

Principal Leadership, Organizational Culture, and School-Based Management to Improve the Quality of Elementary Schools

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ABSTRACT: This study aims to examine the role of principal leadership, organizational culture, and school-based management in improving the quality of elementary schools, both separately and simultaneously. The sample size was 121 public elementary school teachers. The sampling technique used was stratified random sampling. The data analysis technique was descriptive and causal with multiple linear regression. Primary data processing was assisted by the SPSS application program. In an effort to improve the quality of elementary schools, this can be done by optimizing principal leadership, organizational culture, and school-based management. Policies related to this optimization can be implemented separately or at different times or carried out simultaneously. Policies related to optimizing organizational culture to improve the quality of elementary schools should be prioritized over principal leadership and school-based management.

KEYWORDS: Elementary School Quality, Organizational Culture, Principal Leadership, School-Based Management

INTRODUCTION

To develop human resources, professional educators are needed so that graduates succeed with competent quality in society. In developing the principal's leadership contribution through the development of ideas for building schools utilizing information systems, both vertically and horizontally, to minimize errors. Indicators of principal leadership are personality, knowledge, and communication skills. School-based management includes school performance and quality, especially to improve student learning outcomes. School-based management is the school's autonomy in deciding policies related to school development. Organizational culture includes values and basic assumptions related to prevailing customs developed by an organization. Organizational culture includes innovation, courage, results-oriented, team-oriented, aggressiveness, and stability. Quality is a quality orientation that will be built by involving teachers, students, and the community environment to ensure the educational process runs according to plan. School quality concerns graduate competencies, content, processes, and assessments.

The principal's limitations in implementing leadership functions will impact the declining quality of education. Likewise, an organizational culture that is not practiced will present obstacles in achieving educational goals. Teachers and educational staff who do not cooperate effectively will impact the teaching process, hindering the learning process because learning simulations will not achieve optimal results. One of the keys to successful education lies in competency-based education, with graduates aiming to compete with students from other schools. Competition among students must be fostered, given that educational quality will continuously change due to the effects of developments in information and communication technology.

Jalal & Supriadi, (2001) state that educational quality can be improved through the support of the school community, including students, teachers, educational staff, and the surrounding community. Furthermore, several influencing factors are mentioned, including low teacher quality, suboptimal school leadership and management, and available infrastructure.

This study aims to determine and assess whether principal leadership, organizational culture, and school-based management can improve the quality of public elementary schools. This is crucial for formulating school policies related to elementary school quality. Improving school quality will improve the quality of students and is the initial stage in educating the community. The research question is: Do principal leadership, organizational culture, and school-based management influence the quality of public elementary schools, either partially or simultaneously? This study is expected to contribute to the body of knowledge regarding improving the quality of elementary schools.



LITERATURE REVIEW

A. Hypothesis Development

Principal Leadership and Elementary School Quality

Mobilization, coordination, control, and alignment of all educational resources is a very important role for the principal's leadership. The principal's contributions to the development and advancement of the institution they lead are highly valuable because they involve various aspects. Sulistiyarini et al., (2024); Fadhli, (2017) state that quality education is indicated by good conditions and meets the requirements related to input, process, and output components. Research by Asmah et al., (2023) shows that principal leadership significantly influences school quality. The elementary school is located in Ringinarum District, Kendal Regency. Other researchers found that principal leadership significantly influences school quality at vocational high schools in Pekalongan Regency (Pahing & Ningsih, 2025). Qualitative research conducted by Sulistiyarini et al., (2024) found that principal leadership plays a role in enhancing school quality. The study took place at Bumijawa 01 Tegal Public Elementary School. Based on the above description, the following temporary answer can be proposed,

H1: Principal leadership influences elementary school quality.

Organizational Culture and Elementary School Quality

Organizational culture encompasses directly observable elements such as discipline, spatial planning, symbols, and so on. Meanwhile, those that cannot be directly observed are the beliefs and values internalized by individuals within an organization or school (6). Research by Meryati et al., (2018) at the Baitul Jihad Kemang Pratama 2 Integrated Islamic Elementary School in Bekasi found that organizational culture significantly influences elementary school quality. The study found that organizational culture significantly contributes to educational quality at Nu Al Islami Pesanggaran Junior High School in Banyuwangi. The research used a qualitative approach with a case study approach. Research by Pahing & Ningsih, (2025) at a public vocational high school in Pekalongan Regency was effective in improving school quality. Based on the description above, the following hypothesis can be proposed,

H2: Organizational culture significantly influences elementary school quality.

