



The Influence of Teacher Learning Community Activities, Principal Leadership, and Utilization of Information Technology on the Performance of Junior High School Teachers in Ukui District

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ABSTRACT

This study investigates the influence of teacher learning community activities, school principal leadership, and information technology utilization on public junior high school teachers' performance in Ukui District. It examines both the simultaneous and partial influences of these variables on teacher performance and educational quality. Using a quantitative approach with an ex post facto and correlational design, data were collected via validated questionnaires from a proportional sample of teachers. Multiple linear regression was used for analysis. Findings show that teacher learning community activities, principal leadership, and IT utilization each significantly improve teacher performance. Recommendations include promoting teacher learning communities, enhancing leadership through management training, and leveraging information technology for digital-based learning.

INTRODUCTION

Teachers play a pivotal role in the educational process, directly influencing student outcomes through their ability to plan lessons, assess, and nurture student potential. Teacher performance is a key indicator of educational success, encompassing not only subject knowledge but also life skills and technological competency, which are essential for preparing students for the future. Certification, often used as a measure of educational quality, has been linked to better teaching outcomes. However, according to Suherman (2016), factors influencing teacher performance include teaching ability, communication, well-being, professional development, personality, community relations, work environment, and discipline. In Ukui District, a significant number of teachers lack certification, highlighting the need for effective professional support.

In addition to teaching expertise, effective school leadership and the use of technology play crucial roles in enhancing teacher performance. School principals who foster a supportive work environment and strong communication contribute to improved teacher outcomes. Meanwhile, the integration of technology in teaching is essential in the digital age, though many teachers still struggle to utilize it effectively. Learning communities, where teachers collaborate and share experiences, can further improve teacher competence, yet many teachers in Ukui District are unaware of their benefits. This study examines how teacher learning communities, school leadership, and technology utilization influence teacher performance in public junior high schools in Ukui District.

LITERATURE REVIEW

Performance refers to the application of plans that have been formulated or designed. It is carried out by human resources who possess the necessary competencies, motivation, and interests. Organizational performance can be assessed based on how well activities are conducted to achieve the desired goals. Suprihanto (in Supardi, 2015) argues that performance is the result of work completed over a certain period, such as performing tasks in accordance with established standards and criteria. Sedarmayanti (2017) further suggests that achieving the desired performance requires careful planning, which links performance targets at individual, group, and organizational levels to ensure that tasks are aligned and successfully completed. Teacher performance, in particular, is key to improving the quality of education, as teachers play a central role in the teaching and learning process. Teachers' performance encompasses various factors such as lesson planning, execution, evaluation, and discipline, all of which are indicators of effective teaching. Nana (2015) outlines several indicators of teacher performance, including understanding learning materials, organizing the learning environment, using teaching media, managing interactions, evaluating student progress, and applying educational principles.

In the context of education, learning communities, principal leadership, and technology play significant roles in enhancing teacher performance. Learning communities provide an opportunity for educators to collaborate and share knowledge, thereby improving the overall quality of teaching. These

communities focus on student learning, fostering collaboration, and utilizing learning data to improve educational outcomes. Pandiangan (2019) highlights that learning communities serve as environments where educators can share experiences, knowledge, and resources, benefiting both individual members and the entire educational system. School principals are also pivotal in influencing teacher performance, as they create a conducive work environment, establish policies, and guide teachers towards achieving educational goals. Hasibuan (2018) emphasizes that a leader's responsibility is to use their authority to guide and support others in achieving desired outcomes. Moreover, the integration of technology is essential in the modern educational landscape, enabling more efficient and innovative learning processes. Teachers and principals must be proficient in using technology to enhance the learning experience. Technology is increasingly transforming education by providing tools that improve teaching practices and facilitate communication between educators and students. This includes the use of digital tools such as computers, the internet, and other communication media that support both face-to-face and virtual learning environments.

METHODS

This study uses a quantitative approach with a survey method to analyze the impact of independent variables—Teacher Learning Community Activities (X1), Principal Leadership (X2), and Information Technology Utilization (X3)—on the dependent variable, Teacher Performance (Y). Data is collected using a questionnaire with closed-ended questions to assess the optimization of these factors. Descriptive and inferential statistical analysis is performed using Microsoft Excel and SPSS version 25 for data processing. Inferential Statistical Analysis involves several important steps. Before conducting regression analysis, classical assumption tests are performed to ensure the suitability of the regression model, which includes tests for normality, linearity, multicollinearity, and heteroscedasticity. Subsequently, multiple linear regression analysis is used to model the relationship between independent variables (X1, X2, X3) and the dependent variable (Y) with the following equation:

$$Y = B_0 + B_1X_1 + B_2X_2 + B_3X_3 + e$$

Additionally, simple linear regression is used to measure the strength of the relationship between independent and dependent variables. Hypothesis testing is carried out using the t-test to assess the partial effects between the independent and dependent variables. If the calculated t-value is greater than the critical t-value, the null hypothesis is rejected, indicating a significant effect. Then, the F-test is performed to examine the simultaneous effect of the independent variables on the dependent variable. Finally, the coefficient of determination is calculated to determine how much the independent variables explain the variation in the dependent variable.

