



The Influence of Digital Competence and Learning Methods on Teacher Performance at SMK Muhammadiyah Cikampek

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ABSTRACT

This study aims to analyze the effect of digital competence and teaching methods on teacher performance at SMK Muhammadiyah Cikampek. The research employed a quantitative approach using a survey method involving 90 teachers as respondents through a saturated sampling technique. Data were collected using a five-point Likert scale questionnaire and analyzed using multiple linear regression with the assistance of SPSS. The results indicate that digital competence and teaching methods have a positive and significant effect on teacher performance, both partially and simultaneously, with an Adjusted R Square value of 0.878, indicating that both variables explain 87.8% of the variation in teacher performance. These findings suggest that strengthening digital competence and applying appropriate teaching methods play an important role in improving teacher performance in vocational schools.

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1. INTRODUCTION

In the digital era, learning requires teachers to transform by utilizing media and digital technology as support tools for teaching and learning activities (Wijaya et al., 2022). However, its implementation still faces challenges, particularly regarding teachers' ability to master technology and adjust teaching methods effectively (Putri et al., 2024).

SMK Muhammadiyah Cikampek was chosen because it has implemented digital learning, but still faces challenges in matching media and teaching methods. This school strives to improve the quality of teaching according to industry needs and technological developments.

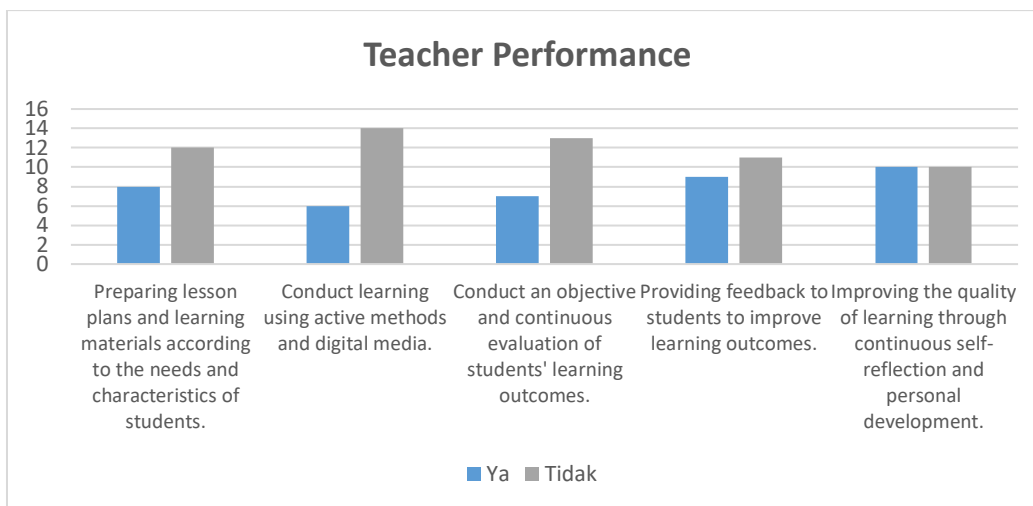


Fig. 1:Pre-Survey Results Graph

Teacher performance refers to professional ability in planning, implementing, and evaluating learning (Safitri et al., 2024).

Based on the graph above, out of 20 teachers at SMK Muhammadiyah Cikampek, it was found that 60% of teachers have not demonstrated optimal performance, particularly in planning and evaluating learning. This indicates the need to improve professional competence so that teacher performance meets the demands of learning in the digital age.