School-Based Management and Elementary School Quality

The decentralized model of education management, which transfers policy formulation and authority from regional or central governments to school administrators, is called school-based management (8). The primary factor determining the success of management-based quality improvement lies in the principal's leadership, such as motivating and coordinating the school community in various programs and activities (9). Research by Pranilisa & Monika, (2022) indicates that school management influences school quality at public elementary school 14/I Sungai Baung, Batang Hari Regency. Research conducted by Ridhwan & Nurmiyanti, (2016) indicates that school-based management influences the quality of high school education and its equivalent in Pagedangan District, Tangerang Regency. Research conducted at public elementary schools in Patumbak District, Deli Serdang Regency, by Damanik, (2019) proves that school-based management influences elementary school quality. Based on the description above, the following hypothesis can be proposed,

H3: School-based management has an influence on the quality of elementary schools.

Principal Leadership, Organizational Culture, School-Based Management, and Elementary School Quality

The four research variables, principal leadership, organizational culture, school-based management (independent variables), and elementary school quality (dependent variable) are communality. Thus, they are interrelated. If the three independent variables have a directional relationship with the dependent variable, then principal leadership, organizational culture, and school-based management simultaneously influence the dependent variable. Therefore, the following hypothesis can be proposed,

H4: Principal leadership, organizational culture, and school-based management simultaneously influence elementary school quality.

B. Conceptual Framework

Interconnected and related propositions are called a conceptual framework (Napitupulu, 2025). In other words, a conceptual framework is built from several propositions. A variable that influences another variable is a proposition. Researchers use the hypotheses above to develop a conceptual framework, as shown in Figure 1.

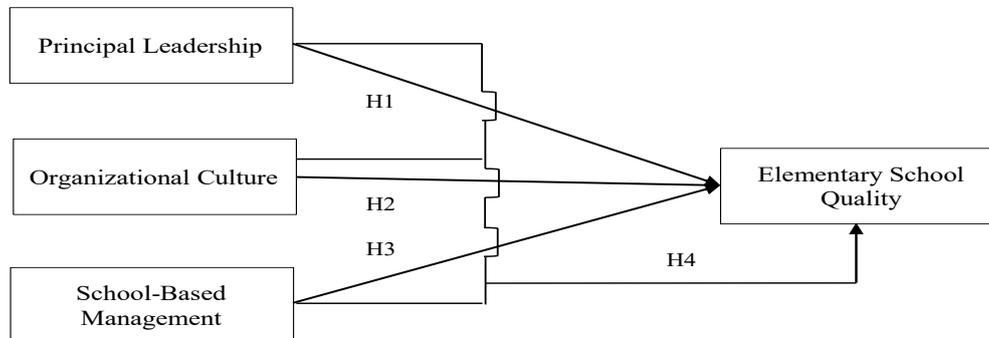


Figure 1. Conceptual Framework of the Research

Source: Processed from secondary data, 2025

There are three independent variables in this study that influence the dependent variable (elementary school quality): principal leadership, organizational culture, and school-based management. The recursive influence of each independent variable separately on the dependent variable includes H1, H2, and H3. The influence of the three independent variables simultaneously on elementary school quality is called H4. These three independent variables, both separately and together, are expected to improve elementary school quality.

METHODS

A. Population, Sample, and Sampling Technique

A population is all observed units where measurements will be taken (14). Therefore, a population can include people, objects, organizations, or events (15). The population was 173 elementary school teachers in this study. A portion of the population studied was considered a sample (Arikunto, 2011). The research model used a regression equation, where the variables are identical to the indicators (17). The sample size in this study was determined using the Slovin formula. The number of respondents was 121. Sugiyono, (2016) used a stratified probability sampling technique. After stratification, respondents were selected randomly. Each teacher had an equal chance of becoming a respondent.

B. Location and Time

The research was conducted at public elementary schools in Tiga Binanga District, Karo Regency, North Sumatra Province. Primary data collection took place during May 2025.

