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THE INFLUENCE OF INSTRUCTIONAL LEADERSHIP, PROFESSIONAL COMPETENCE, AND LEARNING COMMUNITIES ON THE QUALITY OF PUBLIC ELEMENTARY SCHOOLS

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Abstract

This research aims to analyze the influence of instructional leadership, teachers' professional competence, and learning communities on the quality of elementary schools in Tembalang District, Semarang City. The study focuses on determining the extent to which each variable contributes, both partially and simultaneously, to school quality. A quantitative approach was applied using an ex post facto method and a correlational research design. The population consisted of all public elementary school teachers in Tembalang District, totaling 367 individuals. A proportional random sampling technique, classified as a probability sampling method, was employed to ensure representativeness from each school, resulting in a final sample of 191 teachers. Data were collected through closed-ended questionnaires, which underwent validity testing using Pearson's Product-Moment and reliability testing using Cronbach's Alpha, confirming their validity and reliability. Data were analyzed using simple and multiple linear regression via SPSS version 26. The results revealed that, partially, instructional leadership contributed 84.8% to school quality, professional competence contributed 82.4%, and learning communities contributed 35.9%. Simultaneously, the three variables had a significant combined influence of 91.7%. These findings indicate that improving the quality of elementary schools requires a synergistic interaction between effective instructional leadership, strong professional competence of teachers, and active learning communities. The study is expected to serve as a valuable reference for education policymakers in designing more effective and sustainable strategies to enhance the quality of basic education.

Keywords Elementary School Quality, Instructional Leadership, Learning Communities, Professional Competence.

INTRODUCTION

The quality of basic education is crucial in shaping competitive human resources (Susanti et al., 2023 ; Anas, 2022). However, elementary schools in Indonesia still face persistent challenges, particularly the gap between regulatory expectations and practical implementation (Khonsa et al., 2025 ; Andriyan et al., 2023). Ideally, teachers should carry out their pedagogical roles professionally and contextually, aligned with curriculum demands (Anwar, 2019; Mujiburrahman et al., 2023). Yet in reality, many practices remain administrative, monotonous, and unresponsive to students' learning needs (Setiawan et al., 2024; Syarief Hidayatulloh, 2023).

Academic anxiety arises when there is a disconnect between teachers' formal qualifications and their actual classroom competence (Prasetyaningtyas et al., 2022). Staffing data from the UPTD of Tembalang District shows that 99% of 367 teachers across 21 public elementary schools hold bachelor's degrees, and 85% are certified, based on direct interviews with the staffing officer. However, surveys indicate that 70% of teachers set learning objectives unilaterally, 58% rely on lectures, and 65% do not engage in teaching reflection. Although 78% incorporate literacy activities, 80% never assess students' literacy systematically, revealing a lack of measurable and follow-up practices.

Low school quality is further reflected in the weak implementation of learning communities, a program meant to foster teacher collaboration post-pandemic (Supardi U.S. & Henhen Herdiana, 2024). Initial surveys show 80% of these communities do not operate as scheduled, 70% lack clear programming, and 65% of teachers hesitate to engage in reflective dialogue. School principals are expected to lead strategically through instructional leadership, focusing on teacher development to enhance learning outcomes (Awangku Amin & Mohd Hamzah, 2021). However, in Tembalang, 80% of principals do not evaluate programs regularly, and 70% rarely communicate with students. Observations also revealed that many teachers are unaware of their school's vision, highlighting weak leadership in aligning school goals with practice..

Previous research supports the importance of these three factors. A study by Muhammad Huda (2023) stated that principal leadership and teachers' professional competence significantly influence elementary school quality. Sumiati & Niemted (2020) found a strong correlation between instructional leadership practices and teachers' self-efficacy and collegiality. Sumarni et al. (2022) also highlighted that principals who actively apply instructional leadership can build a professional learning climate that supports continuous teacher development. Meanwhile, Novita & Radiana

(2024) emphasized that the effectiveness of learning communities heavily depends on principal leadership in building a collaborative culture. On the other hand, Arifin & Hanif (2024) showed that active learning communities can encourage an increase in teachers' pedagogical competence.

