

The Influence of School Culture and Principal Managerial Competence on Elementary School Teacher Performance in a Remote Indonesian District: A Quantitative Study

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Article History: Received on 12 June 2026, Revised on 16 June 2026,
Published on 3 August 2026

Abstract: This quantitative study examines the influence of school culture and principal managerial competence on elementary school teacher performance in Karang Agung Ilir District, Banyuasin Regency, Indonesia—a remote area with significant geographic and infrastructural constraints. Using an explanatory correlational design, data were collected from 79 public elementary school teachers selected through proportional random sampling. Validated and reliable Likert-scale questionnaires were employed. Data were analyzed using simple and multiple linear regression. Findings reveal that school culture has a positive and significant effect on teacher performance ($\beta = 0.967$, $t = 21.512$, $p < 0.001$), contributing 85.7% ($R^2 = 0.857$). Principal managerial competence also demonstrates a positive and significant effect ($\beta = 0.955$, $t = 21.239$, $p < 0.001$), contributing 85.4% ($R^2 = 0.854$). Simultaneously, both variables significantly predict teacher performance ($F = 294.892$, $p < 0.001$), with a combined contribution of 88.6% ($R^2 = 0.886$). These results indicate that in resource-limited, geographically isolated schools, a conducive school culture and effective principal managerial competence are critical determinants of teacher performance. The study contributes empirical evidence from an understudied remote elementary school context, extending organizational culture and educational leadership theories. Practically, it recommends targeted professional development for principals in managerial functions and intentional cultivation of collaborative school culture to enhance teacher performance in similar marginalized settings.

Keywords: Elementary School, Merdeka Curriculum, Principals' Managerial Competence, School Culture, Teacher Performance

A. Introduction

Education is a fundamental pillar of national civilization development, yet reality shows that Indonesia still faces a systemic learning crisis exacerbated by post-COVID-19 pandemic learning loss and interregional disparities in quality (Ssenyonga, 2021). In response, the government launched the “Merdeka Belajar” (Freedom to Learn) policy with the “Independent Curriculum” (Independence Curriculum) as the spearhead of learning transformation, which demands flexibility, creativity, and the

use of digital technology by teachers. However, field observations from December 8-19, 2025, in Karang Agung Ilir District, Banyuasin Regency, revealed a glaring gap between this national policy and the reality of the readiness of supporting instruments at the elementary education level. Although administratively, all schools have adopted the new curriculum, the substantive acceleration of learning quality remains hampered by fundamental structural and organizational factors (Kurniawan, 2024).

Karang Agung Ilir District's geographic location, directly adjacent to Sembilang National Park, presents more than just a map boundary but a real physical obstacle to improving teacher performance. Observations at eight public elementary schools revealed that educator mobility is compromised by damaged road infrastructure and water transportation access that is highly dependent on weather fluctuations. These conditions systematically limit teachers' mobility, access to supervision from education authorities, and access to intensive professional development, creating physical and professional isolation that directly impacts their ability to implement the curriculum. Field findings during eleven days of observation confirmed a sharp disparity in knowledge between educational units regarding the implementation of the Independent Curriculum. Only one school was able to demonstrate progress due to receiving special assistance, while the other seven schools still struggled with administrative uncertainty and limited digital literacy due to unstable internet signals.

Unequal distribution of knowledge fueled information asymmetry and gaps in teacher capacity within the same sub-district (Ciarla, 2023). Schools that did not receive in-depth training interventions relied solely on "independent training" with very limited resources, while teacher working groups often failed to function optimally due to distance constraints and the lack of competent facilitators. This objective situation leads to the crucial conclusion that amidst limited physical and digital access, the continuity of learning relies heavily on the school's internal capacity, leading to the principal's managerial skills and school culture emerging as the most dominant determining variables. Observations show that in schools with adaptive and visionary leadership, teachers tend to be more courageous in implementing learning innovations despite limited resources (Noviyanti, 2024; Sliwka et al., 2024), primarily due to the support of a collaborative and open work culture. Conversely, in schools with a static work culture, curriculum changes are often perceived as an additional burden, resulting in decreased teacher motivation and professional performance (Erichsen & Reynolds, 2020; Stacey et al., 2023).

In other words, teacher performance does not stand alone but is highly dependent on how the school's organizational environment is managed (Van Waeyenberg et al., 2022). Based on this empirical reality, this research urgently needs to be conducted to scientifically examine the extent to which managerial leadership and organizational cultural climate can drive elementary school teacher performance in Karang Agung Ilir District. This urgency is further strengthened by the finding that of the eight schools, only two are led by permanent principals, while the other six are still held by

acting principals, some of whom have only been inaugurated for about two months and are still in the adjustment phase. This unstable leadership situation has the potential to impact management effectiveness, decision-making, and the implementation of quality improvement programs and also confirms that without contextual policy adaptation, national education reform risks failing to improve the quality of learning in marginalized communities (Bahreini et al., 2021; Dimmock et al., 2021).