C. Data Collection

Primary Sources

Primary data is information collected for the current research problem (Hair et al., 2020). Data collected specifically for the purposes of the research being conducted. Primary data is collected using a questionnaire. Concept measurement uses a Likert scale (1-5) (20). The questionnaire is distributed to teachers to elicit their opinions through statements or questions. The research instrument is tested for validity and reliability before being used with actual respondents.

Secondary Sources

Data previously collected for purposes other than the current research is called secondary data (20). Secondary sources include textbooks, journal articles, relevant reports, and websites. Secondary sources are generally used by authors for literature reviews and introductions.

D. Analysis Techniques

Descriptive Analysis Techniques

Descriptive analysis is a statistical method that describes collected data as is without drawing general conclusions (21). Siyoto & Sodik, (2015) state that descriptive research is concerned with the detailed study of phenomena to clearly differentiate them from other phenomena. Zikmund et al., (2013) state that descriptive methods aim to clearly describe the characteristics of research



variables. This technique is necessary and used to examine differences in respondent characteristics to determine their impact on their perceptions of the questions posed by the researcher.

Causal Analysis Techniques with Multiple Linear Regression

A mathematical model that statistically links a dependent variable with one or more independent variables is called multiple linear regression (Sarma & Vardhan, 2019; Zikmund et al., 2013). Multiple linear regression is used when researchers want to test the influence of one dependent variable and a set of independent variables (Afifi et al., 2020; Hair et al., 2019). According to McClave et al., (2018), the general functional form of the multiple linear regression equation is:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n + \epsilon \dots \dots \text{Population}$$

$$Y = a + b_1 X_1 + b_2 X_2 + \dots + b_n X_n + e \dots \dots \text{Sample}$$

Y = dependent variable (value of the variable to be predicted); a = constant; b1, b2,..., bn = Regression coefficient value; X1, X2,..., Xn = independent variables. The above model can be discussed further if it has fulfilled the results of the classical assumption test (residual normality, collinearity, and heteroscedasticity), partial test (t-test), simultaneous test (F-test), and the magnitude of the coefficient of determination.

RESULTS AND DISCUSSION

A. Descriptive Analysis

Respondent Characteristics by Gender: Respondents included both male and female teachers. There were 35 male teachers and 86 female teachers. The number and percentage of each gender are presented in Table 1.

Table 1. Respondents by gender

No.	Gender	Total	Percentage
1	Male	35	28,9
2	Female	86	71,1
3	Total	121	100,0

Source: Processed from primary data, 2025

The percentage of male teachers at public elementary schools in Tiga Binanga District, Karo Regency, is 28.9%. The percentage of female teachers is even higher, at 71.1%. In other words, there are more female teachers than male.

Respondent Characteristics Based on Class

The teachers who were respondents in this research included Class IIIC, IIID, and IVA. IVB, IVC, and IVD. The number of teachers (respondents) was 121 people, consisting of 12 people from class IIIC, 19 teachers from class IIID, 24 teachers from class IVA, 30 teachers from class IVB, 15 teachers from class IVC, and 21 teachers from class IVD. The distribution of the number and percentage of teachers by group is presented in Table 2

Table 2. Number and Percentage of Teachers by Class

No.	Class	Total (person)	Percentage
1	IIIC	12	9,9
2	IIID	19	15,7
3	IVA	24	19,8
4	IVB	30	24,8
5	IVC	15	12,4
6	IVD	21	17,4
7	Total	121	100,0

Source: Processed from primary data, 2025

Teachers in class IVB accounted for 24.8%, the largest percentage compared to other groups. Second place was taken by class IVA, at 19.8%. The smallest number of teachers in class IIIC was 9.9%. The second-lowest was in class IVC, at 12.4%.



B. Multiple Linear Regression Analysis

Primary data processing using the SPSS application program for multiple linear regression yielded the results presented in Table 3.

Table 3. Multiple linear regression output with assisted by SPSS

1	Model	B	Std. Error	Beta	t	Sig.
		Unstandardized Coefficients		Standardized Coefficients		
	(Constant)	14,272	2,445		5,838	,000
	Principal Leadership	,325	,138	,223	2,356	,020
	Organizational Culture	,571	,040	,789	14,312	,000
	School-Based Management	,526	,155	,320	3,404	,001

Source: Processed from primary data, 2025

Referring to Table 3 above, the multiple linear regression functional model can be written as follows: $Y = 14.272 + 0.325X_1 + 0.571X_2 + 0.526X_3$. Where Y is the quality of elementary schools, the constant is 14.272; the coefficient of variable X1 (principal leadership) is 0.325; variable X2 (organizational culture) is 0.571; variable X3 (School-Based Management) is 0.526.

