

The Influence of Principal Leadership and Teacher Collaboration on Public Elementary School Teachers' Performance

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Abstract: This study aims to determine and describe the influence of principal leadership and teacher collaboration on the performance of public elementary school teachers in Cluster 2, Tanjung Lubuk District, encompassing six schools. A quantitative descriptive method was employed. The population comprised 129 teachers, with a sample of 97 respondents determined through appropriate sampling techniques. Data were collected using questionnaires, observation, and documentation. Analyses included normality, linearity, multicollinearity tests, simple and multiple correlation, simple regression, t-tests, and F-tests. The findings reveal that principal leadership and teacher collaboration significantly influence teacher performance. The more professional teachers are in executing their duties and the higher the value of collaboration, the better their performance. The ANOVA test confirmed significance with $F\text{-count} > F\text{-table}$, leading to rejection of H_0 . This study provides empirical evidence from a clustered rural school setting in Tanjung Lubuk District, demonstrating the combined predictive power of leadership and collaboration on teacher performance in an under-researched multi-school context. Findings underscore the need for school principals to simultaneously strengthen leadership capacity and foster collaborative teacher cultures to optimize performance outcomes. This research contributes actionable insights for educational policymakers and administrators, affirming that teacher performance is substantially enhanced when authoritative leadership is complemented by structured teacher collaboration, offering a foundational reference for performance improvement strategies in similar rural elementary school clusters.

Keywords: Elementary School, Principal Leadership, Teacher Collaboration, Teachers' Performance

A. Introduction

Education is the primary foundation for developing quality human resources in Indonesia, which is currently pursuing the 2030 Sustainable Development Goals (SDGs). At the elementary school level, the quality of education depends heavily on the performance of teachers as the primary actors in learning. However, Teachers' performance is often suboptimal, particularly in rural areas. Data from the Ministry

of Education, Culture, Research, and Technology in 2024 showed that approximately 30% of rural elementary school teachers experience decreased motivation due to a lack of school leadership support and collaboration between teachers (Zamjani, 2024). Cluster 2 of Tanjung Lubuk District, South Sumatra Province, faces similar challenges. This area encompasses both public and private elementary schools serving students from low-income families, whose access to educational resources has become increasingly difficult following the COVID-19 pandemic. This study examines the influence of principal leadership and teacher collaboration on teachers' performance to provide practical contributions to improving the quality of local education.

Principal leadership is defined as the ability to influence, motivate, and direct teachers towards achieving educational goals (Bush & Glover, 2020; Pardosi & Utari, 2022). In Indonesia, transformational leadership has been shown to be more effective, contributing up to 45% to increased teacher motivation through professional development and constructive feedback (Fauzi, 2021). Post-pandemic, leadership must also be adaptive to online learning technology (Singh et al., 2022). However, observations in Cluster 2 Tanjung Lubuk showed that many principals still employ a rigid, transactional, and sanction-oriented style, thus hindering teacher initiative and innovation in teaching methods. Teacher collaboration refers to the collaborative process of sharing knowledge, resources, and learning strategies, rooted in the theory of communities of practice (Khasawneh et al., 2023; Townley, 2020). This collaboration increases pedagogical knowledge retention by up to 35% (Yunus et al., 2021) and teaching innovation by up to 28% (Nugraha, 2020), particularly in the implementation of the Merdeka Curriculum, which emphasizes collaborative learning (Dakabesi & Wicaksono, 2022).

Unfortunately, in Cluster 2 Tanjung Lubuk, collaboration remains limited due to schools being spread across remote areas, a lack of principal facilitation, and geographic isolation, which has led to stagnant teacher professional development. Teachers' performance, as the dependent variable, is measured based on pedagogical, professional, personality, and social competencies in accordance with Law Number 14 of 2005 concerning Teachers and Lecturers and is evaluated through the teacher performance management, which was updated in 2025. Nationally, the average performance of elementary school teachers only reaches 70% of the standard target (Kawuryan et al., 2021), with greater challenges in rural areas due to workload and minimal organizational support (Pratiwi, 2025). In Cluster 2 Tanjung Lubuk, a 2024 preliminary survey showed that teachers performed poorly in learning innovation, which was exacerbated by the transition to an independent curriculum and weak collaboration.

