Golden Age
Jurnal Ilmiah Tumbuh Kembang
Anak Usia Dini

OPEN ACCESS

The Impact of Principal Leadership on Teacher Quality and Performance: A Mixed-Methods Study in Deli Serdang Regency

Amanah Surbaskti [ID] [1]**, Siti Aisyah**[2]
[1,2] Medan Area University, Indonesia.

Check for updates

Abstract
This study examines the role of principal leadership in improving teacher quality and performance within the Siti Humairah Study Group in Deli Serdang Regency. Employing a mixed-methods approach, the research integrates quantitative data from surveys with qualitative insights gathered through interviews, observations, and document analysis. The findings reveal that principal leadership accounts for 44.2% of the variation in teacher quality and 60.4% of the variation in teacher performance, highlighting its significant impact. Effective leadership practices, such as strategic supervision, professional development facilitation, and participatory decision-making, were found to enhance teacher motivation and collaboration. However, challenges such as limited resources and disciplinary issues underscore the need for comprehensive interventions. The study emphasizes the importance of adaptive leadership styles tailored to contextual challenges. Successful principals created supportive environments, provided constructive feedback, and facilitated targeted training programs. Additionally, transformational and participatory leadership approaches were shown to foster teacher engagement and improve teaching quality. Nonetheless, external factors, including organizational culture and individual teacher attitudes, were found to moderate the effectiveness of leadership interventions. This research contributes valuable insights to the discourse on educational leadership and its influence on school effectiveness. It underscores the critical role of principal leadership in fostering teacher quality and performance while addressing persistent challenges. Practical implications include the need for strengthened leadership training programs and increased resource support to overcome operational and cultural barriers within schools. These recommendations aim to inform policymakers and educational leaders in driving sustainable improvements in teacher performance and student outcomes.

Introduction

Education serves as a cornerstone for societal development, with its success measured by the effectiveness of schools in producing competent and professional graduates, as evidenced by metrics such as student achievement scores, graduation rates, and the employability of graduates in their respective fields. Principals, as leaders of educational institutions, play a pivotal role in shaping teacher quality and performance, which in turn, determine the effectiveness of education systems (Arjunaita et al., 2020; Sulfemi & Arsyad, 2019). Quality education not only facilitates personal growth but also equips individuals with the skills necessary for global competitiveness, especially in the context of rapidly evolving technological and societal demands (Dutta & Sahney, 2022; Hadi et al., 2024). The critical role of principals in achieving these educational objectives highlights the need to examine their leadership strategies, particularly in improving teacher performance and school outcomes (Liswati et al., 2023; Rosalina & Wati, 2020). Without effective leadership, even the most talented teachers may struggle to maximize their professional potential and impact on students' learning (Ajepri et al., 2022).

Previous research underscores the significance of instructional leadership in fostering effective teaching practices and professional development among teachers (Akgöz et al., 2024; Hadi et al., 2024). Instructional leadership is often operationalized through activities such as classroom observations, providing constructive feedback, and facilitating targeted professional development programs for teachers. Leadership styles such as transformational and instructional leadership are positively associated with enhanced teacher autonomy, collaboration, and commitment to improving educational outcomes (Chang et al., 2021; Thien & Adams, 2024). For example, a study found that schools led by transformational leaders experienced a 15% increase in collaborative teaching practices, which directly contributed to improved student performance in standardized assessments (Chang et al., 2021). found that schools led by transformational leaders experienced a 15% increase in collaborative teaching practices, which directly contributed to improved student performance in standardized assessments. Visionary principals are capable of fostering innovation in teaching by employing strategic supervision and motivation (Hyseni Duraku & Hoxha, 2021; Liswati et al., 2023). Principals' ability to adapt their leadership style to the needs of their teachers and the specific challenges of their schools is a critical factor in promoting teacher satisfaction and performance (Özgenel et al., 2022; Torres Clark & Chrispeels, 2022). These findings highlight the multidimensional nature of principal leadership and its impact on teacher effectiveness.