Residual Normality Test

It is important to test the normality of the residual data distribution to ensure that a linear model (regression equation) is suitable for confirmatory or predictive use. In multivariate analysis, the sample size should be at least ten times the number of indicators; the data distribution can be considered to meet the assumption of normality (Sugiyono, 2019; Kasanah, 2015; Wijanto, 2008). In this study, there were four variables or indicators. Therefore, to meet normality, the minimum number of observations was 40 respondents. With 121 teachers as respondents, the assumption of normality in this study was deemed to have been met.

Multicollinearity Test

A condition that indicates a strong relationship ($r \geq 0.90$) (Hair et al., 2019) between two or more independent variables in a multiple linear regression model is called multicollinearity. To detect multicollinearity, the tolerance value or Variance Inflation Factor (VIF) value can be observed. A tolerance limit of > 0.10 and a VIF limit of < 10.00 indicate no strong correlation between the independent variables. The results of primary data processing using SPSS are presented in Table 4.

Table 4. Multicollinearity Test Results

1	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
	(Constant)	14,272	2,445		5,838	,000		
	Principal Leadership	,325	,138	,223	2,356	,020	,273	3,663
	Organizational Culture	,571	,040	,789	14,312	,000	,805	1,242
	School-Based Management	,526	,155	,320	3,404	,001	,276	3,618

Source: Processed from primary data, 2025

The variance inflation factor value for the principal leadership variable is $3.663 < 10.00$, organizational culture is $1.242 < 10.00$, and school-based management is $3.618 < 10.00$. Furthermore, the tolerance values are respectively 0.273, 0.805, and 0.276 > 0.10 . The parameters above indicate that there is no strong correlation between the independent variables in the resulting multiple linear regression model.



Heteroscedasticity Test

The heteroscedasticity test assesses whether there is inequality in the variance of the residuals across all observations in a linear regression model. If this occurs, it will be difficult to distinguish the effect of each independent variable on the dependent variable. Therefore, homoscedasticity is expected. The results of the heteroscedasticity test (Glejser's Test) using SPSS software are presented in Table 5.

Table 5. Heteroscedasticity Test Results

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
1 (Constant)	2,586	1,548			
Principal Leadership	,189	,087	,360	2,172	,332
Organizational Culture	,032	,025	,122	1,262	,210
School-Based Management	,015	,098	,025	,151	,880

Source: Processed from primary data, 2025

Sig. Principal leadership is $0.332 > 0.05$; there is no heteroscedasticity; Sig. Organizational Culture is $0.210 > 0.05$; there is no heteroscedasticity; Sig. School-based management is $0.880 > 0.05$; there is no heteroscedasticity. Thus, there is a similarity in residual variance (homogeneous) for all observations.

Partial Test (T-Test)

This test aims to determine whether, when taken separately, variable X still significantly contributes to the dependent variable Y. The results of the data processing for the partial test can be seen in the last column of Table 3. Principal leadership variable: The calculated t-value of 2.356 is greater than the t-table value of 1.980 at a significance level of $0.020 < 0.05$ with a 95% confidence level, meaning H_a is accepted and H_o is rejected. There is an influence of principal leadership on elementary school quality. Organizational culture variable: The calculated t-value of 14.312 is greater than the t-table value of 1.980 with a 95% confidence level, meaning H_a is accepted and H_o is rejected, meaning there is an influence of organizational culture on elementary school quality. School-based management variable: The calculated t-value of 3.404 is greater than the t-table value of 1.980 with a 95% confidence level. This means H_a is accepted and H_o is rejected, meaning there is an influence of school-based management on elementary school quality.

Simultaneous Test (F-Test)

The simultaneous test is intended to test whether there is truly a linear relationship between the independent variables X and the dependent variables Y. The F-test is used to determine the effect of independent variables on the dependent variable simultaneously (together). The F-test criteria relate to the proposed hypothesis, namely: H_a : F-value $>$ F-table, indicating a significant simultaneous effect of the independent variables on the dependent variable. H_o : F-value $<$ F-table, indicating no significant simultaneous effect of the independent variables on the dependent variable. The results of the primary data processing are presented in Table 6.