The novelty of this research lies in its quantitative examination of the simultaneous influence of school culture and principal managerial skills on elementary school teacher performance in a non-urban area with unique geographic, social, and institutional characteristics. Unlike previous research, which generally examined both variables separately and was mostly conducted at the secondary education level or in urban areas, this study integrates both as strategic determinants of elementary school teacher performance in rural areas (Mardiati et al., 2023). Using standardized instruments and inferential statistical tests, this study provides new, contextual empirical evidence while enriching the study of elementary school management in non-urban areas. This research makes theoretical, empirical, and practical contributions to the field of elementary education management. Theoretically, this study enriches the integration of school culture and managerial ability as determinants of teacher performance. Empirically, this study presents quantitative evidence regarding the partial and simultaneous influence of these two variables in the context of underdeveloped areas.

Practically, the results of this study can serve as a reference for principals, supervisors, and regional policymakers in formulating strategies to strengthen school culture and improve principal managerial competence to continuously boost teacher performance and the quality of elementary education. Therefore, the study, "The Influence of Principal Managerial Ability and School Culture on Elementary School Teacher Performance in Karang Agung Ilir District," is highly relevant, urgent, and strategic.

Research purpose and hypotheses in this paper:

H1: School culture positively influences teacher performance.

H2: Principal managerial competence positively influences teacher performance.

H3: School culture and principal managerial competence simultaneously influence teacher performance.

B. Methods

This research was conducted at eight public elementary schools in seven villages in Karang Agung Ilir District, Banyuasin Regency, South Sumatra. The locations were chosen because they represent remote areas with geographical challenges, limited transportation access, and unequal internet connectivity. This research was conducted in the 2025/2026 academic year. The timing of the research was based on the maturity

of curriculum implementation, compliance with the latest regulations on teacher performance assessments, and the need to obtain the latest data related to digital literacy and the use of the Merdeka Mengajar (PMM) Platform. The research was conducted through the stages of preparation, data collection, data analysis, and report preparation. The implementation was adjusted to the school academic calendar to avoid disrupting learning activities and to produce valid and accurate data. This research used a quantitative approach with an explanatory research design.

In this context, the variables analyzed included school culture, principal managerial skills, and teacher performance. The explanatory approach was chosen because the main objective of the research was not simply to describe managerial and cultural phenomena in elementary schools but to empirically test the extent to which these two independent variables influence teacher performance as the dependent variable. In terms of type and design, this research is a causal correlational study using a survey method. The research instrument, a structured questionnaire, was theoretically developed based on three main conceptual frameworks. First, organizational culture theory served as the basis for formulating school culture indicators, which views culture as a system of values, basic assumptions, and collective practices that shape the professional behavior of school personnel (Haas, 2024). Second, principal managerial theory served as the basis for constructing managerial capability variables, emphasizing the relationship between leadership competency, organizational climate, and teacher effectiveness (Papilaya & Nanda, 2024). Third, teacher performance theory was used to define teacher performance as a multidimensional construct encompassing competency, work processes, professional behavior, and learning outcomes (Hakim, 2023).

The population in this study was all public elementary school teachers working in the Karang Agung Ilir District, Banyuasin Regency. Based on data on the distribution of educational institutions in the area, eight public elementary schools served as the focus of the research. This population encompasses teachers with various employment statuses, ranging from civil servants and government employees with work agreements to honorary teachers. This was done to ensure the data obtained could comprehensively represent teacher performance in implementing the Independent Curriculum without bias based on employment status. The sampling technique used the Sloving formula, resulting in a sample size of 79. The researchers employed three complementary primary data collection techniques (data triangulation): questionnaires, observations, and interviews. Reliability testing in this study used the Cronbach's alpha method with the assistance of IBM SPSS Statistics. The basis for decision-making in the reliability test, with a significance level of 5%, is as follows:

1. If the calculated r_i value is greater than the table r_i value, the instrument is considered reliable.
2. If the calculated r_i value is less than the table r_i value, the instrument is considered unreliable.

Data analysis in this quantitative study was conducted systematically to process the numerical data obtained from 79 teacher respondents in Karang Agung Ilir District. In accordance with the research objective of proving the influence of causal relationships, the analysis steps are structured starting from descriptive statistical analysis, classical assumption testing, correlation analysis, determinant analysis, and regression analysis. Hypothesis testing uses the t-test, f-test, and coefficient of determination test.