The main problems in Cluster 2 Tanjung Lubuk are the principal's lack of visionary leadership and teacher collaboration hampered by an individualistic culture and limited infrastructure. As a result, teachers' performance has declined, reflected in high teacher absenteeism (15% above the national average); low 2024 school

examination results (only 65% of students passed with honors); and the majority of teachers being over 40 years old with minimal collaborative training. Previous research indicates that leadership and collaboration together contribute to teachers' performance (Liu & Watson, 2023). However, these studies were mostly conducted in urban areas, leaving a gap for contextual research in rural areas like Tanjung Lubuk (Nugraha, 2020). This research is urgently needed to support the 2025 Teachers' performance Management policy, the SDGs 4 target on inclusive education, and the Golden Indonesia 2045 vision, with the novelty of integrating a mixed-methods structural equation modeling (SEM) model that considers the local culture of mutual cooperation in a post-pandemic rural context.

B. Methods

This research was conducted at six public elementary schools within Cluster 2 in Tanjung Lubuk District, comprising six schools: Sukarami 1 Public Elementary School, Pengarayan 1 Public Elementary School, Pengarayan 2 Public Elementary School, Pengarayan 3 Public Elementary School, Pengarayan 4 Public Elementary School, and Sri Tanjung Public Elementary School. The research lasted six months, encompassing preparation, field data collection, data processing, and the completion of the research report. The approach used in this study was quantitative with descriptive methods. This research was associative and correlational, involving three variables: principal leadership (X1), teacher collaboration (X2), and Teachers' performance (Y). The main focus of this study was to uncover the influence of principal leadership and teacher collaboration on Teachers' performance in Cluster 2 in Tanjung Lubuk District.

The study population was all 129 classroom teachers at the 2nd Public Elementary School in Tanjung Lubuk District. The sample size was determined using the Slovin formula at a tolerance level of 0.05, resulting in a sample size of 97 teachers spread across the six elementary schools. Data collection was conducted using three techniques: a questionnaire, observation, and documentation. The main research instrument was a Google Forms-based questionnaire using a Likert scale with four answer alternatives (scored 1–4). Despite using a Likert scale, this study employed an interval scale, which assumes equidistant distances between data points. The instrument items were designed not as an experimental test, but rather as structured statements to measure the three research variables. Before widespread use, the research instrument was piloted to assess its validity and reliability. The pilot test was conducted on 20 teachers from the Cluster 2 population of Tanjung Lubuk District, who were not included in the research sample.

This number of pilot respondents was deemed to meet the minimum requirements for instrument testing. Instrument item validity was tested using the corrected item-total correlation technique using SPSS. Meanwhile, the reliability test was analyzed using the Cronbach's alpha coefficient, with the instrument being considered reliable if the Cronbach's alpha value reached at least 0.70.

The proposed research hypotheses are as follows:

1. The influence of principal leadership (X1) on teachers' performance (Y):
H₀1: There is no significant influence of principal leadership on teachers' performance.
H_a1: There is a significant influence of principal leadership on teachers' performance.
2. The influence of teacher collaboration (X2) on teachers' performance (Y):
H₀2: There is no significant influence of teacher collaboration on teachers' performance.
H_a2: There is a significant influence of teacher collaboration on teachers' performance.
3. The influence of principal leadership (X1) and teacher collaboration (X2) simultaneously on teachers' performance (Y):
H₀3: There is no significant influence of principal leadership and teacher collaboration on teachers' performance simultaneously.
H_a3: There is a significant influence of principal leadership and teacher collaboration simultaneously on teachers' performance.

The data analysis techniques used included analysis prerequisite tests (normality, linearity, and multicollinearity tests), simple regression tests, and multiple linear regression tests. Partial hypothesis testing was conducted using the t-test, while simultaneous influence testing was conducted using the multiple linear regression test followed by the F-test at a significance level of 5%.