RESULTS AND DISCUSSION

A. Descriptive Analysis

1. Teacher Performance

Based on the descriptive table, the teacher performance variable shows that the number of respondents analyzed is 102. The mean value obtained from the data is 102.89, representing the average respondent assessment of teacher performance. The median, which represents the middle value of the ordered data, is 106, while the mode, or most frequent value, is 109. The standard deviation of the data is 7.849, indicating that the distribution of the data is relatively not too spread out compared to the average. Additionally, the range, representing the difference between the highest and lowest values, is 25, with the lowest score being 85 and the highest reaching 110.

Table 1. Teacher Performance	
Descriptive Statistic	
N	102
Mean	102.89
Median	106.00
Mode	109
Standard Deviation	7.849
Variance	61.602
Range	25
Lowest Score	85
Highest Score	110

2. Teacher Learning Community Activities

Based on the descriptive analysis, the Teacher Learning Community Activity variable, measured through 23 questionnaire items, shows that the number of respondents in this study is 102. The mean value obtained is 100.58, reflecting the average level of teacher learning community activity based on respondent perceptions. The median, representing the middle value of the ordered data, is 104, while the mode, or the most frequent value in the data, also shows a value of 104.

Table 2. Teacher Learning Community Activities	
Descriptive Statistic	
N	102
Mean	100.58
Median	104.00
Mode	104
Standard Deviation	10.216
Variance	104.365
Range	44
Lowest Score	71
Highest Score	115

3. Principal Leadership

Based on the descriptive analysis, the Principal Leadership variable, with 102 respondents, has a mean of 81.86. The median is 84.50, and the mode is 90. The standard deviation is 8.362, indicating that most respondents' ratings are close to the mean.

Table 3. Principal Leadership

Descriptive Statistic	
N	102
Mean	81.86
Median	84.50
Mode	90
Standard Deviation	8.362
Variance	69.922
Range	29
Lowest Score	61
Highest Score	90

4. Information Technology Utilization

Based on the descriptive analysis, the variable analyzed has 102 respondents. The mean score is 70.32, reflecting the average respondent rating. The median is 75.00, and the mode is 80. The standard deviation is 9.377, indicating significant variation in the responses. The variance is 87.924, suggesting a broad spread of data. The range between the highest and lowest scores is 29, with the lowest score at 51 and the highest at 80, showing notable differences in respondent ratings, though most rated within the higher range.

Table 4 . Information Technology Utilization

Descriptive Statistic	
N	102
Mean	70.32
Median	75.00
Mode	80
Standard Deviation	9.377
Variance	87.924
Range	29
Lowest Score	51
Highest Score	80

B. Preliminary Tests

The normality test, using the Kolmogorov-Smirnov method with SPSS version 27, showed that all variables had a significance (Sig) ≥ 0.05 , indicating that the data are normally distributed. The linearity test revealed that all relationships between the independent and dependent variables were linear, with significance values above 0.05. The multicollinearity test, based on Variance Inflation Factor (VIF) and Tolerance Value, showed that all VIF values were below 10 and Tolerance Values were above 0.1, confirming no

multicollinearity. Lastly, the heteroscedasticity test indicated no issues, as all significance values were greater than 0.05, ensuring the regression model met the necessary assumptions for valid analysis.

C. Hypothesis Testing

1. Linear Regression Analysis

1) Teacher Learning Community

The coefficient table shows a constant value (a) of 65.046 and a coefficient for Teacher Learning Community Activity (b) of 0.376. The regression equation is: $Y = 65.046 + 0.376 X_1$. This indicates that each one-point increase in Teacher Learning Community Activity (X_1) raises teacher performance (Y) by 0.376 points. The significance value (sig) is 0.000, less than 0.05, confirming that Teacher Learning Community Activity significantly influences teacher performance.