Effective school leadership is closely linked to the principal's ability to create supportive environments that encourage teacher professional growth and organizational commitment (Dağlı & Kalkan, 2021; Werang et al., 2023). Leadership practices that emphasize instructional guidance, professional development opportunities, and recognition of teacher efforts are associated with increased teacher efficacy and job satisfaction (Meng & Chang, 2024; Zeinabadi, 2022). Studies have also highlighted the importance of inclusive and distributive leadership in fostering a culture of trust, collaboration, and shared responsibility among teachers (Can & Güneş, 2023; Pan & Chen, 2024). Principals who adopt agile and ethical leadership approaches have been shown to mitigate organizational cynicism while enhancing teacher well-being and workplace motivation (Çevik et al., 2023; Okçu et al., 2023). These insights underscore the importance of leadership practices that prioritize teacher empowerment and professional satisfaction.

In addition to improving teacher quality, principal leadership also directly impacts teacher motivation and engagement. Transformational and authentic leadership styles have been found to enhance teachers' psychological well-being and sense of autonomy, which are critical factors in sustaining long-term professional performance (ERBAŞ KELEBEK, 2023; Hsieh et al., 2022). Principals who provide intellectual stimulation, individualized support, and opportunities for career advancement can significantly increase teacher motivation and job performance (Faridah et al., 2022; Töre & Uzun, 2024). Furthermore, leadership approaches that integrate collaboration and shared decision-making have been shown to increase teachers' intrinsic motivation and commitment to their roles (Khanyi & Naidoo, 2020; Khaola & Oni, 2020). These studies emphasize the role of leadership in fostering a motivated and engaged teaching workforce.

Despite the wealth of knowledge on leadership practices, challenges persist in ensuring the consistent application of effective leadership strategies across schools. Key challenges include limited access to resources, especially in rural and under-resourced areas, inconsistent training opportunities for principals, and misaligned perceptions between principals and teachers regarding leadership expectations. Disparities exist in principals' ability to address teachers' professional needs, particularly in under-resourced or rural areas (Lingam et al., 2021; Mohamed, 2023). In such contexts, principals often face barriers such as limited resources, insufficient training, and a lack of professional development opportunities, which hinder their capacity to support teachers effectively (Mgaiwa & Hamis, 2022; Shen et al., 2021). Additionally, differences in perceptions between principals and teachers regarding leadership practices and expectations can create misalignments that affect school performance (Carrasco & Montoya,

2024; Hyseni Duraku & Hoxha, 2021). These challenges highlight the need for targeted interventions to address the gaps in leadership effectiveness and their impact on teacher performance.

While prior research provides valuable insights into the relationship between principal leadership and teacher performance, several gaps remain unaddressed. For instance, there is a lack of studies examining how leadership styles can be adapted to diverse cultural contexts and resource-constrained environments. Additionally, limited attention has been given to the role of leadership in addressing the specific needs of marginalized teacher groups, such as those in rural or underfunded schools. Most studies have focused on individual leadership styles without adequately exploring the interplay between different leadership approaches and their combined effects on teacher quality and motivation (Badawi et al., 2024; Karacabey et al., 2022). Moreover, there is limited empirical evidence on the effectiveness of leadership practices in specific cultural and educational contexts, such as rural or developing regions, where resource constraints may pose additional challenges (Sahlin, 2023; Ucar & Dalgic, 2021). The impact of principals' leadership on specific teacher groups, such as study group teachers, has also received insufficient attention (Obeidat et al., 2024; Spyropoulou & Koutroukis, 2024). Addressing these gaps is critical to developing a comprehensive understanding of the factors that influence teacher performance and the role of principal leadership.

This study aims to investigate the role of principal leadership in improving the quality and performance of study group teachers in Deli Serdang Regency, with a specific focus on identifying effective leadership strategies that enhance teacher professionalism and educational outcomes. By examining the interplay between various leadership styles and their contextual application, this research seeks to contribute to the growing body of knowledge on educational leadership and its impact on teacher development. The findings are expected to inform policymakers and educational leaders on best practices for fostering teacher quality and performance, ultimately contributing to the broader goal of improving school effectiveness and student outcomes.

Methods

This study uses a mixed-methods approach, combining descriptive quantitative and qualitative methodologies to comprehensively analyze the role of principal leadership in improving teacher quality and performance. The population in this study consisted of the principal and teachers in the Siti Humairah Study Group in Deli Serdang Regency. The sample was determined purposively, involving 1 principal and 15 teachers, making a total of 16 respondents. Quantitative data collection was conducted using a closed questionnaire instrument consisting of multiple sections and utilizing a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree) to measure perceptions of the principal's leadership style and its impact on teacher quality and performance.