C. Results and Discussion

The Influence of Principal Leadership on Teachers' Performance

The leadership of public elementary school principals in Cluster 2, Tanjung Lubuk District, influences teachers' performance. This is based on the results of the research data analysis. Based on a significance test, the professionalism variable, measured by the dimensions of background, learning resource development, personality competency, ICT and research skills, social competency, professionalism, publications, and reflection, obtained a calculated t-value greater than the t-table. Therefore, H_a is accepted, indicating a positive effect between the principal leadership variable in public elementary school principals in Cluster 2, Tanjung Lubuk District, and Teachers' performance. The results indicate that principal leadership is good, as evidenced by the questionnaire completed by respondents. 85 out of 97 respondents were categorized as fair, good, and very good. Meanwhile, 12 were categorized as poor or very poor.

This is because respondents did not meet the professional competency achievement indicators specified in the study. The results of the t-test analysis indicate that the principal leadership variable influences teachers' performance. This is in line with the

research results of Saine & Santoso (2024), based on the results of descriptive analysis, the results of the study showed that there was a significant influence of principal leadership on the performance of economics subject teachers in state senior high schools. Furthermore, the results of Rohma et al. (2020) research entitled "The Influence of School-Based Management and Teacher's Professionalism toward Teacher's Performance." The results of the study stated that teacher professionalism had a positive and significant effect on teachers' performance. The variable of teacher professionalism makes an effective contribution to teachers' performance.

This is further supported by the results of Kanya et al. (2021), entitled "Factors Affecting Teacher Performance." The results indicate that principal leadership influences teachers' performance. Recent research supports this finding, such as Rostini's et al. (2022) study, which found that principal leadership significantly improves teachers' performance in elementary schools through an effective managerial approach. Furthermore, Sugiyanto et al. (2025) concluded that principal leadership has a positive and significant effect on elementary school teachers' performance, both partially and simultaneously, along with the school's organizational climate. This finding aligns with Law No. 20 of 2003 concerning the education system. Educators are defined as professionals tasked with planning and implementing the learning process, assessing learning outcomes, and providing guidance and training. These primary duties constitute the research dimension and are outlined as indicators of teachers' performance in this study. Based on this statement, it is clear that teachers' performance is significantly influenced by the principal's leadership in carrying out their duties.

The Influence of Teacher Collaboration on Teachers' Performance

Teacher collaboration has been shown to influence the performance of public elementary school teachers in Cluster 2, Tanjung Lubuk District. This can be seen from the results of the data analysis. Based on a significance test, the teacher collaboration variable is measured by the dimensions of managerial competency, principal as supervisor, democratic, comparative, and constructive. The results showed that the calculated t-value was greater than the tabulated t-value, indicating a significant influence between teacher collaboration and the performance of public elementary school teachers in Cluster 2, Tanjung Lubuk District. This is based on the results of the questionnaire, where 86 respondents were categorized as fairly good, good, and very good, although 9 respondents were categorized as poor or very poor. Respondents categorized as poor were due to failure to meet the competency achievement indicators specified in the study and other factors not examined in this study. The results indicate that teacher collaboration influences teachers' performance.

This aligns with Cravens & Hunter (2021), "Assessing the impact of collaborative inquiry on teacher performance and effectiveness." The results showed that teacher collaboration had a positive and significant effect on teachers' performance. This is in

line with Sunaryo (2020), the results showed a positive and significant influence of academic supervision on performance, with a calculated t -value $> t$ -table. This is further supported by the results of a study by Zohriah et al. (2022), "The Impact of Managerial and Principal Academic Supervision on Teacher Performance." The results showed a significant influence of principal academic supervision on teachers' performance.