Table 6. Simultaneous Test Results

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1647,760	3	549,253	97,196	,000 ^b
	Residual	661,165	117	5,651		
	Total	2308,926	120			

a. Dependent Variable: Mutu Sekolah Dasar

Source: Processed from primary data, 2025



The test results show that the calculated F-value of 97.196 is greater than the F-table value of 2.450, and the significance value is $0.000 < 0.05$, so H_a is accepted and H_o is rejected. Together, there is a contribution of principal leadership, organizational culture, and school-based management to the quality of elementary schools.

Coefficient of Determination

The R-square or coefficient of determination essentially measures the model's ability to explain variation in the dependent variable. The R^2 value is between zero and one. A value close to one indicates that the dependent variables provide almost all the information needed to predict variation in the dependent variable. The results of primary data processing using the SPSS application program are presented in Table 7.

Table 7. Determinant Coefficient

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,845 ^a	,714	,706	2,377	1,862

Source: Processed from primary data, 2025

The R-squared value was $0.714 > 0.50$. The three independent variables in the regression model were dominant in determining the quality of elementary schools (25). Therefore, it was not determined by factors outside the model. 71.4% of elementary school quality can be explained by variables (principal leadership, organizational culture, and school-based management), while the remaining 28.6% was influenced by other variables not studied, such as school fees, learning facilities, and others.

The test results for the multiple regression model $Y = 0.325X_1 + 0.571X_2 + 0.526X_3$ met the specifications. Therefore, the discussion can continue. The regression coefficient for principal leadership is 0.325 with a standard error of 0.138, where the calculated t-value of 2.356 > the calculated t-value of 1.658 with a 95% confidence level, sig. $0.000 < 0.05$. These parameters indicate that principal leadership has a significant and positive effect on elementary school quality. Changes in principal leadership are in line with changes in elementary school quality. If principal leadership increases by one unit, elementary school quality will increase by 0.325 units. This assumes that both organizational culture and school-based management variables remain constant. Conversely, if principal leadership decreases by one unit, elementary school quality will also decrease by 0.325 units, provided the other two independent variables remain constant. The results of this study support those obtained by Asmah et al., (2023), Pahing & Ningsih, (2025), and Sulistiyarini et al., (2024). Principal leadership influences school quality. The differences lie in the research location, research time, and number of respondents. Furthermore, some studies employ qualitative research.

The regression coefficient for organizational culture is 0.571 with a standard error of 0.040, where the calculated t-value of 14.312 is greater than the calculated t-value of 1.658 with a 95% confidence level, or $\alpha p = 0.05$, or sig. $0.020 < 0.05$. These parameters indicate that organizational culture has a significant and positive effect on elementary school quality. Changes in organizational culture are in line with changes in elementary school quality. A one-unit increase in organizational culture will increase elementary school quality by 0.571 units, assuming both principal leadership and school-based management variables remain constant. Conversely, a one-unit decrease in organizational culture will also decrease elementary school quality by 0.571 units, provided that principal leadership and school-based management remain unchanged. The authors' research findings align with those of Meryati et al., (2018) and Pahing & Ningsih, (2025). The differences lie in the research locus, research time, number of respondents, and type of research chosen.

The regression coefficient for school-based management is 0.526 with a standard error of 0.155, where the calculated t-value of 3.404 is greater than the calculated t-value of 1.658 with a 95% confidence level, or $\alpha = 0.05$, or sig. $0.001 < 0.05$. These parameters indicate that school-based management has a significant and positive effect on the quality of elementary schools. The increase or decrease in school-based management will result in an increase or decrease in the quality of elementary schools. If school-based management is increased by one unit, then elementary school quality will increase by 0.526 units, assuming the principal's leadership and organizational culture variables remain unchanged. Conversely, if school-based management is decreased by one unit, elementary school quality will also decrease by 0.526 units, provided that elementary school leadership and



organizational culture remain unchanged. Several previous studies by Pranilisa & Monika, (2022), Damanik, (2019), and Ridhwan & Nurmiyanti, (2016) align with this study. The differences lie in the research location, timing, and number of respondents. The regression coefficients for the three independent variables were 0.325, 0.571, and 0.526, respectively. Organizational culture had the highest regression coefficient. The influence of organizational culture was stronger than that of principal leadership and school-based management on elementary school quality. Principal leadership had the smallest influence on elementary school quality. Furthermore, the standard error for organizational culture was smaller than that for the other two independent variables. The accuracy of organizational culture's confirmation and prediction was better in relation to elementary school quality.