This study is motivated by the limitations of previous research, which predominantly examined partial relationships between leadership, teacher competence, and learning communities. Few studies have analyzed how these three variables interact to influence education quality, particularly in public elementary schools at the sub-district level. Moreover, limited research has specifically explored these issues within Tembalang District, which faces distinct contextual challenges such as weak instructional leadership practices, suboptimal teacher performance, and the underdevelopment of collaborative learning cultures. This study aims to fill that gap by adopting an integrative approach to empirically examine the influence of principals' instructional leadership, teachers' professional competence, and learning communities on the quality of public elementary schools in Tembalang District. The novelty of this research lies in its comprehensive analytical framework and its use of localized, contextually relevant data. The contribution of this study is twofold: theoretically, it advances the discourse in educational management; and practically, it offers a data-driven foundation for educational policy formulation tailored to local needs. The findings are expected to inform more integrated, measurable, and sustainable intervention strategies, addressing the gap between the ideal standards outlined in educational regulations and their often suboptimal implementation in the field. Through a correlational quantitative approach, this study endeavors to provide a holistic understanding of how the three key variables contribute to the quality of basic education as the desired educational outcome.

METHOD

This study adopts a quantitative approach with a correlational research design (Waruwu et al., 2025). A quantitative approach was chosen because this research aims to examine the relationships between variables that can be statistically measured and generalized (Mas et al., 2024). Correlational research is used to determine the extent of the relationship between several independent variables, namely, instructional leadership, professional competence, and learning communities, and the dependent variable, which is school quality (Nurhayati et al., 2025). This study is ex post facto in nature, as the data examined originates from pre-existing conditions, without any manipulation of variables by the researchers. The researchers did not intervene but rather analyzed

relationships that naturally formed within public elementary schools in Tembalang District, Semarang City (Hardani MSi et al., 2020).

The research was conducted in 21 public elementary schools in Tembalang District from January to June 2025. This study used primary data obtained directly from respondents through closed-ended questionnaires administered to elementary school teachers in 21 public schools in Tembalang District. The research population included all teachers and principals in the area, totaling 367 individuals. For sample selection, probability sampling with the proportional random sampling method was used, based on Slovin's formula, resulting in 191 respondents proportionally distributed across each school. This technique was chosen to ensure fair representation from every school within the population (Subhaktiyasa, 2024).

Data collection was carried out using a survey method with closed questionnaires developed based on an indicator matrix for all four research variables. These questionnaires were designed through a rigorous validation and reliability testing process. Validity was measured using Pearson Product-Moment correlation analysis, while reliability was tested using Cronbach's Alpha coefficient, all of which showed results above the threshold value (0.60), indicating that the instruments used were valid and reliable (Muchlis, 2023).

After data collection, analysis was performed with the aid of SPSS version 26 software. Data analysis began with descriptive statistics to provide a general overview of the survey results. This was followed by prerequisite analyses, including normality tests (Kolmogorov-Smirnov), linearity tests (via F-test), multicollinearity tests (via Tolerance and VIF values), and heteroscedasticity tests (with the Glejser test and Scatter Plot) (Syafitri et al., 2023). Subsequently, inferential analyses were conducted, including correlation tests (both partial and multiple) to determine the relationships between variables. This was followed by simple linear regression and multiple linear regression to determine the partial and simultaneous influence of each independent variable on the dependent variable. To strengthen the results, calculations of the coefficient of determination, effective contribution, and relative contribution were also performed to ascertain the magnitude of each predictor variable's contribution to school quality. This research is guided by four hypotheses as follows:

- H1: Instructional leadership significantly influences school quality.
- H2: Teacher’s professional competence significantly influences school quality.
- H3: Learning communities significantly influence school quality.

- H4: Instructional leadership, professional competence, and learning communities simultaneously influence school quality.

These hypotheses form the analytical framework used to conduct both partial and simultaneous regression testing. The presence of clear hypotheses strengthens the scientific rigor of this study and supports the transparency of its methodological design. This research aims to gain an empirical understanding of the extent to which principals' instructional leadership, teachers' professional competence, and learning communities influence elementary school quality in Tembalang District. The findings of this study are expected to make a tangible contribution to educational policy-making for quality improvement at the basic education unit level. To clarify the relationships between the variables studied, a conceptual diagram illustrating the correlational research model used is presented below.

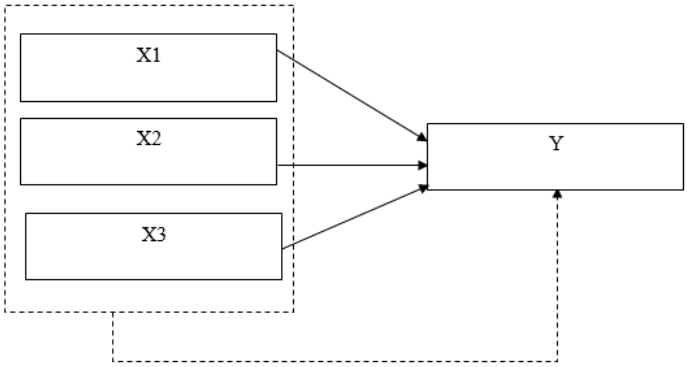

Figure 1. Diagram of Conceptual Framework

Information:

- X1 = Instructional Leadership
- X2 = Teacher's Professional Competence
- X3 = Learning Communities
- Y = School Quality

FINDINGS AND DISCUSSION

Findings

A. Data Description.

This study's data were collected from 191 elementary school teachers in Tembalang District, Semarang City, using four types of questionnaires: School Quality, Instructional Leadership, Professional Competence, and Learning Communities. Each variable was measured based on the respondents' scores from these questionnaires, which served as the primary data source for analysis.