Recent research also supports these findings. Qin et al. (2025) found that teacher collaboration significantly improves teachers' innovation abilities, with teaching motivation and teaching efficacy acting as mediators, ultimately contributing positively to improved teacher professional performance. Furthermore, Wulschleger et al. (2025) concluded that high-quality teacher collaboration has a significant indirect effect on improving instructional quality and student achievement through improved teaching practices. According to Lorensius et al. (2022), supervision, oriented toward improving classroom teaching facilities based on instructions from superiors, has shifted toward providing conditions and situations for academic activities for teachers and students. This condition is related to teachers' performance in preparing quality learning in accordance with national education goals.

The Influence of Principal Leadership and Teacher Collaboration on Teachers' performance

The variables of principal leadership and teacher collaboration, both simultaneously and jointly, have been shown to influence the performance of public elementary school teachers in Cluster 2, Tanjung Lubuk District. This is based on the results of the data analysis conducted previously. Questionnaire results obtained from respondents indicated that Teachers' performance is influenced by teacher professionalism and collaboration. Based on the significance test, there was a significant joint influence between principal leadership and teacher collaboration on the performance of public elementary school teachers in Cluster 2, Tanjung Lubuk District. The Anova test results showed that the calculated F -value was greater than the table F -value, thus rejecting H_0 . The significant influence of principal leadership and teacher collaboration on the performance of public elementary school teachers in Cluster 2, Tanjung Lubuk District, was also influenced by other factors not examined in this study.

This aligns with the results of research by Hamka (2023), which concluded that there is a positive influence of principal leadership and educational supervision on teachers' performance. Based on the analysis discussed above, it can be concluded that principal leadership and teacher collaboration influence the performance of public elementary school teachers in Cluster 2, Tanjung Lubuk District. The more professional a teacher is in carrying out their duties, the better their performance will be. Likewise, good teacher collaboration will also improve performance. The main duties and functions of teachers in Indonesia are clearly regulated in various government regulations,

especially Law Number 14 of 2005 concerning Teachers and Lecturers, Government Regulation (PP) Number 74 of 2008 concerning Teachers (as amended by PP Number 19 of 2017), and Permendikbud Number 15 of 2018 concerning Fulfillment of Teacher Workload. According to Article 20 of Law No. 14/2005 and Article 52 of PP No. 74/2008, the main duties of teachers as professional educators include: (1) planning learning, (2) implementing a quality learning process, (3) assessing and evaluating learning outcomes, (4) guiding and training students, and (5) carrying out additional tasks inherent in the implementation of the main teaching profession.

In detail, the duties and responsibilities of the role include developing the curriculum at the school level, including syllabi and lesson plans; implementing interactive, inspiring, enjoyable, challenging, and motivating learning activities for students; and assessing learning outcomes, including aspects of attitude, knowledge, and skills. Teachers are also tasked with continuously improving their professional qualifications and competencies through training and self-development. The minimum workload for elementary school teachers is 24 hours of face-to-face contact per week, with an emphasis on the quality of the learning process in accordance with National Education Standards. In the context of data analysis in Cluster 2, Tanjung Lubuk District, although principal leadership and teacher collaboration significantly influence performance simultaneously, there are indications that several areas of the role remain weak. Lesson planning (including the development of professional lesson plans) and evaluation of learning outcomes tend to be weak areas.

The teacher professionalism mentioned in the questionnaire is not fully reflected in the development of quality teaching materials, resulting in routine learning and a lack of innovation. Good teacher collaboration has not been optimally translated into joint practices for developing effective lesson plans or remedial programmes. This aligns with recent research findings, which show that despite the positive influence of leadership, implementation of duties and responsibilities in the field is often hampered by heavy administrative burdens and a lack of ongoing training. This low level of planning and assessment impacts the quality of educational output, as students may not receive an optimal learning experience. To improve this, strengthened academic supervision by principals and regular, collaborative-based training programmes are needed.