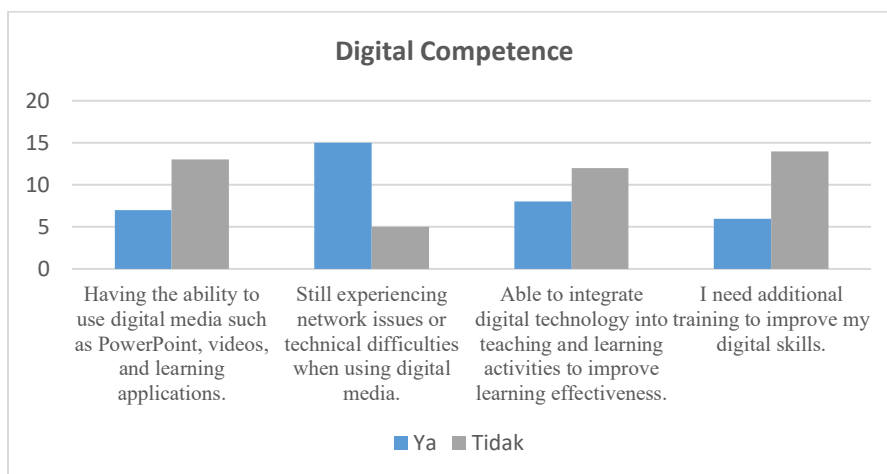


Fig. 2:Pre-Survey Results Graph

According to (Domínguez-González et al., 2025). digital competence is a person's ability to use, understand, and integrate digital technology into learning activities to enhance the effectiveness and efficiency of the teaching and learning process.

Based on the graph above, the results of the pre-survey also show that 70% of teachers have not yet fully mastered digital learning applications, both in planning technology-based lesson plans and in using interactive media. This low digital competence affects the effectiveness of the teaching and learning process and the teacher's ability to create innovative learning.

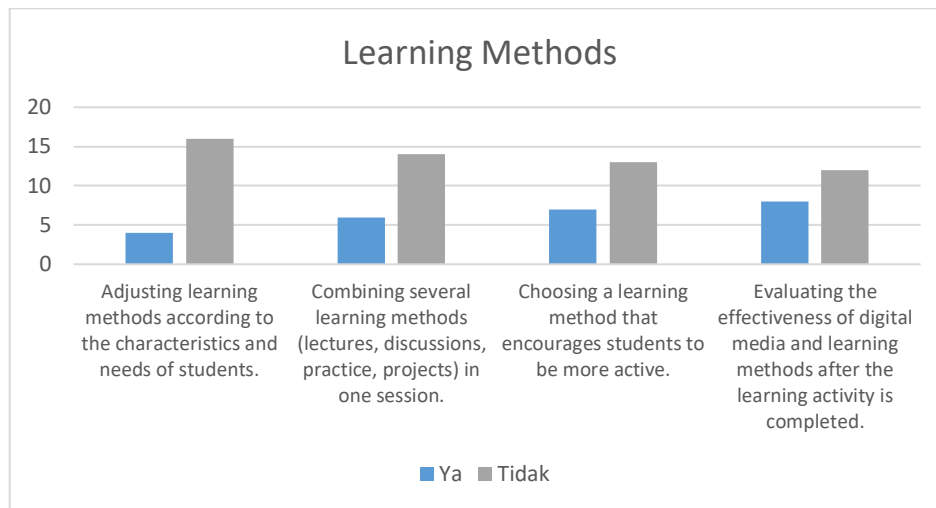


Fig. 3:Pre-Survey Results Graph

According to (Chukurliev, 2024), a learning method is a strategy or way used by teachers to deliver material so that students are active and motivated in learning.

Based on the graph above, in addition, 55% of teachers still apply conventional teaching methods, such as lectures and individual assignments, without involving a digitally-based collaborative approach. This affects the low student engagement in learning as well as the suboptimal implementation of active and creative learning models in vocational high schools.

National education regulations, such as Government Regulation No. 57 of 2021 (Republic of Indonesia, 2020) and (Minister of Education, Culture, Research, and Technology Regulation No. 7, 2021), emphasize the importance of strengthening digital competencies for vocational high school teachers so that they are able to carry out technology-based learning in accordance with the demands of the workforce and the Industry 4.0 era.

Several previous studies have shown that digital competence and learning methods affect teacher performance. Research by (Al Ghifari, 2024), emphasizes the role of teachers in enhancing the effectiveness of technology-based learning. Similar findings were reported by (Yanti et al., 2022), stating that low digital competence and lack of training make it difficult for teachers to implement digital learning optimally. Meanwhile, (Lia Emerda et al., 2025), found that project-based learning methods can improve teachers' performance in designing creative learning activities.

However, some research findings indicate differences and limitations in the results (Masnah, 2024), stating that the influence of digital competence on teacher performance is not consistent because it is affected by the availability of facilities and training. In addition, research by (Pratiwi, 2024), shows that most previous studies were conducted in public schools, while research in private vocational schools is still limited. Based on these findings, a research gap can be identified, namely the absence of studies that simultaneously examine the influence of digital competence and teaching methods on teacher performance in the context of Vocational High Schools (SMK).