The results of the descriptive statistical analysis for the research variables: Instructional Leadership (X1), Professional Competence (X2), Learning Communities (X3), and School Quality (Y) are presented in the following table.

Table 1. Research Data for Each Research Variable

		Statistics			
		School Quality	**Instructional Leadership**	**Professional Competence**	**Learning Communities**
N	Valid	191	191	191	191
	Missing	0	0	0	0
Mean		183.46	122.99	132.69	136.68
Median		182.00	122.00	133.00	136.00
Std. Deviation		15.429	14.067	9.256	12.152
Variance		238.050	197.884	85.669	147.673
Range		56	58	36	48
Minimum		154	92	114	112
Maximum		210	150	150	160
Sum		35041	23491	25343	26105

Source: Processed Primary Data

Based on Table 1, respondents' perceptions of the four research variables are generally at a medium level. The average score for School Quality is 183.46 (range 154–210), with most respondents (24.08%) in the medium category, indicating diverse but concentrated perceptions. Instructional Leadership has a mean of 122.99, dominated by medium (28.79%) and low (25.65%) categories, suggesting varied views on principals' instructional roles. Professional Competence averages 132.69, with 31.41% in the medium and 24.08% in the low category, showing that while professionalism is present, improvements in teaching practice are needed. Learning Communities average 136.68, with most responses in the medium (27.22%) and high (24.08%) categories, indicating gradual development, though not yet optimal.

Overall, the data show that perceptions of the four variables, particularly Professional Competence and Learning Communities, are leaning toward the higher end of the medium scale, forming a strong foundation for further relational and influence analysis on School Quality.

B. Dimension Test Results

Dimension analysis was conducted to determine the contribution of each indicator or dimension to the research variables. The data processing results using factor analysis show varying contributions among dimensions for each variable.

1. School Quality Dimension Test

Table 2 indicates that the input dimension has the highest contribution to School Quality (0.618), while the process only contributes 0.272, the lowest among the three. This aligns with field findings, where the teaching-learning process is still suboptimal, evidenced by a lack of planning, minimal use of media, and instruction that does not follow the plan.

Table 2. School Quality Dimension Analysis

Indikator	Initial	Extraction
Input	1.000	0.618
Proses	1.000	0.272
Output	1.000	0.473

2. Instructional Leadership Dimension Test

The results in Table 3 indicate that the "empowering teachers" dimension contributes the most (0.853), while "creating a positive learning climate" contributes only 0.487. This shows that while principals are quite successful in empowerment, efforts to create a conducive learning atmosphere are still suboptimal due to low teacher motivation for continuous learning.

Table 3. Instructional Leadership Dimension Analysis

Indikator	Initial	Extraction
Communicating School Vision	1.000	0.620
Empowering Teachers	1.000	0.853
Managing School Programs	1.000	0.795
Positive Learning Climate	1.000	0.487

3. Professional Competence Dimension Test

Table 4 shows that mastery of subject matter has the highest contribution (0.692), while understanding student characteristics and learning styles is the lowest (0.216). This indicates that differentiation-based learning planning is still very weak because teachers do not fully understand the individual needs of students.

Table 4. Professional Competence Dimension Analysis

Indikator	Initial	Extraction
Mastery of Subject Matter	1.000	0.692
Student Characteristics & Learning Styles	1.000	0.216
Curriculum & How to Use It	1.000	0.647

4. Learning Communities Dimension Test

Based on Table 5, the Collaborative Inquiry dimension has a large contribution (0.877), while Shared Repertoire is very low (0.015). This indicates that technical collaboration among teachers exists, but a culture of sharing best practices has not been well established due to teachers' low openness in sharing teaching strategies.

Table 5. Learning Communities Dimension Analysis

Indikator	Initial	Extraction
Shared Values & Vision	1.000	0.884
Collaborative Inquiry	1.000	0.877
Shared Repertoire	1.000	0.015

C. Regression Requirement Test Results.

Before conducting the regression analysis, specifically the regression model analysis, prerequisite tests were performed (Mardiatmoko, 2020). A good regression model is one that meets these requirements. The tests conducted in this study include:

1. Data Normality Test.

The normality test aims to determine whether the data for each variable is normally distributed (Abstrak, 2019).Normal distribution is important because many statistical techniques, including regression, assume normal data. Testing was done using the Kolmogorov-Smirnov Test. If the significance (Sig.) value is greater than 0.05, the data is considered normally distributed.

