225, which indicates a weak relationship between teaching quality and students' critical thinking abilities. The interpretation of the correlation coefficient based on the rxy value is as follows:

0,00-0,199 = very low
0,20-0,399 = low
0,40-0,599 = medium
0,60-0,799 = strong
0,80-1,000 = very strong

Judging from the results of the calculation of the regression coefficient obtained, which is 0.255, it has **a low state** level (in the range **of 0.20-0.399**). The result of the determination coefficient of 0.0650 showed that the quality of students' critical thinking contributed 25.50%,

while 65.50% was influenced by other factors. This low contribution is due to the focus of teacher competence which is limited to pedagogic competence, which has a direct impact on the experience of teachers and students.

In providing an interpretation of the correlation index number "r" product moment, on the table calculate the value of "r" *product moment*. There is the influence of the model from two variables, so the author formulates *the alternative* hypothesis (Ha) and the null hypothesis (Ho), as follows:

1. Null Hypothesis (Ho): There is a low influence between teacher competence on students' critical thinking skills.
2. Alternative Hypothesis (Ha): There is no significant influence between teacher competence on students' critical thinking skills.

So to be able to test the hypothesis, it must be proven by comparing the "r" obtained through calculations or "r" observations (ro) with the magnitude of "r" in the following calculation "r" product moment (rt), first looking for degrees of freedom (db) or *degrees of freedom* whose formula is as follows:

Df = N – nr

Df = *Degrees of freedom*

N = *Number of Case*

nr = Number of correlated variables

There are many samples in this study with a total of 30 students, thus N = 30. The variables that are looking for correlation are the variables X and Y, so nr = 1. It is easy to obtain the Df, which is Df = 30 - 1 =29. Consult table "r" *Product Moment*, then it can be known that Df is 124, obtained a value of "r" *Product Moment* at the significance level of 5% = 0.367 and the significance level of 1% = 0.470. Thus, it can be known that if the ro > rt are either 5% or 1% significantly, then the null hypothesis is rejected, while the alternative hypothesis is accepted and approved. This means that there is an influence of weak or low teacher competence with students' critical thinking skills.

The results showed a low relationship of 0.255 between teaching quality and student success at SMK Daarul Ullum, South Jakarta. This is in accordance with the researcher's opinion that other factors such as the variety of teacher competencies need to be considered to improve the quality of student learning.

Implementation of Research Results

Researchers realize that this research has not completely arrived at the level of absolute truth. From the results of the hypothesis test, the researcher also realized that this study has several weaknesses, including:

1. The researcher only examined the variables of pedagogical competence, but actually there are many other factors that affect students' critical thinking skills.

2. The difficulty of collecting data on respondents is considering the fairly dense and diverse activities of respondents.
3. The limitations of reference sources obtained by researchers in presenting material in this study.

The results of this study only apply to grade XI at SMK Daarul Uluum, South Jakarta and cannot be generalized to other education levels. Because each respondent has different characteristics.

CONCLUSION

Based on the research findings, there is a low or negative relationship between teacher competence and students' critical thinking skills, suggesting that increasing lesson hours could improve students' learning focus and critical thinking abilities. The study indicates that students' lack of concentration during lessons is influenced by the quality of teacher competence, emphasizing the need to enhance teaching quality comprehensively to foster critical thinking. However, the assessment focused only on pedagogic competence and did not consider other essential teacher competencies, which may limit the findings. Additionally, intensive vocational activities, which demand more time, may reduce the effectiveness of material discussion. Future research should explore the combined influence of multiple teacher competencies—including professional and social competencies—on critical thinking skills, particularly in vocational education contexts, and consider how to optimize lesson structuring to balance practice and theory effectively.

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