Therefore, this study aims to analyze the influence of digital competence (X1) and learning methods (X2) on teacher performance (Y) at SMK Muhammadiyah Cikampek, both partially and simultaneously. This research is expected to provide empirical contributions to the development of digital-based vocational learning models as well as to enhance teacher professionalism in facing educational transformations in the era of Industry 4.0.

2. LITERATURE REVIEW

HUMAN RESOURCE MANAGEMENT

Human Resource Management (HRM) theory serves as the foundation for this study because it explains how organizations manage individual potential to optimally contribute to the institution's goals. According to (Satria & Kurniawaty, 2024) the application of strategic HRM in educational settings can improve teacher performance through competency development and adaptation to technology. In line with this, (Permatasari & Tandiyuk, 2023), emphasizes that effective HRM focuses on enhancing pedagogical skills and digital competence so that teachers can conduct innovative learning. According to (Wike Pertiwi, Djaddang, 2024), human resource development is necessary for individuals to be able to engage, collaborate, and carry out tasks according to their roles in an organization or activity.

In summary, HRM theory asserts that the development of teachers' digital and pedagogical competence is part of efforts to improve performance as human resources within educational organizations.

Digital Literacy Theory

The theory of digital literacy underlies the variable of digital competence. According to (Domínguez-González et al., 2025), digital literacy is an individual's ability to use, understand, and integrate digital technology effectively in professional activities, including learning. Furthermore, (Wijaya et al., 2022), explained that teachers with high digital literacy are able to adapt to changes in learning technology and create a more interactive and efficient learning environment. (Pertiwi. W & Savitri 2024, n.d.), emphasized that mastering digital skills is part of teacher professionalism in the Industry 4.0 era, which demands innovation and adaptability in teaching.

It can be synthesized that the theory of digital literacy explains that a teacher's ability to master and creatively utilize digital technology will enhance the effectiveness and efficiency of the learning process, which ultimately has a positive impact on teacher performance.

Constructivist Learning Theory

Constructivist learning theory is the theory that underlies the application of learning methods. According to (Nurhayati et al., 2020), constructivist theory places students at the center of learning activities by involving critical thinking, discussions, and problem-solving. Meanwhile, (Hashim et al., 2023) explains that in the context of modern education, the constructivist approach supports the implementation of project-based learning methods, collaborative activities, as well as the integration of digital technology to enhance student engagement and teaching effectiveness. According to (Mengdobilova M.Q., 2024), learning methods based on constructivism can improve students' communication, collaboration, and creative thinking skills, as the learning process is directed towards real experiences that foster conceptual understanding.

It can be concluded that the constructivist learning theory underlies the learning method variable because it emphasizes the importance of student-centered teaching strategies, encourages active involvement, and utilizes digital technology to create meaningful, interactive, and contextual learning in vocational education settings.

Organizational Behavior Theory

Organizational behavior theory underlies teacher performance variables. In the context of education, (Safitri et al., 2024) state that teachers' professional, disciplined behavior with high responsibility plays an important role in improving the quality of learning. Meanwhile, (Wike Pertiwi et al., 2024) explain that teacher performance is influenced by work behavior, motivation, and a supportive organizational environment. Teachers who have positive behavior

and are able to adapt to a good work system will demonstrate optimal performance. According to (KSPatoni, et al., 2025), good organizational behavior is reflected in a healthy work culture, open communication, and effective management support. These factors shape productive work behavior that impacts the improvement of teacher performance in the school environment.

It can be summarized that organizational behavior theory explains that teacher performance is influenced by individual behavior, work culture, and supporting organizational management systems. The more positive the work behavior and organizational environment, the higher the teacher's performance in achieving learning objectives.

Digital Competence (X1)

(Domínguez-González et al., 2025) explained that digital competence is an individual's ability to use and integrate digital technology into teaching and learning activities. (Masnah, 2024) added that teachers' digital competence plays an important role in enhancing learning effectiveness, especially in technology-based schools. Meanwhile, (Pertiwi. W & Savitri 2024, n.d.) stated that good work competence, including digital competence, positively impacts teachers' performance quality because digital abilities and skills drive task effectiveness.

It can be synthesized that teachers' digital competence is the professional ability to master and integrate learning technology to improve the effectiveness, efficiency, and quality of the learning process.

Dimensions and indicators of digital competence: (1) Technology Literacy: mastery of digital devices, learning applications, and the internet (Domínguez-González et al., 2025). (2) Digital Media Integration: interactive use of digital media in planning and implementing learning (Masnah, 2024). (3) Digital Professional Ability: application of technology to enhance work effectiveness and quality of outcomes (Pertiwi W. et al., 2024).