The results show that all variables have a Sig. Value > 0.05, as seen in the table below, meaning that data from all variables are normally distributed and suitable for further analysis.

Table 6. Normality Test Results

Variabel	N	Mean	Std. Dev.	Sig. (2-tailed)
School Quality	191	183.46	15.429	0.089
Instructional Leadership	191	122.99	14.067	0.057
Professional Competence	191	132.69	9.256	0.064
Learning Communities	191	136.68	12.152	0.071

2. Data Linearity Test.

This test is used to determine whether the relationship between two variables forms a straight line (linear) (Alwy Yusuf et al., 2024). A linear relationship is important in regression because the model used is a linear model. It is tested using ANOVA by looking at the Deviation from Linearity value; if Sig. > 0.05, the relationship between variables is considered linear.

The test results show that the relationships of School Quality with Instructional Leadership, Professional Competence, and Learning Communities are all linear, as seen in Table 7, making the regression model suitable for use.

Table 7. Linearity Test Results

Variable Relationship	F Deviation	Sig.
Y vs. X1 (Instructional Leadership)	0.795	0.825
Y vs. X2 (Professional Competence)	1.352	0.110
Y vs. X3 (Learning Communities)	1.006	0.473

3. Multicollinearity Test

This test aims to determine whether there is a very strong relationship between the independent variables (Zidane Ardiansyah et al., 2023). If multicollinearity exists, regression analysis can yield misleading results. The absence of multicollinearity is characterized by a VIF value < 10 and tolerance > 0.10. The test results, as shown in Table 8, indicate that all variables meet these criteria, meaning there is no multicollinearity issue among the independent variables.

Table 8. Multicollinearity Test Results

Variabel	Tolerance	VIF
Instructional Leadership	0.295	3.387
Professional Competence	0.286	3.501
Learning Communities	0.688	1.454

4. Heteroscedasticity Test

This test is performed to see if there is inequality of variance (data spread) in the regression model. If the result is significant (< 0.05), heteroscedasticity occurs, which can affect the model's accuracy. Conversely, if Sig. > 0.05, there is no heteroscedasticity issue (Ahyani et al., 2024).

The test results, as shown in Table 9, indicate that the significance values of all variables are above 0.05, meaning no heteroscedasticity occurred. This is also reinforced by the scatterplot graph, where the points are evenly distributed without a particular pattern..

Table 9. Heteroscedasticity Test Results

Variable	Sig.
Instructional Leadership	0.069
Professional Competence	0.076
Learning Communities	0.943

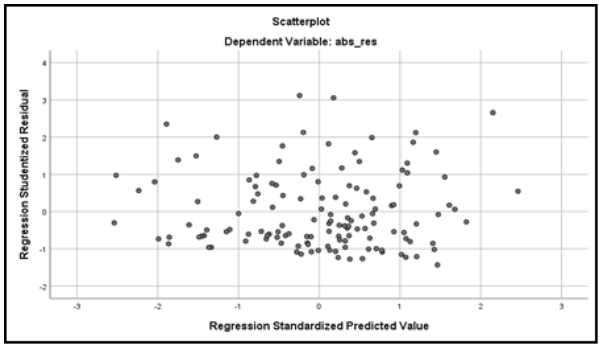

Figure 2. Scatterplot Graph of Heteroscedasticity Test

D. Hypothesis Test Results

In this research, there are four hypotheses to be tested, where Hypotheses 1, 2, and 3 will use simple linear regression analysis, and Hypothesis 4 will be tested using multiple linear regression analysis.

1. Simple Regression

a. Hypothesis 1: The Influence of Instructional Leadership on School Quality.

To interpret the correlation coefficient, the researcher uses the following guidelines:

Table 10. Interpretation of Correlation Coefficient

Coefficient Interval	Level of Relationship
0.000-0.199	Very Low
0.200-0.399	Low
0.400-0.599	Moderate
0.600-0.799	High
0.800-1.000	Very High

The test of the influence of Instructional Leadership (X1) on School Quality (Y) can be seen in Table 11 below.