CONCLUSIONS AND RECOMMENDATIONS

A. Conclusions

Principal leadership, organizational culture, and school-based management, both separately and simultaneously, can improve the quality of public elementary schools in Tiga Binanga District, Karo Regency.

Organizational culture plays the strongest role in improving the quality of public elementary schools in Tiga Binanga District, Karo Regency, compared to principal leadership and school-based management.

B. Recommendations

Efforts to improve the quality of public elementary schools in Tiga Binanga sub-district, Karo Regency, can be achieved by optimizing principal leadership, organizational culture, and school-based management.

Policies related to these optimizations can be implemented separately at different times or simultaneously. Optimizing policies related to organizational culture in public elementary schools in Tiga Binanga sub-district, Karo Regency, should be prioritized over principal leadership and school-based management.

REFERENCES

1. Jalal F, Supriadi D. Reformasi pendidikan dalam konteks otonomi daerah. Jakarta: kerjasama Depdiknas, Bappenas, Adicita Karya Nusa; 2001. 445 p.
2. Sulistiyarini E, Hartinah S, Purwanto BE. Peran Kepemimpinan Kepala Sekolah dalam Meningkatkan Mutu Sekolah di Sekolah Dasar. *J Educ Res*. 2024;5(3):3888–901.
3. Fadhli M. Manajemen Peningkatan Mutu Pendidikan. *Tadbir J Stud Manaj Pendidik*. 2017;1(2):215.
4. Asmah N, Miyono N, Soedjono S. Pengaruh Kepemimpinan Kepala Sekolah dan Kedisiplinan Guru Terhadap Mutu Sekolah Dasar. *J Inov Pembelajaran di Sekol*. 2023;4(2):363–71.
5. Pahing, Yovitha Yulianti Ningsih. Analisis Pengaruh Profesionalisme Guru, Budaya Organisasi, dan Kepemimpinan Kepala Sekolah terhadap Peningkatan Mutu Sekolah. *Andragogi J Pendidik dan Pembelajaran*. 2025;5(1):174–86.
6. Nurfajrina S, Efendi U, Sucitra DA. Pengaruh Budaya Organisasi terhadap Mutu Pendidikan di Sekolah. *J Manaj Mutu Pendidik [Internet]*. 2022;10(2). Available from: <https://jurnal.fkip.unila.ac.id/index.php/JMMP/article/view/26712/0>
7. Meryati, Titin Meidarti, Eka Giovana Asti. ANALISIS PENGARUH BUDAYA ORGANISASI SEKOLAH DAN MOTIVASI KERJA GURU TERHADAP MUTU PENDIDIKAN DI BEKASI (<http://ejournal.stieipwija.ac.id/index.php/jmk/article/view/196>). *J Manaj Kewirausahaan*. 2018;Vol. 15 No(01):83–98.
8. Asyibli B, Maulida RS, Zohriah A, Bactiar M. Manajemen Berbasis Sekolah: Solusi Alternatif Peningkatan Mutu Pendidikan Pada Satuan Pendidikan. *J Kependidikan [Internet]*. 2025;13(1):75–98. Available from: [file:///C:/Users/ASUS/Downloads/1097-Article Text-3401-1-10-20230117.pdf](file:///C:/Users/ASUS/Downloads/1097-Article%20Text-3401-1-10-20230117.pdf)
9. Azis A. SEKOLAH, MANAJEMEN PENINGKATAN MUTU BERBASIS DI SD NEGERI MANTUYAN. *J Manaj Pendidik Islam [Internet]*. 2020;6(2):13. Available from: <https://www.golder.com/insights/block-caving-a-viable-alternative/>
10. Pranilisa F, Monika MS. Pengaruh Manajemen Sekolah Terhadap Mutu Pendidikan Di Sekolah Dasar. *J Pendidik Glas*. 2022;6(2):262.
11. Ridhwan DS, Nurmiyanti L. Pengaruh Otonomi Daerah Dan Manajemen Berbasis Sekolah Terhadap Peningkatan Mutu Pendidikan Menengah Atas Di Kab. Tangerang. *EDUKASI J Penelit Pendidik Agama dan Keagamaan*. 2016;14.