Learning Methods (X2)

According to (Chukurliiev, 2024) learning methods are strategies used by teachers to deliver material so that the learning process is effective and engaging. (Mengdobilova M.Q., 2024) adds that the implementation of innovative methods such as project-based or collaborative learning can increase student engagement and learning outcomes. Meanwhile, (Hashim et al., 2023) emphasize that learning methods that are adaptive to technological developments can encourage learning motivation and improve teaching effectiveness in vocational schools.

It can be synthesized that learning methods are innovative, technology-based strategies applied by teachers to create active, engaging, and meaningful learning for students.

Dimensions and indicators of teaching methods (1) Teaching Strategy: selecting methods according to the characteristics and needs of students (Chukurliiev, 2024). (2) Student Engagement: activating participation through interactive and collaborative methods (Mengdobilova, 2024). (3) Learning Innovation: integrating technology and digital media to enhance effectiveness and learning interest (Hashim et al., 2023).

Teacher Performance (Y)

According to (Safitri et al., 2024) teacher performance is the professional ability to carry out the learning process, including the stages of planning, implementation, and evaluation, oriented towards the effectiveness of student learning. (Yasmin & Wadud, 2023) added that teacher performance is also reflected in the ability to use learning media and methods that suit students' needs. Meanwhile, according to (Eka et al., 2024), teacher performance is influenced by workplace support as well as the ability to adapt to developments in educational technology.

It can be synthesized that teacher performance is the professional ability to plan, implement, and evaluate learning effectively by utilizing digital technology to improve student learning outcomes.

The dimensions and indicators of teacher performance are: (1) Learning Planning: preparing lesson plans and teaching materials according to student needs (Safitri et al., 2024). (2) Learning Implementation: using active methods and digital media for student engagement (Putri et al., 2024). (3) Learning Evaluation: assessing learning outcomes objectively and continuously (Eka et al., 2024).

Previous Research

Table 1. Previous Research

No	Author(s) & Year	Research Title	Research Variables	Research Method	Research Findings	Relevance to the Study
1	(Yanti et al., 2022)	Analysis of Teachers' Digital Competence in Blended Learning	Digital Competence	Quantitative	Digital competence has a significant effect on learning effectiveness	Supports the digital competence variable (X1)

2	(Wijaya et al., 2022)	The Credibility of Digital Media: Teacher Perceptions and Practice	Digital Literacy, Teaching Practices	Quantitative	Digital literacy improves the quality and interactivity of learning	Strengthens the theoretical foundation of digital literacy
3	(Hashim et al., 2023)	Adaptive Strategies for Technical and Vocational Education	Learning Methods, Technology	Qualitative	Technology-based adaptive learning methods increase student engagement	Relevant to the learning method variable (X2)
4	(Masnah, 2024)	Teachers' Digital Competence and Learning Effectiveness	Digital Competence, Teacher Performance	Quantitative	Digital competence has a significant effect on teacher performance	Supports the relationship between X1 and Y
5	Chukurliev (2024)	Four Innovative Teaching Methods	Learning Methods	Literature Review	Innovative teaching methods enhance teaching effectiveness	Supports the learning method variable (X2)