Table 5. The influence of teacher learning community on teacher performance

Variable	Unstandardized Coefficient Beta	Standardized Coefficient	t	Sig.
Constant	65.046		9.606	.000
Teacher Learning Community	.376	.490	5.618	.000

2) Principal Leadership

The coefficient table shows a constant value (a) of 59.463 and a coefficient for principal leadership (b) of 0.531, resulting in the regression equation:

$$Y = 59.463 + 0.531 X_2.$$

This indicates that a one-point increase in principal leadership (X_2) boosts teacher performance (Y) by 0.531 points. The significance value of 0.000 (less than 0.05) confirms that principal leadership significantly influences teacher performance.

Table 6. The influence of principal leadership on teacher performance

Variable	Unstandardized Coefficient Beta	Standardized Coefficient	t	Sig.
Constant	59.463		9.333	.000
Teacher Learning Community	.531	.565	6.851	.000

3) Information Technology Utilization

The coefficient table shows a constant value (a) of 61.590 and a coefficient for technology use (X_3) of 0.587, resulting in the regression equation:

$$Y = 61.590 + 0.587 X_3.$$

This indicates that a one-point increase in technology use (X_3) boosts teacher performance (Y) by 0.587 points. The significance value of 0.000 (less than 0.05) confirms that technology use significantly influences teacher performance.

Table 7. The influence of information technology utilization on teacher performance

Variable	Unstandardized Coefficient Beta	Standardized Coefficient	t	Sig.
Constant	61.590		14.557	.000
Teacher Learning Community	.587	.702	9.848	.000

2. Multiple Regression Analysis

This analysis is conducted to assess the simultaneous effect of independent variables on the dependent variable. In this study, multiple linear regression analysis is used to measure the extent to which teacher community activity, school leadership, and the use of information technology influence teacher performance. The results of the multiple linear regression analysis are presented in the following table:

Table 8. Multiple Regression Analysis

Mode		Unstandardized Coefficients		Standardized Coefficients
		B	Std. Error	Beta
1	(Constanta)	52.690	5.876	
	Teacher Learning Community Activities	.153	.076	.199
	Principal Leadership	.019	.117	.020
	Information Technology Utilization	.517	.084	.618
Dependent Variable: Teacher Performance				

Based on the Coefficient table, the multiple linear regression equation is: $Y = 52.690 + 0.153(X_1) + 0.019(X_2) + 0.517(X_3)$. The constant value of 52.690 indicates that when all independent variables (Teacher Community Activity, School Leadership, and Information Technology Use) are zero, teacher performance is predicted to be 52.690. The coefficient for Teacher Community Activity (0.153) shows that for every one-unit increase, teacher performance increases by 0.153. The coefficient for School Leadership (0.019) indicates a smaller but still significant increase of 0.019 in teacher performance. The coefficient for Information Technology Use (0.517) has the largest influence, suggesting a 0.517 increase in teacher performance for each one-unit increase in this variable. Thus, while all three factors collectively influence teacher performance, Information Technology Use

has the most dominant effect, and School Leadership has the smallest influence.

3. Partial Testing (t-test)

The analysis shows that all three independent variables significantly influence teacher performance in public junior high schools in Ukui District. The first hypothesis (H1), examining the effect of teacher community activity, has a significance value of $0.000 < 0.05$ and a t-value of 5.618, indicating a positive and significant effect. The second hypothesis (H2), testing the influence of school leadership, has a significance value of $0.000 < 0.05$ and a t-value of 6.851, confirming its significant impact. The third hypothesis (H3), assessing the effect of information technology use, shows a significance value of $0.000 < 0.05$ and a t-value of 9.848, indicating a positive and significant relationship.

Table 9. Partial Testing Analysis (t-test)

Variable	Unstandardized Coefficients	t	Sig.
Teacher Learning Community	.376	5.618	.000
Principal Leadership	.531	6.851	.000
Information Technology Utilization	.587	9.848	.000

4. Simultaneous Significance Test (f-test)

Based on the statistical test results presented in the ANOVA table, the significance value (Sig) is 0.000. According to the decision-making criteria, if the significance value is less than 0.05, then H_a is accepted and H_0 is rejected. In this study, the significance value of 0.000 is less than 0.05, so it can be concluded that the hypothesis is accepted. Thus, there is a significant influence of teacher community activity, school leadership, and the use of information technology on teacher performance at public junior high schools in Ukui District. The F-value of 35.340 indicates a strong relationship between the independent and dependent variables, with a regression mean square of 1077.731 and a residual mean square of 30.496.