Qualitative data were gathered through structured interviews with the principal and selected teachers, as well as observations and document analysis. Interviews were designed to explore deeper insights into leadership practices, challenges, and their impact on teacher performance. Observations were conducted over eight days, focusing on teacher discipline, interactions between the principal and teachers, and teaching practices. Relevant documents, such as training certificates, attendance records, and planning documents, were reviewed to support the qualitative analysis.

Quantitative data analysis utilized multiple regression to evaluate the influence of the principal's leadership role on teacher quality and performance. The analysis included preparation of data to ensure all assumptions for regression analysis were met, such as normality and multicollinearity tests. The independent variable was the principal's leadership role, while the dependent variables were teacher quality and teacher performance. The coefficient of determination (R^2) was calculated to evaluate the proportion of variance in the dependent variables explained by the independent variable, with findings showing 44.2% for

teacher quality and 60.4% for teacher performance. Significance testing demonstrated a statistically significant influence (p < 0.05).

The qualitative data were analyzed thematically to identify patterns and categories related to the principal's leadership role, teacher behavior, and institutional strategies. By integrating quantitative findings with qualitative insights, this study provides a holistic understanding of the principal's leadership impact. The data collection period lasted for two weeks, encompassing questionnaire distribution, interviews, observations, and documentation review.

Result

The role of principal leadership is crucial in improving the quality and performance of teachers in the Siti Khumairah Study Group. This conclusion is drawn from interviews conducted about the principal's role in school management. The findings emphasize the importance of the principal's leadership in enhancing teacher welfare, which directly impacts their quality and performance. The following are the results of multiple regression analysis regarding the role of principal leadership in improving the quality and performance of teachers in the Siti Humairah study group.

Table 1. Regression Analysis Results: Principal Leadership and Teacher Quality in Siti Khumairah Study Group

	Not standardized Coefficient		standardized Coefficient	T	Signature.
Model	B	Standard. Error	English		
1 (Constant)	57.215	9.725		5,883	.000
Role Head School	.414	.110	.665	3.777	**.001**
A. Depends Variables: Quality Teacher					

The results of the analysis in the table above show that the unstandardized coefficient value for the role of the principal is 0.414 with a significant value of 0.001, indicating a significant influence on teacher quality. Then the magnitude of the influence of the principal's leadership role in improving teacher quality is obtained which can be seen in the table below.

Table 2. of Results of the Determination Coefficient of the Principal's Role in Improving Teacher Performance

Model	R	R Rectangle	Customized R Rectangle	Standard. Error from That Estimating
1	.665 [a]	**.442**	.411	2.28038

In the table, it can be seen that the role of the principal's leadership in improving teacher quality is 44.2% and the remaining results of 55.8% show that the role of the principal's leadership in improving teacher quality is very influential with significant data value results.

Then another test was conducted, namely the role of leadership in improving teacher performance in the Siti Humairah study group. The results of the research data using multiple linear regression analysis used by researchers as an analysis tool. For further data, the results of the regression analysis are presented in the table below.

Table 3. of Results of Regression Analysis of the Role of Principal Leadership in Improving Teacher Performance

	Not standardized Coefficient		standardized Coefficient	T	Signature.
Model	B	Standard. Error	English		
1 (Constant)	35,727	10,604		3.369	.003
Role Head School	.698	.133	.777	5.235	**.000**
A. Depends Variables: Performance Teacher					

The results of the regression analysis above show that the role of the principal's leadership has a significant effect on improving teacher performance in the Siti Humairah study group with a value of 0.000 <0.05. The magnitude of the influence of the principal's leadership role in improving teacher performance can be seen in the following table.

Table 4. of Results of Determining the Role of Principal Leadership in Improving Teacher Performance

Model	R	R Rectangle	Customized R Rectangle	Standard. Error from That Estimating
1	.777 [a]	.604	.582	4.34718

The results in the table above show that the role of the principal's leadership in improving teacher performance is 60.4%, while the remaining 39.6% is influenced by other factors. This indicates a significant impact of the principal's leadership. Compared to prior studies, this percentage underscores the pivotal role of effective leadership in educational settings, though it also highlights the need to explore and address the other contributing factors for comprehensive improvement.