Source: Processed by the researcher, 2025

THEORETICAL FRAMEWORK AND RESEARCH HYPOTHESES

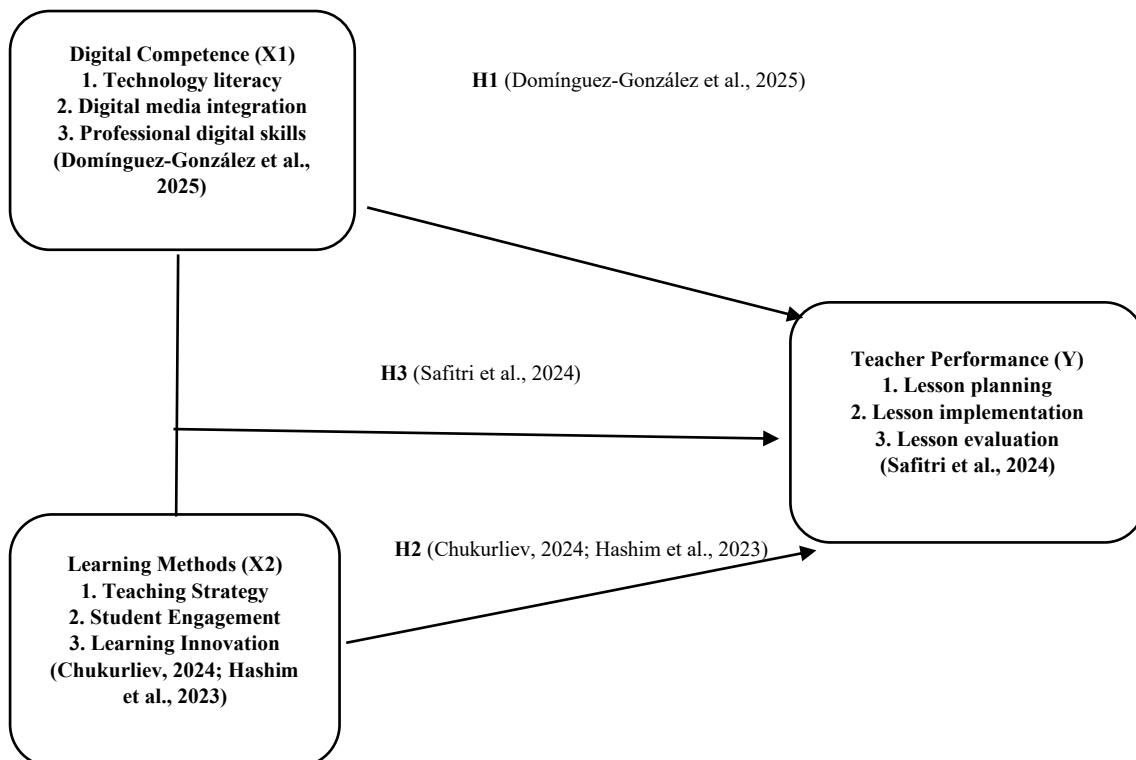


Figure 4 Paradigm

Source: Processed by the researcher, 2025

HYPOTHESIS

A hypothesis is a temporary assumption about the relationship between variables formulated based on theory, previous research results, and the conceptual framework that has been developed. The hypothesis in quantitative research serves as a statement that will be tested for its validity through statistical analysis (Sugiyono, 2021). Based on the conceptual framework and research paradigm above, the hypotheses in this study are formulated as follows:

1. H1: It is suspected that there is an effect of digital competence (X1) on teacher performance (Y) at SMK Muhammadiyah Cikampek.
2. H2: It is suspected that there is an effect of learning methods (X2) on teacher performance (Y) at SMK Muhammadiyah Cikampek.
3. H3: It is suspected that there is a simultaneous effect of digital competence (X1) and learning methods (X2) on teacher performance (Y) at SMK Muhammadiyah Cikampek.

3. METHOD

This study uses a quantitative verificative approach, which aims to test the validity of hypotheses regarding the influence among variables based on numerical data analyzed statistically. The focus of this research is to examine the effect of digital competence (X1) and learning methods (X2) on teachers' performance (Y) at SMK Muhammadiyah Cikampek.

The population in this study includes all teachers at SMK Muhammadiyah Cikampek, totaling 90 people. Since the population size is not very large, the sampling technique used is saturated sampling (census sampling), which is a sampling technique where all members of the population are used as research respondents (Sugiyono, 2021). Thus, all 90 teachers are used as respondents in this study.

The research data consists of primary and secondary data. Primary data was obtained directly through the completion of closed-ended questionnaires based on a five-point Likert scale, with response options ranging from strongly disagree (1) to strongly agree (5). The questionnaires were developed based on indicators from each variable, namely digital competence, learning methods, and teacher performance, tailored to the research context. Data collection was carried out by distributing the questionnaires both directly and online to all teachers at SMK Muhammadiyah Cikampek. All returned questionnaires were deemed complete and could be further processed, so the number of respondents analyzed remained 90 people.

Data analysis was conducted using multiple linear regression analysis with the assistance of SPSS version 26.0 software. This analysis aims to determine the extent of the influence of the independent variables, namely digital competence and learning methods, on the dependent variable, which is teacher performance, both partially and simultaneously. Before performing the regression analysis, validity and reliability tests were first conducted to ensure that the research instruments are adequate and consistent in measuring the variables being studied. Next, classical assumption tests were carried out, including normality tests, multicollinearity tests, and heteroscedasticity tests, to ensure that the regression model meets good statistical criteria.