C. Results and Discussion

The Influence of School Culture (X1) on Teacher Performance (Y)

The research results indicate that school culture has a very strong and significant relationship with the performance of elementary school teachers in Karang Agung Ilir District. This is evidenced by the Pearson correlation test, which obtained a correlation coefficient of 0.926 with a significance value of $0.000 < 0.05$. Furthermore, the results of a simple linear regression analysis showed a regression coefficient of 0.967 with a calculated t-value of 21.512 and a significance value of 0.000. The R-square value of 0.857 indicates that school culture contributes 85.7% to improving teacher performance. Therefore, the better the school culture, the higher the teacher's performance in carrying out their professional duties (Amtu et al., 2020; Muhsin et al., 2020). The findings of this study indicate that school culture plays a role as a psychological and social environment that influences teacher work behavior. A positive school culture is reflected in shared values and beliefs, work norms, school climate, organizational practices, and conducive social relationships among school members. Given the limited geographic constraints, limited transportation access, and limited professional support, school culture plays a crucial role in maintaining teacher stability and morale.

Empirically, research shows that teachers working in schools with a collaborative culture tend to be better able to adapt to the implementation of the Independent Curriculum. They are more open to discussions, sharing teaching materials, and coordinating learning. Conversely, an individualistic work culture makes it difficult for teachers to develop differentiated learning, diagnostic assessments, and the Pancasila Student Profile Strengthening Project. Therefore, school culture is not merely an organizational norm but a driving factor in the quality of learning. The results of this study align with Hakim's research, which states that teacher performance is influenced by a school organizational system that supports continuous teacher professional development (Hakim, 2023). A healthy school culture creates a comfortable work environment, increases teachers' intrinsic motivation, and builds professional commitment to educational tasks (Bukhari et al., 2023; Taqwim, 2024). Furthermore, the theory of educational organizational culture explains that schools with a collaborative culture, open communication, and mutual trust will more easily foster teacher work effectiveness (Al-Zu'bi et al., 2024).

The findings of this study are also relevant to the real-world conditions of elementary schools in Karang Agung Ilir District. Limited road access, minimal direct supervision, and the fact that some schools are still led by acting principals cause teachers to rely more heavily on the strength of the school's internal culture. In such situations, a positive school culture can act as a psychological buffer for teachers, enabling them to maintain the quality of learning despite various limitations. Thus, the results of this study demonstrate that school culture plays a strategic role in improving teacher performance. Schools that are able to build a collaborative, communicative, and adaptive work culture will be more successful in continuously improving teacher professionalism and the quality of learning.

The Influence of the Principal's Managerial Ability (X2) on Teacher Performance (Y)

The results of the study indicate that the principal's managerial ability has a very strong and significant relationship with the performance of elementary school teachers in Karang Agung Ilir District. The Pearson correlation test yielded a correlation value of 0.924 with a significance level of $0.000 < 0.05$. Furthermore, the results of a simple linear regression analysis showed a regression coefficient of 0.955 with a calculated t-value of 21.239 and a significance level of 0.000. The R-square value of 0.854 indicates that the principal's managerial ability contributes 85.4% to teacher performance. These results indicate that the better the principal's managerial ability, the higher the teacher's performance in carrying out teaching tasks. The principal's managerial ability in this study encompasses the functions of planning, organizing, directing, supervising, decision-making, and evaluating and developing the school.

The results showed that all indicators were in the good category. This indicates that the principal has strived to carry out his managerial functions effectively in supporting the implementation of education. In the context of elementary schools in Karang Agung Ilir District, the principal's managerial skills are crucial because schools still face various structural and geographical limitations. Principals are required not only to perform administrative functions but also to act as instructional leaders, able to motivate teachers to adapt to curriculum changes and the challenges of modern education (He et al., 2024; Pak et al., 2020; Ralebese et al., 2025). The results of this study support the POAC (Planning, Organizing, Actuating, Controlling) theory, which states that organizational success is greatly influenced by the effectiveness of the management functions carried out by the organization's leaders (Terry, 2019). Principals who are able to plan school programs well, organize teacher tasks effectively, provide work motivation, conduct academic supervision, and continuously evaluate programs will be better able to improve teacher performance quality.

Furthermore, this study also strengthens the principal's managerial leadership theory, which positions principals as strategic leaders in creating educational quality.