Table 11. Correlation Test X1 vs. Y

Correlations			
		School Quality	Instructional Leadership
School Quality	Pearson Correlation	1	.921**
	Sig. (2-tailed)		.000
	N	191	191
Instructional Leadership	Pearson Correlation	.921**	1
	Sig. (2-tailed)	.000	
	N	191	191

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

Based on Table 11 above, it can be seen that the correlation between the Instructional Leadership variable and School Quality is positive, indicated by an r-value of 0.921. The Sig (2-tailed) value for the direct relationship between X1 and Y is 0.000. Since 0.000 < 0.05, it indicates a very high and significant correlation. Next, Hypothesis 1 is tested by referring to Table 12.

Table 12. ANOVA Test Results X1 vs. Y

ANOVA[a]						
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	Regression	38369.785	1	38369.785	1057.177	.000[b]
	Residual	6859.671	189	36.295		
	Total	45229.455	190			

a. Dependent Variable: School Quality
b. Predictors: (Constant), Instructional Leadership

Based on Table 12, the ANOVA test results for the influence of Instructional Leadership on School Quality indicate that the regression analysis yielded a significance of 0.000, which is smaller than the significance level of 0.05 (i.e., 0.000 < 0.05). Meanwhile, the F-calculated value is 1057.177, which is greater than the F-table value at a 0.05 confidence level, which is 3.08. Since F-calculated (1057.177) is greater than F-table (3.08), Hypothesis 1, stating that there is an influence of Instructional Leadership on the School Quality of public elementary schools in Tembalang District, is accepted.

The ANOVA test results confirm that Instructional Leadership has a significant influence on School Quality. The magnitude of this influence can be observed in Table 13 below:

Table 13. Test Results for the Magnitude of Influence of Variable X1 on Variable Y

Model Summary[b]				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.921[a]	.848	.848	6.024

a. Predictors: (Constant), Instructional Leadership
b. Dependent Variable: School Quality

Based on Table 13 above, the R-squared value is 0.848 = 84.8%. This means that the magnitude of the influence of variable X1 on Y is 84.8%, and the remaining 15.2% is influenced by other variables outside the scope of this research. The next regression test is the t-test. The results of the t-test are:

Table 14. t-Test Results X1 vs. Y

Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	59.215	3.846		15.396	.000
	Instructional Leadership	1.010	.031	.921	32.514	.000
a. Dependent Variable: School Quality						

Based on Table 14, the regression equation derived is: $\hat{Y}$= 59,215 + 1,010X_1. The regression analysis shows that each unit increase in Instructional Leadership leads to a 1.010-point improvement in School Quality, indicating that strengthening instructional leadership positively impacts school quality.

b. Hypothesis 2: The Influence of Professional Competence on School Quality

The test of the influence of Professional Competence (X2) on School Quality (Y) can be seen in Table 15 below.

Table 15. Correlation Test X2 vs. Y

Correlations			
		School Quality	Professional Competence
School Quality	Pearson Correlation	1	.907**
	Sig. (2-tailed)		.000
	N	191	191
Professional Competence	Pearson Correlation	.907**	1
	Sig. (2-tailed)	.000	
	N	191	191
**. Correlation is significant at the 0.01 level (2-tailed).			

Based on Table 15 above, it is evident that the correlation between the Professional Competence variable and School Quality is positive, indicated by an r-value of 0.907. The Sig (2-tailed) value for the direct relationship between X2 and Y is 0.000. Since 0.000 < 0.05, it indicates a high and significant correlation. The results of the F-test for the influence of the Professional Competence variable on School Quality are as follows:

Table 16. ANOVA Test Results X2 vs. Y

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	37246.971	1	37246.971	881.890	.000[b]

Residual	7982.485	189	42.235
Total	45229.455	190	

a. Dependent Variable: School Quality
b. Predictors: (Constant), Professional Competence

Based on Table 16, the ANOVA test results for the influence of Professional Competence on School Quality indicate that the regression analysis yielded a significance of 0.000, which is smaller than the significance level of 0.05 (i.e., 0.000 < 0.05). Meanwhile, the F-calculated value is 881.890, which is greater than the F-table value at a 0.05 confidence level, which is 3.08. Since F-calculated (881.890) is greater than F-table (3.08), Hypothesis 2, stating that there is an influence of Professional Competence on the School Quality of elementary schools in Tembalang District, is accepted. The influence of Professional Competence on School Quality can be seen in Table 17 below:

Table 17. Test Results for the Magnitude of Influence of Variable X2 on Variable Y

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.907[a]	.824	.823	6.499

a. Predictors: (Constant), Professional Competence
b. Dependent Variable: School Quality

Based on Table 17 above, the R-squared value is 0.824 = 82.4%. This means that the magnitude of the influence of variable X2 on Y is 82.4%, and the remaining 17.6% is influenced by other variables outside the scope of this research. The next regression test is the t-test. The results of the t-test are:

Table 18. Hasil uji t X2 terhadap Y

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	17.255	6.775		2.547	.000
	Professional Competence	1.513	.051	.907	29.697	.000

a. Dependent Variable: School Quality

Based on Table 18, the regression equation derived is: $\hat{Y}$= 17.255 + 1,513X_2. Based on the analysis of these regression coefficients, it can be concluded that the School Quality variable has a constant value of 17.255 when the independent variable is held constant. The

Professional Competence variable has a regression coefficient of 1.513, indicating that every one-unit increase in Professional Competence will result in a 1.513 increase in School Quality. This suggests that enhancing teachers' professional competence can significantly improve the overall quality of schools.

c. Hypothesis 3: The Influence of Learning Communities on School Quality

The test of the influence of Learning Communities (X3) on School Quality (Y) can be seen in Table 19 below.

Table 19. Correlation Test X3 vs. Y

Correlations			
		School Quality	**Learning Communities**
School Quality	Pearson Correlation	1	.599**
	Sig. (2-tailed)		.000
	N	191	191
Learning Communities	Pearson Correlation	.599**	1
	Sig. (2-tailed)	.000	
	N	191	191
**. Correlation is significant at the 0.01 level (2-tailed).			

Based on Table 19 above, it is evident that the correlation between the Learning Communities variable and School Quality is positive, indicated by an r-value of 0.599. The Sig (2-tailed) value for the direct relationship between X3 and Y is 0.000. Since 0.000 < 0.05, it indicates a moderate and significant correlation. The results of the F-test for the influence of the Learning Communities variable on School Quality are as follows:

Table 20. ANOVA Test Results X3 vs. Y

ANOVA[a]						
	Model	**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	Regression	16234.484	1	16234.484	105.822	.000[b]
	Residual	28994.972	189	153.413		
	Total	45229.455	190			
a. Dependent Variable: School Quality						
b. Predictors: (Constant), Learning Communities						

Based on Table 20, the ANOVA test results for the influence of Learning Communities on School Quality indicate that the regression analysis yielded a significance of 0.000, which is smaller than the significance level of 0.05 (i.e., 0.000 < 0.05). Meanwhile, the F-calculated value is 105.822, which is greater than the F-table value at a 0.05 confidence level, which is 3.08. Since F-calculated (105.822) is greater than F-table (3.08), Hypothesis 3, stating that there is an

influence of Learning Communities on the School Quality of elementary schools in Tembalang District, is accepted. The influence of Learning Communities on School Quality can be seen in Table 21 below:

Table 21. Test Results for the Magnitude of Influence of Variable X3 on Variable Y

Model Summary[b]				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.599[a]	.359	.356	12.386

a. Predictors: (Constant), Learning Communities
b. Dependent Variable: School Quality

Based on Table 21 above, the R-squared value is 0.359 = 35.9%. This means that the magnitude of the influence of variable X3 on Y is 35.9%, and the remaining 64.1% is influenced by other variables outside the scope of this research. The next regression test is the t-test. The results of the t-test are:

Table 22. t-Test Results X3 vs. Y

Coefficients[a]						
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	**Std. Error**	**Beta**		
1	(Constant)	79.497	10.146		7.835	.000
	Learning Communities	.761	.074	.599	10.287	.000

a. Dependent Variable: School Quality

Based on Table 22, the regression equation derived is: $\hat{Y}$= 79.497 + 0,761X_3. The analysis indicates that each one-unit increase in Learning Communities leads to a 0.761-point rise in School Quality, suggesting that fostering active Learning Communities can positively enhance the overall quality of schools.

2. Multiple Regression
   a. Hypothesis 4: The Influence of Instructional Leadership, Professional Competence, and Learning Communities on School Quality.

      An ANOVA test was conducted to determine whether Hypothesis 4 is accepted or rejected. The test results can be seen in Table 23 below:

Table 23. ANOVA Regression Test Results for X1, X2, X3 on Y

ANOVA[a]						
	Model	**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	Regression	41521.148	3	13840.383	697.933	.000[b]
	Residual	3708.308	187	19.831		
	Total	45229.455	190			

a. Dependent Variable: School Quality
b. Predictors: (Constant), Learning Communities, Instructional Leadership, Professional Competence

Table 23 shows that the F-calculated value is 697.933, which is greater than the F-table value of 3.08, with a probability significance level of 0.000 < 0.05 (or Sig = 0.000 = 0.000% < 5%). This means that H0 is rejected and H4 is accepted. Therefore, the regression model used for this research is significant, implying that the variables Instructional Leadership, Professional Competence, and Learning Communities significantly influence the School Quality variable. The next step is to determine the magnitude of the influence of Instructional Leadership, Professional Competence, and Learning Communities on School Quality by looking at the Adjusted R-squared value in Table 24.