After the model was declared to meet the classical assumptions, multiple linear regression analysis was conducted to determine the direction and magnitude of the influence of digital competence and learning methods on teacher performance. Hypothesis testing was carried out using the t-test to determine the effect of each independent variable partially on the dependent variable, as well as the F-test to determine the simultaneous effect of both independent variables on the dependent variable. The testing criteria used a significance level of 0.05 (5%), where the test results are considered significant if the significance value (Sig.) is less than 0.05.

4. RESULTS AND DISCUSSIONS

Research data was obtained from questionnaires distributed to 90 teachers at SMK Muhammadiyah Cikampek using a saturated sampling technique. The research instrument consisted of a closed-ended questionnaire with a five-point Likert scale to measure digital competence, teaching methods, and teacher performance. All returned questionnaires were declared complete and suitable for analysis.

Instrument Validity and Reliability Test

Validity and reliability tests are conducted to ensure the appropriateness of the research instrument. The validity test uses the Corrected Item–Total Correlation, while the reliability test uses Cronbach’s Alpha with the help of SPSS. The validity test aims to assess the accuracy of the statement items by comparing the Corrected Item–Total Correlation values against the table r value of 0.207.

Table 2. of Instrument Validity Test Results

Digital Competence (X1)				Learning Methods (X2)			Teacher Performance (Y)				
No.	r-value	r-table (5%)	Remark	No.	r-value	r-table (5%)	Remark	No.	r-value	r-table (5%)	Remark
X1.1	0.865	0,207	Valid	X2.1	0.787	0,207	Valid	Y1	0.809	0,207	Valid
X1.2	0.849		Valid	X2.2	0.826		Valid	Y2	0.863		Valid
X1.3	0.811		Valid	X2.3	0.802		Valid	Y3	0.795		Valid
X1.4	0.806		Valid	X2.4	0.797		Valid	Y4	0.783		Valid
X1.5	0.808		Valid	X2.5	0.816		Valid	Y5	0.867		Valid
X1.6	0.794		Valid	X2.6	0.8		Valid	Y6	0.873		Valid
X1.7	0.811		Valid	X2.7	0.821		Valid	Y7	0.825		Valid
X1.8	0.848		Valid	X2.8	0.802		Valid	Y8	0.831		Valid
X1.9	0.911		Valid	X2.9	0.807		Valid	Y9	0.835		Valid
X1.10	0.823		Valid	X2.10	0.854		Valid	Y10	0.84		Valid
X1.11	0.822		Valid	X2.11	0.839		Valid	Y11	0.826		Valid
X1.12	0.843		Valid	X2.12	0.822		Valid	Y12	0.836		Valid
X1.13	0.865		Valid	X2.13	0.856		Valid	Y13	0.822		Valid
X1.14	0.849		Valid	X2.14	0.84		Valid	Y14	0.784		Valid
X1.15	0.811		Valid	X2.15	0.861		Valid	Y15	0.75		Valid

Data source: processed SPSS output, 2025

Based on the table above, it can be seen that all statement items have a calculated r value greater than the table r (0.207), so they are declared valid.

Instrument Reliability Tests

The instrument reliability test aims to determine the consistency of the research instrument in measuring variables. An instrument is considered reliable if it produces consistent data in repeated measurements.

Table 3. Instrument Reliability Test Results

Variabel	Number of Items	Cronbach's Alpha	Remark
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Digital Competence (X1)	15 Item	0,973	Reliabel
Learning Methods (X2)	15 Item	0,972	Reliabel
Teacher Performance (Y)	15 Item	0,972	Reliabel

Data source: processed SPSS output, 2025

Based on the results of the reliability test, it was found that all variables had a Cronbach's Alpha value greater than 0.60, thus the research instrument is declared reliable.

Classical Assumption Test

Based on the results of testing all classical deviations in the research data, it can be explained as follows:

Normality Test

A normality test is conducted to determine whether the residuals in a regression model are normally distributed.

Table 4. Normality Test Results

	Tests of Normality					
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Unstandardized Residual	.069	90	.200*	.993	90	.909

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

a. Lilliefors Significance Correction

Source: SPSS Output (processed), 2025

Based on the results of the normality test using the Kolmogorov–Smirnov method, an Asymp. Sig. value of 0.200 > 0.05 was obtained. Thus, it can be concluded that the residual data are normally distributed, so the regression model meets the normality assumption.