Based on the above data accompanied by interviews with the principal and teachers, it is proven that the principal has a leadership role that has been carried out effectively. For instance, as a leader, the principal implemented strategic planning sessions to address key challenges in school management. As a motivator, the principal initiated regular recognition programs to celebrate teachers' achievements and encourage professional development. Furthermore, as a supervisor, the principal conducted bi-weekly classroom observations followed by constructive feedback sessions to improve teaching practices. The data taken by conducting interviews with the principal and teachers in the Siti Humairah study group became a source of data that supported this study, accompanied by observations that lasted for 8 days with data documented by the researcher.

The study also investigates the qualitative aspects of principal leadership in improving teacher quality and performance within the Siti Humairah study group in Deli Serdang Regency. Principal leadership emerged as a critical factor influencing teacher quality and performance, as supported by observations and interviews. Principals demonstrated leadership by making strategic decisions aligned with the school's vision and mission, often through supervision and coaching initiatives. These efforts included providing constructive feedback and ensuring accountability, which were reported to significantly enhance teacher motivation and discipline.

Figure 1. The principal gives directions on discipline

As educators, principals played a pivotal role in organizing training and mentoring programs. Teachers described their experiences in workshops and seminars as instrumental in improving their pedagogical and professional skills. Such initiatives not only expanded teacher competencies but also fostered a culture of continuous learning within the school. The principal's active involvement in professional development activities reflected a commitment to fostering high standards of teaching and learning.

Figure 2. Teachers taking part in training

Managerial roles performed by principals further strengthened the school's operational framework. Through planning and implementing structured programs, assigning roles, and facilitating curriculum discussions, principals ensured alignment with educational objectives. Teachers highlighted that collaborative discussions, led by the principal, were key in refining instructional strategies and addressing challenges in the classroom. This managerial effectiveness was consistently linked to improved teacher confidence and performance.

Figure 3. Principal and teachers together preparing the program

The adoption of transformational and participatory leadership styles was another notable finding. By involving teachers in decision-making and fostering an inclusive environment, principals cultivated a sense of ownership and commitment among staff. Teachers reported that situational adaptability in leadership styles helped address unique school contexts effectively. Overall, the qualitative findings underscore the critical role of principal leadership in enhancing teacher quality and creating a positive educational environment

Discussion

Principal leadership plays a pivotal role in determining teacher quality and performance, significantly advancing educational goals (Arjunaita et al., 2020; Rosalina & Wati, 2020). This study focuses on the Siti Humairah Study Group in Deli Serdang Regency, where principal leadership strategies were evaluated for their effectiveness in improving teacher professionalism and student outcomes. Previous research underscores the importance of leadership styles in shaping teacher behaviors, fostering collaboration, and enhancing motivation, which collectively affect overall school success (Fatoni, 2017; Liswati et al., 2023). In the context of the Siti Humairah Study Group, these leadership dynamics were explored to understand their specific impact on improving teacher professionalism and educational outcomes. However, challenges such as teacher tardiness and insufficient classroom performance highlight the ongoing need for effective principal-led interventions (Istiqomah, 2021; Septyarini & Pratiwi, 2020). Against this backdrop, the current study investigates the

specific mechanisms through which principals enhance teacher quality and performance, drawing on both quantitative and qualitative data.

The findings indicate that principal leadership accounts for 44.2% of the variation in teacher quality, calculated through regression analysis of survey data and performance metrics, underscoring its substantial influence. This aligns with the view that leadership practices, such as providing constructive feedback and facilitating teacher training, are essential for fostering professional growth (Sutikno et al., 2022). The regression analysis further supports the argument that strategic planning and direct supervision by principals lead to measurable improvements in teacher competence (Septyarini & Pratiwi, 2020). Teachers who participated in training programs organized by their principal reported enhanced pedagogical and professional skills, reflecting the principal's role in cultivating a culture of continuous learning (Bhakti et al., 2019; Mardizal et al., 2023). These results are consistent with the broader literature highlighting the transformative impact of leadership on teacher quality (Fitriyah & Santosa, 2020; Liswati et al., 2023).