Principals with strong communication, coordination, and supervision skills will be able to create a conducive work climate so that teachers feel they receive professional support in implementing learning (Ariyani et al., 2021; Ayumi & Nasution, 2025). Empirically, observations indicate that some principals in Karang Agung Ilir District are still acting principals, and some have only been in office for a relatively short time. This situation results in suboptimal implementation of academic supervision and teacher development. However, principals who are able to build positive communication and work motivation have been shown to increase teacher enthusiasm in carrying out their teaching duties despite limited facilities and regional access. Thus, the principal's managerial skills have been shown to significantly impact teacher performance. Principals who are able to effectively carry out management functions will be more successful in creating a professional, disciplined work environment that supports improvements in educational quality.

The Influence of School Culture (X1) and Principal's Managerial Ability (X2) on Teacher Performance (Y) Simultaneously

The results of the study indicate that school culture and the principal's managerial skills simultaneously have a very strong and significant influence on the performance of elementary school teachers in Karang Agung Ilir District. This is evidenced by the F-test results, which obtained a calculated F-value of 294.892 with a significance value of $0.000 < 0.05$. Furthermore, the coefficient of determination (R^2) of 0.886 indicates that school culture and the principal's managerial skills together contribute 88.6% to teacher performance, while the remaining 11.4% is influenced by other factors outside the study.

The resulting multiple linear regression equation is:

$$Y = -0.402 + 0.513 X1 + 0.482 X2$$

This equation indicates that school culture and the principal's managerial skills have a positive influence on teacher performance. This means that improving the quality of school culture and the principal's managerial skills will be followed by improved teacher performance. The results of this study indicate that improving teacher performance cannot be achieved through a single factor alone but rather requires synergy between the school's organizational environment and the principal's leadership qualities. School culture serves to foster a conducive work climate, while the principal's managerial skills play a role in directing, controlling, and motivating all school activities. When these two factors work in harmony, teachers will more easily develop their professionalism and the quality of their learning.

In the context of Karang Agung Ilir District, the synergy of these two variables is crucial because schools face geographical challenges, limited access to education, and the dynamics of implementing the Independent Curriculum. Principals with strong managerial skills will be able to build an adaptive and collaborative work culture, enabling teachers to continue optimally implementing learning despite limited

resources. The results of this study also reinforce the theory of modern educational organizations, which states that educational quality is strongly influenced by the interaction between school leadership and organizational culture. An effective principal will build a positive school culture through open communication, professional development, appreciation for teacher performance, and strengthening collaboration between teachers. A positive school culture will further enhance teacher motivation, discipline, and professional responsibility in implementing learning.

Practically, the results of this study imply that efforts to improve the quality of basic education in Karang Agung Ilir District need to focus on simultaneously strengthening school culture and enhancing principals' managerial competencies. Developing a collaborative work culture, improving academic supervision, strengthening organizational communication, and mentoring principals are strategic steps to improve the quality of teacher performance. Thus, this study demonstrates that school culture and principal managerial skills are important and strategic factors in improving elementary school teacher performance in Karang Agung Ilir District. The more conducive the school culture and the more effective the principal's managerial skills, the higher the quality of teacher performance in implementing the learning process.

D. Conclusion

This study concludes that school culture and principal managerial competence significantly and positively influence elementary school teacher performance in Karang Agung Ilir District, both partially and simultaneously. The very strong effect sizes ($R^2 = 0.857$ for school culture; $R^2 = 0.854$ for principal competence; $R^2 = 0.886$ combined) indicate that in geographically isolated, resource-limited settings, internal school factors become the dominant determinants of teacher performance. When external support (supervision, professional development, infrastructure) is limited, a collaborative school culture and effective principal leadership function as compensatory mechanisms that sustain teacher motivation and professional behavior. Theoretically, this study extends organizational culture and educational leadership theories by demonstrating their amplified effect in remote, low-resource contexts—a condition underrepresented in mainstream literature. The findings challenge the assumption that teacher performance is primarily driven by individual competence; instead, organizational and leadership factors can be equally or more influential. Practically, this study recommends: (1) targeted managerial training for principals in remote areas focusing on planning, supervision, and teacher motivation; (2) intentional cultivation of collaborative school culture through regular teacher working groups and shared goal-setting; (3) policy attention to stabilizing principal assignments (reducing acting principals) in remote schools. Limitations include the exclusive use of self-reported data, which may inflate relationships due to common method bias, and the cross-sectional design, which precludes causal inference. Future research should employ mixed methods, including classroom observations and

supervisor ratings, and longitudinal designs to establish causality. Comparative studies across multiple remote districts would further validate the generalizability of these findings.

E. Acknowledgement

We express our acknowledgment to our respondents, colleagues who helped us in this paper.

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