Multicollinearity Test

The multicollinearity test is conducted by looking at the tolerance value and the Variance Inflation Factor (VIF). The test results show a tolerance value of 0.159 (>0.10) and a VIF value of 6.275 (<10). Thus, there is no serious multicollinearity among the independent variables.

Table 5. Multicollinearity Test Results

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	6.251	2.082		3.003	.003		
	X1	.399	.087	.426	4.589	.000	.159	6.275
	X2	.510	.089	.532	5.721	.000	.159	6.275

a. Dependent Variable: Y

Source: SPSS Output (processed), 2025

Based on the results of the multicollinearity test, it is known that the tolerance values for variables X1 and X2 are 0.159 (>0.10) and the Variance Inflation Factor (VIF) is 6.275 (<10). Thus, it can be concluded that there is no multicollinearity among the independent variables in the regression model.

Heteroscedasticity Test

The heteroscedasticity test was conducted using a scatterplot between the standardized residuals and the standardized predicted values. The test results show that the points are randomly scattered and do not form a specific pattern, so it can be concluded that the regression model does not experience heteroscedasticity.

Table 6. Heteroscedasticity Test Results

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	8.301	1.172		7.082	.000
	X1	.010	.049	.052	.211	.833
	X2	-.086	.050	-.425	-1.709	.091

a. Dependent Variable: ABS_RES

Source: SPSS Output (processed), 2025

Based on the results of the heteroscedasticity test using the Glejser method, it is known that the significance value of variable X1 is 0.833 and variable X2 is 0.091, all of which are greater than 0.05. Thus, it can be concluded that the regression model does not contain signs of heteroscedasticity, so the regression model meets the classical assumptions.

MULTIPLE LINEAR REGRESSION

Multiple linear regression is a statistical method used to analyze the effect of two or more independent variables on a single dependent variable, while also examining the direction and magnitude of each variable's influence.

Based on the results of the multiple linear regression analysis, the regression equation is obtained as follows:

$$Y = 6.251 + 0.399X_1 + 0.510X_2$$

The t-table value at a 5% significance level ($\alpha = 0.05$) with degrees of freedom

1. t-test (Partial)

The t-table value is obtained from the t-distribution table at a 5% significance level ($\alpha = 0.05$) with degrees of freedom:

$df = n - k - 1 = 90 - 2 - 1 = 87$, which is 1.987. The results of the partial t-test are shown in Table 1 below.

Table 7. t-Test Results (Partial)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	6.251	2.082		3.003	.003
	X1	.399	.087	.426	4.589	.000
	X2	.510	.089	.532	5.721	.000

a. Dependent Variable: Y

Source: SPSS Output (processed), 2025

Based on the t distribution table at a 5% significance level ($\alpha = 0.05$) with degrees of freedom ($df = 87$), the t table value obtained is 1.987. It is known that X1 has a calculated t of $4.589 > 1.987$ and X2 has a calculated t of $5.721 > 1.987$. Both variables have a significance of $0.000 < 0.005$. Therefore, it can be concluded that variables X1 and X2 have a significant partial effect on variable Y.

2. ANOVA (F-Test/Simultaneous Test)

The F-test is used to determine the simultaneous effect of independent variables on the dependent variable. Based on the results of the ANOVA test, the significance value is < 0.05 , so Digital Competence and Learning Methods together have a significant effect on Teacher Performance.

Table 8. Results of the F Test (Simultaneous)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17475.872	2	8737.936	319.811	.000 ^b
	Residual	2377.028	87	27.322		
	Total	19852.900	89			

a. Dependent Variable: Y

b. Predictors: (Constant), X2, X1

Source: SPSS Output (processed), 2025

Based on the table above, the calculated F value is 319.811. The F-table value at a 5% significance level ($\alpha = 0.05$) with $df_1 = k = 2$ and $df_2 = n - k - 1 = 87$ is 3.10. Since the calculated F (319.811) > F-table (3.10) and the significance value $0.000 < 0.05$, it can be concluded that Digital Competence and Learning Methods simultaneously have a significant effect on Teacher Performance.

3. Coefficient of Determination

The Model Summary shows the ability of the independent variables to explain the dependent variable. The R Square value indicates the magnitude of the contribution of Digital Competence and Learning Methods to Teacher Performance, while the remainder is explained by other variables outside the model.