Table 24. Summary Table of Regression Test for X1, X2, and X3 on Y

Model Summary[b]				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.958[a]	.918	.917	4.453

a. Predictors: (Constant), Learning Communities, Instructional Leadership, Professional Competence
b. Dependent Variable: School Quality

Based on Table 24, the influence of Instructional Leadership, Professional Competence, and Learning Communities on School Quality yields an Adjusted R-square of 0.917 or 91.7%. This value indicates that 91.7% of School Quality is influenced by Instructional Leadership, Professional Competence, and Learning Communities. The remaining 8.3% is influenced by other variables such as job satisfaction, work motivation, etc.

Table 25. Coefficients of Regression for X1, X2, and X3 on Y

Coefficients[a]						
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	**Std. Error**	**Beta**		
1	(Constant)	3.331	5.273		.632	.528

Instructional Leadership	.567	.042	.517	13.421	.000
Professional Competence	.702	.065	.421	10.755	.000
Learning Communities	.126	.032	.099	3.918	.000

a. Dependent Variable: School Quality

Based on Table 25, the resulting regression equation is:

Y = 3,331 + 0,567 X1 + 0,702 X2 + 0,126 X3

Information:

Y = School Quality

X1 = Instructional Leadership

X2 = Professional Competence

X3 = Learning Communities

Based on the analysis of these regression coefficients, it can be concluded that the constant value of the dependent variable, School Quality, is 3.331 when all independent variables are held constant. The Instructional Leadership variable has a regression coefficient of 0.567, meaning each unit increase in this variable contributes to a 0.567 increase in School Quality. Similarly, Professional Competence shows a stronger influence with a coefficient of 0.702, while Learning Communities contribute a smaller yet positive effect with a coefficient of 0.126. These results suggest that improvements in academic supervision, teacher professionalism, and collaborative learning practices will collectively enhance School Quality.

Based on the results of the third hypothesis test, the influence of the three independent variables on the dependent variable can be illustrated as shown in Figure 3.

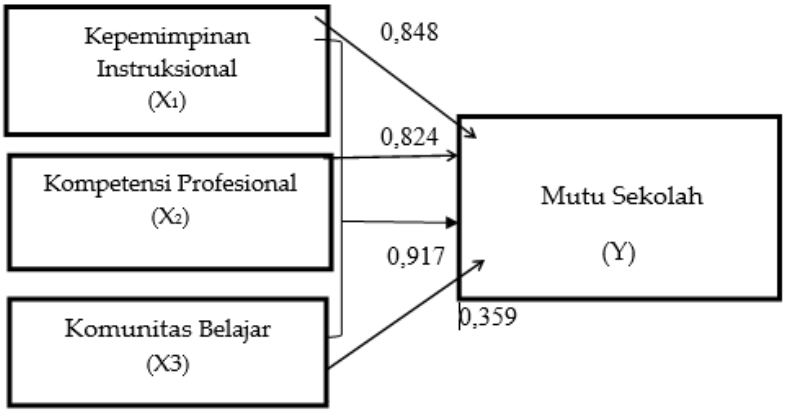

Figure 3. Magnitude of Influence of Variables X1, X2, and X3 on Y

Based on Figure 3, the influence of each independent variable, namely, Instructional Leadership (X1), Professional Competence (X2), and Learning Communities (X3), on the dependent variable, School Quality (Y), both individually and collectively, can be explained as follows:

1) Instructional Leadership (X1) partially contributes 0.848 or 84.8% to the School Quality (Y) variable. This means that, partially, Instructional Leadership influences School Quality by 84.8%.
2) The Professional Competence (X2) variable partially contributes 0.824 or 82.4% to the School Quality variable. This means that, partially, Professional Competence influences School Quality by 82.4%.
3) The Learning Communities (X3) variable partially contributes 0.359 or 35.9% to the School Quality variable. This means that, partially, Learning Communities influence School Quality by 35.9%.

Collectively, the Instructional Leadership, Professional Competence, and Learning Communities variables contribute 0.917 or 91.7% to the School Quality variable. This means that, together, Instructional Leadership, Professional Competence, and Learning Communities influence School Quality by 91.7%.