12. Damanik R. Pengaruh Manajemen Berbasis Sekolah Dan Komite Sekolah Terhadap Mutu Sekolah. Serunai J Ilm Ilmu Pendidik. 2019;5(1):41–52.
13. Napitupulu RB. Menyusun Proposal Penelitian Manajemen. Edisi satu. Indonesia YSI, editor. Medan: Yaysasan Sinergi Inspirasi Indonesia; 2025. 270 p.
14. Lohr SL. Sampling Design and Analysis. Third Edit. Abingdon, Oxon: CRC Press; 2022. 675 p.
15. Walliman N. Research Method The Basic. Third Edit. New York: Routledge; 2022. 286 p.
16. Suharsimi Arikunto. Prosedur penelitian : suatu pendekatan praktik [Internet]. Ed. Rev. V. Jakarta: Rineka Cipta; 2011. 413 hlm. Available from: <https://opac.perpusnas.go.id/DetailOpac.aspx?id=217760>
17. Sugiyono. Metode Penelitian Kuantitatif, Kualitatif, dan R&D [Internet]. Cetakan 1. Bandung: CV.Alfabeta; 2019. 464 p. Available from: <http://cvalfabeta.com/product/metode-penelitian-kuantitatif-kualitatif-dan-rd-mpkk/>
18. Sugiyono. Metode Penelitian Kuantitatif Kualitatif dan R&D [Internet]. Bandung: CV.Alfabeta; 2016. 334 p. Available from: <https://www.tokopedia.com/bursabukubandung/metode-penelitian-kuantitatif-kualitatif-dan-rd-prof-dr-sugiyono>
19. Joe F. Hair J, Page M, Brunsveld N. Essentials of Business Research Methods. Fourth edi. New York: Routledge; 2020.
20. Zikmund WG, Babin BJ, Carr JC, Griffin M. Business Research Methods [Internet]. Ninth Edit. Roche M, editor. Mason, OH 45040USA: South-Western, Cengage Learnin; 2013. Available from: [file:///C:/Users/ASUSX4~1/AppData/Local/Temp/Business Research Methods by William G. Zikmund Adhikari Jon C. Carr Barry J. Babin Mitch Griffin \(z-lib.org\).pdf](file:///C:/Users/ASUSX4~1/AppData/Local/Temp/Business%20Research%20Methods%20by%20William%20G.%20Zikmund%20Adhikari%20Jon%20C.%20Carr%20Barry%20J.%20Babin%20Mitch%20Griffin%20(z-lib.org).pdf)
21. Sugiyono. Metode Penelitian Bisnis: Pendekatan Kuantitatif, Kualitatif, Kombinasi, dan R&D [Internet]. Bandung: CV.Alfabeta; 2017. Available from: <https://scholar.google.com/citations?user=uUIIujUAAAAJ&hl=en#d=>
22. Siyoto S, Sodik MA. Dasar metodologi penelitian. Cetakan 1. Ayup, editor. Yogyakarta: Literasi Media Publishing; 2015.
23. Sarma KVS, Vardhan RV. Multivariate Statistics Made Simple A Practical Approach. Taylor & Francis Group, LLC; 2019. 259 p.
24. Afifi A, May S, Donatello RA, Clark VA. Practical Multivariate Analysis. Sixth Edit. Boca Raton: Taylor & Francis Group, LLC; 2020. 435 p.
25. Hair, Black W, Babin B, Anderson R. Multivariate Data Analysis. Eighth Edi. Andover, Hampshire, SP10 5BE United Kingdom: Cengage Learning EMEA; 2019.
26. McClave JT, Benson G, Sincich T. Statistics for Business and Economics. Harlow: Pearson Education Limited; 2018.
27. Kasanah A. Penggunaan Metode Structural Equation Modeling untuk Analisis Faktor yang Mempengaruhi Kualitas Pelayanan Perpustakaan dengan Program LISREL 8.80. Universitas Negeri Semarang; 2015.
28. Wijanto HS. Structural Equation Modeling dengan Lisrel 8.8 Konsep dan Tutorial [Internet]. Bandung: Graha Ilmu; 2008. Available from: <https://teorionline.wordpress.com/2011/08/16/setyo-hari-wijanto-2008-structural-equation-modeling-dengan-lisrel-8-8/>

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