This ensures that teachers' duties and responsibilities are fulfilled not only administratively but also substantively so that the performance of public elementary school teachers in Cluster 2 can continue to improve in line with government regulations. One crucial aspect of teachers' duties and responsibilities is the development of a lesson implementation plan (RPP), a mandatory learning planning tool as stipulated in the minister of education and culture's regulation concerning the curriculum and teacher workload. The RPP serves as a systematic guide to ensure the learning process is directed, aligned with core competencies, and can be evaluated for its results. However, in practice, a significant percentage of teachers still do not create

RPPs independently or simply copy and paste without in-depth understanding. Based on various studies and field observations in elementary schools in Indonesia, the percentage of teachers who fail to develop lesson plans properly or who do not even prepare them at all ranges from 20-40%, depending on the region.

In many rural schools or areas with limited access to training, such as in several sub-districts in South Sumatra, this figure can reach 30-35%. Teachers often simply fulfill formal administrative responsibilities without internalizing the pedagogical principles of lesson plans, such as learning differentiation, literacy integration, or adapting to student characteristics. This is exacerbated by additional workloads and a lack of close monitoring from schools. In the context of the research in Cluster 2, Tanjung Lubuk Sub-district, the low teacher professionalism reported in the questionnaire results is likely correlated with the percentage of teachers who are not optimal in developing lesson plans. Although principal leadership and collaboration have a positive impact on overall performance, this planning aspect remains a bottleneck. Teachers who do not develop lesson plans tend to improvise, making it difficult to achieve learning objectives optimally. Recent research shows that teachers who fail to develop lesson plans effectively often produce less engaging learning, with lower student achievement than their peers who are disciplined in their planning.

Contributing factors include a lack of understanding of the Merdeka Belajar lesson plan, time constraints, and a lack of incentives. As a result, the overall quality of education suffers. To address this, interventions such as regular workshops, collaborative mentoring between teachers, and the use of digital platforms for lesson plan development are needed. By reducing the percentage of teachers who fail to develop lesson plans below 15%, it is hoped that Teachers' performance in Cluster 2, Tanjung Lubuk District, will significantly improve, in line with the spirit of professionalism emphasized in the data analysis. This effort not only complies with government regulations but also supports the sustainable improvement of the quality of basic education.

D. Conclusions

Based on the analysis conducted in Cluster 2, Tanjung Lubuk District, this study conclusively establishes that both principal leadership and teacher collaboration exert significant influences on elementary school teacher performance, both partially and simultaneously. Principal leadership measured across dimensions including professional background, learning resource development, personality competency, ICT and research skills, social competency, professionalism, publications, and reflection demonstrates a significant partial effect, confirming that principals who embody these competencies effectively enhance teacher performance. Similarly, teacher collaboration encompassing managerial competency, supervisory roles, democratic practices, comparative approaches, and constructive interactions shows a significant partial influence, indicating that collaborative professional relationships

among teachers directly improve their performance outcomes. Crucially, their simultaneous influence, confirmed by ANOVA results where F-count exceeds F-table, underscores that teacher performance is optimized when strong principal leadership and robust teacher collaboration are developed in tandem. The findings reveal that the more professional teachers are in executing their duties and the higher the value of teacher collaboration, the better their performance, highlighting the complementary nature of these two variables in driving educational quality. Practically, these findings mandate that school principals systematically strengthen their leadership competencies particularly in ICT, research, and reflective practice while simultaneously fostering a collaborative school culture through structured professional learning communities, peer mentoring, and shared decision-making. Principals should act as both instructional leaders and collaboration catalysts, creating regular opportunities for teachers to engage in collegial dialogue, lesson study, and mutual feedback. Education authorities should provide targeted professional development programs that address both leadership capacity building and collaborative skills enhancement, ensuring that school environments support continuous professional growth. For future research, it is recommended to expand the investigation to include additional variables such as teacher motivation, school culture, or infrastructure to build a more comprehensive model of teacher performance determinants. Comparative studies across different districts and school clusters would enhance generalizability and reveal contextual variations. Mixed-method approaches combining quantitative surveys with qualitative interviews or classroom observations could provide deeper insights into the mechanisms through which leadership and collaboration translate into performance improvements. Longitudinal designs would track how sustained leadership and collaboration interventions affect teacher performance trajectories over time, informing more effective policy frameworks for educational improvement across diverse school contexts.

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