Discussion

Based on the research findings, the three independent variables—Instructional Leadership, Professional Competence, and Learning Communities, both partially and simultaneously, have a significant impact on Elementary School Quality in Tembalang District. Instructional Leadership is a leadership style that emphasizes achieving learning outcomes through the professional empowerment of teachers (Putu Prema Swandewi et al., 2024 ; Aslam et al., 2022). The research results indicate that teachers' perceptions of Instructional Leadership fall into the moderate category. The most dominant dimension is teacher empowerment, while creating a positive learning climate is the weakest aspect. This suggests that principals have not been optimal in fostering an environment that encourages teachers to develop. Nevertheless, principals have strived to empower human resources according to their competencies.

The correlation test showed a value of 0.921, which is categorized as very strong and positive. The regression analysis revealed that the influence of Instructional Leadership on School Quality reaches 84.8%, with the remainder influenced by other factors. These findings align with research

by Masruhin et al., (2022) and Wati et al., (2022) which states that the principal's leadership style is a key factor in improving educational quality.

Teacher's Professional Competence involves mastery of subject matter, teaching strategies, and the ability to apply them in the classroom Permana & Karwanto, (2020) and Fatimatuzzahroh & Zumrotun, (2023). Although the majority of teachers are certified and have teaching experience, the research indicates that perceptions of Professional Competence are still considered moderate. The dimension of subject matter mastery is quite good, but understanding student characteristics remains low. Teachers are not accustomed to independently preparing lesson plans and have not implemented differentiated instruction.

Planning that is merely formalistic and the limited use of learning resources are major impediments to improving instructional quality (Tamim Mulloh & Muslim, 2022). Although subject matter mastery is quite strong, teachers still struggle to guide students in fully comprehending the material. The correlation between Professional Competence and School Quality is 0.907, indicating a very strong relationship. Regression analysis shows that its contribution is 82.4%. This result supports the research by Sabrina & Aslam (2022) and Hasanah & Zainuddin (2024), which emphasizes the importance of teacher competence in shaping teaching quality and School Quality.

Learning Communities are collaborative spaces where teachers share knowledge and experiences to enhance teaching quality (Pribadi et al., 2023 ; Sulistiani & Nursiwi Nugraheni, 2023). However, the analysis results indicate that Learning Communities in Tembalang District are not yet optimal, with respondent perceptions in the moderate category. The collaborative inquiry dimension is quite strong, but the shared repertoire remains weak. Teachers are not fully open to sharing best practices, especially within the professional domain.

The collaborative culture among teachers is more evident in social activities than in academic ones. Learning Communities have not been strategically utilized as a tool for improving School Quality. The correlation between Learning Communities and School Quality is 0.599, which is moderately strong, but its contribution is only 35.9%. This indicates the necessity of revitalizing Learning Communities to become effective platforms for enhancing teacher competence and educational quality. These findings are consistent with the study by Arifin & Hanif, (2024).

Simultaneously, the three independent variables, Instructional Leadership, Professional Competence, and Learning Communities, contribute significantly to School Quality. The F-calculated value of 697.933 significantly exceeds the F-table value of 3.08. The regression coefficients

are: Instructional Leadership 0.567, Professional Competence 0.702, and Learning Communities 0.126. This shows that all three collectively influence School Quality with a very high level of contribution.

The Adjusted R-Square value of 0.917 indicates that 91.7% of the variation in School Quality can be explained by these three variables. The remaining 8.3% is influenced by other factors outside the model. This result reinforces the findings of Setyawan & Santosa (2021) that the synergy among principals, teachers, and a collaborative environment is the primary foundation for building a high-quality school. In this context, strong Instructional Leadership will be able to guide the school's vision by actively involving teachers (Joko Nugroho, 2019). Good Professional Competence enables teachers to perform their roles optimally, while active Learning Communities can serve as a platform for reflection and collective capacity building (Huda Sekolah Menengah Kejuruan Negeri, 2023). If managed well, these three factors will contribute to the continuous improvement of School Quality and build public trust.

CONCLUSION

Based on the research findings, it can be concluded that Elementary School Quality in Tembalang District is significantly influenced by three main factors: Instructional Leadership, Teacher's Professional Competence, and Learning Communities. These three variables have been proven to have a significant impact, both partially and simultaneously, on improving School Quality, with a combined contribution reaching 91.7%. Among the three, Professional Competence and Instructional Leadership have the greatest influence. This finding emphasizes the crucial role of principals as instructional leaders and the necessity of strengthening teachers' capacity in mastering subject matter, understanding student characteristics, and implementing the curriculum contextually. Overall, this research provides empirical evidence that efforts to enhance the quality of basic education cannot be carried out in isolation. Collaboration among effective leadership, professional teachers, and a school culture that supports collaborative learning forms the primary foundation for building high-quality schools. Therefore, the results of this study can serve as a basis for formulating more targeted, contextual, and sustainable educational policies and strategies.

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