Table 9. Results of the Determination Coefficient Test

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.938 ^a	.880	.878	5.227	1.908

a. Predictors: (Constant), X2, X1
b. Dependent Variable: Y

Source: SPSS Output (processed), 2025

Based on the results of the coefficient of determination test, an R Square value of 0.880 was obtained. This indicates that the independent variables X1 and X2 together are able to explain 88.0% of the dependent variable Y, while the remaining 12.0% is influenced by other variables outside the research model.

Discussion

Based on the research background, it is understood that in the digital era, teachers are required to be able to integrate technology into the learning process. However, the pre-survey results indicate that most teachers at SMK Muhammadiyah Cikampek still face challenges in mastering digital technology and implementing innovative teaching methods. This condition has an impact on the suboptimal performance of teachers, particularly in the aspects of lesson planning, implementation, and evaluation. This finding is consistent with studies by Wijaya et al. (2022) and Putri et al. (2024), which state that limited digital literacy can hinder the effectiveness of the learning process.

Theoretically, digital competence refers to an individual's ability to use, understand, and integrate technology into professional activities (Domínguez-González et al., 2025). Meanwhile, effective teaching methods, particularly those based on constructivist approaches, emphasize active student involvement through collaborative and innovative strategies (Hashim et al., 2023; Mengdobilova, 2024). Both aspects are essential factors in improving teacher performance, which reflects professional capability in managing the learning process (Safitri et al., 2024).

The results of this study show that digital competence (X1) has a positive and significant effect on teacher performance (Y). This is evidenced by the t-value of 4.589, which is greater than the t-table value of 1.987, with a significance level of less than 0.05. This finding indicates that the higher the teacher's ability to master digital technology, the better their performance in planning, implementing, and evaluating learning activities. Teachers with strong digital competence tend to utilize interactive learning media, develop technology-based teaching materials, and improve the effectiveness of the learning process. This result is in line with studies by Masnah (2024) and Pertiwi et al. (2024), which state that digital competence significantly contributes to improving teacher performance.

Furthermore, teaching methods (X2) are also proven to have a positive and significant effect on teacher performance, with a t-value of 5.721, which exceeds the t-table value, and a significance level of less than 0.05. This indicates that the use of appropriate, innovative, and technology-based teaching methods can enhance student engagement and learning effectiveness. Teachers who apply varied teaching methods, such as project-based learning, group discussions, and the use of digital media, are more likely to create an active and engaging learning environment. This finding supports the studies of Chukurliev (2024) and Hashim et al. (2023), which highlight the important role of innovative teaching methods in improving instructional quality.

Simultaneously, digital competence and teaching methods have a very strong influence on teacher performance. This is demonstrated by the F-test results, where the F-value of 319.811 is greater than the F-table value of 3.10, with a significance level below 0.05. In addition, the coefficient of determination (R^2) of 0.880 indicates that both variables explain 88% of the variation in teacher performance, while the remaining 12% is influenced by other factors outside this study, such as work motivation, leadership, and school facilities. This shows a strong and synergistic relationship between digital competence and teaching methods in enhancing teacher performance.

These findings reinforce the Human Resource Management theory, which states that improving individual competencies, including technological and strategic capabilities, can enhance organizational performance (Satria et al., 2024). In the context of education, teachers as key human resources must continuously develop their digital competencies and implement adaptive teaching methods in response to technological advancements. Moreover, these results are also aligned with organizational behavior theory, which suggests that individual performance is influenced by ability, work environment, and organizational support systems (Safitri et al., 2024; KS Patoni et al., 2025).

Thus, it can be concluded that improving teacher performance at SMK Muhammadiyah Cikampek does not depend on a single factor but is the result of a combination of adequate digital competence and effective teaching methods. Therefore, continuous efforts are needed from the school to provide digital training, encourage instructional innovation, and create a supportive work environment to ensure that teacher performance continues to improve in line with the demands of the digital era and educational development.

4. CONCLUSION AND IMPLICATIONS

This study concludes that digital competence and learning methods have a positive and significant effect on teacher performance at SMK Muhammadiyah Cikampek, both partially and simultaneously. The findings indicate that good mastery of digital technology as well as the application of appropriate learning methods are important factors in improving teacher performance.

The implication of this study is the need for schools to encourage the strengthening of teachers' digital competence and the implementation of innovative learning methods that are suitable for the characteristics of students in order to support a more effective learning process. In addition, future research is recommended to include other variables, such as work motivation, school principal leadership, or educational infrastructure, and to expand the number and characteristics of respondents so that research results can be generalized more broadly.

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