Table 10. Simultaneous Significance Testing

ANOVA						
Mode		Sum of squares	Df	Mean Square	F	Sig.
1	Regression	3233.193	3	1077.731	35.340	.000 ^b
	Residual	2988.621	98	30.496		
	Total	6221.814	101			
a. Dependent Variable: Teacher Performance						

b. Predictors: (Constant), Teacher Learning Community, Information Technology Utilization, Principal Leadership

5. The coefficient of determination (R-squared)

Based on the Model Summary table, the R Square value of 0.520 indicates that 52.0% of the variation in teacher performance can be explained by the combined effect of the variables teacher learning community activities, the use of information technology, and school leadership. Meanwhile, the adjusted R Square value of 0.505 reflects the percentage of contribution adjusted for the number of variables in the research model. The standard error of the estimate of 5.522 represents the level of deviation or prediction error of the regression results from the actual values.

Table 11. The coefficient of determination

Model Summary				
Model	R	R ²	Adjusted R ²	Std. Error of the Estimate
1	.721 ^a	.520	.505	5.522
a. Predictors: Teacher Learning Community Activities, Principal Leadership, and Utilization of Information Technology				
b. Dependent Variable: Teacher Performance				

D. Discussions

1. The Influence of Teacher Learning Community Activities on Teacher Performance

This study shows that teacher learning community activities positively and significantly influence the performance of public junior high school teachers in Ukui District, with a significance value of 0.000 and t-value of 5.618. This aligns with previous research, such as Khusna and Priyanti (2015), which found similar positive influences on teacher performance. Affandi et al. (2015) support this by highlighting how learning communities help teachers tackle challenges, while Prenger et al. (2019) focus on their benefits to teacher satisfaction and skills. However, Santoso et al. (2019) found that programs like MGMP and MKKKS had limited impact due to a lack of stakeholder support.

2. The Influence of Principal Leadership on Teacher Performance

Hypothesis testing (H2) shows that school leadership significantly influences the performance of public junior high school teachers in Ukui District, with a significance value of 0.000 and a t-value of 6.851. This aligns with studies by Purwanto et al. (2015), which emphasize the role of leadership, work culture, and involvement in enhancing teacher performance. Anggraeni (2017) and Pratiwi and Hadi (2020) also highlight that strong leadership and professional support improve teacher effectiveness, while Mulyani and Prasetyo (2021) stress the importance of leadership in fostering collaboration and professional development.

3. The Influence of Information Technology Utilization on Teacher Performance

Hypothesis testing (H3) reveals that the use of information technology has a positive and significant influence on the performance of public junior high school teachers in Ukui District, with a significance value of 0.000 and a t-value of 9.848. This supports Subandi's (2021) finding that ICT skills and a strong work culture improve teacher performance, especially in the digital era. Amelia et al. (2021) emphasize that effective supervision and ICT utilization enhance classroom management, while Mumtaz (2019) highlights the importance of access to resources, school policies, and computer training for ICT integration. These findings suggest that ICT adoption, supported by policies and a positive work culture, significantly contributes to professional development and teacher performance improvement.

4. The Influence of Teacher Learning Community Activities, Principal Leadership, and Utilization of Information Technology on Teacher Performance

The ANOVA test showed a significance value (Sig) of 0.000, indicating a strong impact of teacher learning community activities, school leadership, and information technology utilization on teacher performance in Ukui District. This aligns with previous studies, such as Nanik Hidayah (2022), which found a significant effect of these variables on teacher performance, with 64.9% of performance variation explained by them. Similarly, research by Siti Nurjanah (2021) and Rizki Pratama (2022) highlighted the positive influence of learning communities and technology use on teacher effectiveness. The synergy of these three factors—collaboration, leadership, and technology—contributes significantly to improving teacher performance, emphasizing that external factors play a vital role in teacher success.

CONCLUSIONS AND RECOMMENDATIONS

Based on the analysis and discussion, the study concludes that teacher learning community activities significantly and positively impact teacher performance in Ukui District, as evidenced by a significance value of 0.000 and a t-value of 5.618. Similarly, school leadership also has a significant effect on teacher performance, with a significance value of 0.000 and a t-value of 6.851, confirming the importance of leadership in influencing performance. Furthermore, the utilization of information technology significantly enhances teacher performance, with a significance value of 0.000 and a t-value of 9.848. Finally, the combined effect of teacher learning community activities, school leadership, and information technology utilization on teacher performance is significant, with an F-value of 35.340, which is higher than the F-table value of 2.70. These results demonstrate that all three factors together positively influence teacher performance in the district.

Based on the study's conclusions, the researcher provides the following recommendations: First, school leaders should strengthen their role in improving teacher performance through continuous training, fostering professionalism, and creating a supportive work environment. Second, teachers are encouraged to further develop their competencies by participating in ongoing training and fostering a responsible approach to teaching. Finally, future research should broaden its scope and include additional variables, such as organizational culture and school policies, to provide a more comprehensive understanding of the factors affecting teacher performance.

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