Teacher performance, influenced by 60.4% of principal leadership factors, reveals a stronger dependence on effective leadership interventions compared to teacher quality. Principals in the Siti Humairah Study Group demonstrated leadership through regular recognition programs and classroom observations, both of which fostered teacher motivation and accountability (Septyarini & Pratiwi, 2020). Participatory leadership styles also played a significant role, as teachers who were involved in decision-making exhibited higher commitment levels and improved performance (Nasution et al., 2023; Tanjung, 2020). Transformational leadership, which emphasizes inspiring and motivating teachers, further enhanced performance outcomes, as evidenced by feedback from participating educators (Palembangan & Sihotang, 2023; Thien & Adams, 2024). These findings suggest that combining instructional and transformational approaches creates an optimal environment for teacher performance enhancement.

Unexpectedly, a portion of the data revealed persistent issues with teacher tardiness and lack of classroom engagement despite the principal's efforts (Septyarini & Pratiwi, 2020). This suggests that factors beyond leadership, such as personal motivation and organizational culture, may also contribute to these challenges (Hyseni Duraku & Hoxha, 2021; Zeinabadi, 2022). Additionally, while principals demonstrated adaptability in their leadership styles, some strategies appeared less effective in addressing entrenched disciplinary issues, highlighting the complexity of influencing teacher behaviors (Çevik et al., 2023; Fitriatin, 2020). These results underscore the need for a multi-faceted approach that combines leadership interventions with broader organizational reforms, such as enhancing teacher mentoring programs, implementing stricter accountability systems, and fostering a more inclusive organizational culture, to address these persistent challenges comprehensively.

The significant impact of principal leadership on teacher quality aligns with findings from prior studies, which emphasize the role of instructional and transformational leadership in professional development (Akgöz et al., 2024; Obeidat et al., 2024). Notably, principals who provided individualized support, such as tailored training programs and regular performance evaluations, achieved better outcomes, a finding echoed in other contexts (Mulyani et al., 2020; Susanto & Mattalatta, 2018). However, the magnitude of influence reported in this study exceeds that in previous research, which often identifies additional mediators such as organizational climate and teacher self-efficacy (Meng & Chang, 2024; Torres Clark & Chrispeels, 2022). This suggests that leadership strategies employed in the Siti Humairah Study Group were particularly well-targeted and effective.

In terms of teacher performance, the results corroborate previous findings that highlight the role of participatory and transformational leadership in fostering teacher motivation and improving classroom practices (Karatas et al., 2024; Obeidat et al., 2024). Similar studies demonstrate that leadership practices such as collaborative decision-making and situational adaptability significantly enhance teacher engagement and performance (Lingam et al., 2021;

Töre & Uzun, 2024). However, the observed persistence of disciplinary issues contrasts with findings from other contexts where leadership alone was sufficient to address such problems (Okçu et al., 2023; Sahlin, 2023). This discrepancy underscores the need to consider contextual factors, including local cultural and organizational dynamics, in interpreting these findings.

The significant influence of principal leadership on both teacher quality and performance can be attributed to a combination of direct and indirect interventions. Leadership practices such as supervision, training facilitation, and recognition fostered a supportive and growth-oriented environment, motivating teachers to improve their skills and classroom effectiveness (Dutta & Sahney, 2022; Werang et al., 2023). Moreover, the participatory approach adopted by the principal enhanced teachers' sense of ownership and responsibility, aligning individual goals with institutional objectives (Hanim et al., 2020; Pan & Chen, 2024). However, the persistence of certain challenges suggests that external factors, including resource constraints and teacher attitudes, may moderate the effectiveness of leadership interventions (Chang et al., 2021; Shen et al., 2021).

These findings have significant implications for educational leadership and policy. They highlight the critical need for leadership development programs that equip principals with the skills to implement both instructional and transformational leadership strategies effectively (Kazemi et al., 2022; Naidoo, 2019). Policymakers should prioritize the establishment of mandatory leadership training modules, supported by government grants, to ensure accessibility and effectiveness. Additionally, implementing pilot programs that test collaborative frameworks in schools can offer practical insights and scalable solutions. Encouraging schools to adopt participatory leadership models through incentive programs can further drive teacher engagement and institutional success. Fostering a culture of continuous improvement via clear performance benchmarks and regular feedback mechanisms will enhance overall outcomes, creating a sustainable model for educational excellence (Khaola & Oni, 2020; Obeidat et al., 2024).

Conclusion

The conclusion of this study highlights the significant role of the principal's leadership in improving teacher quality and performance within the Siti Khumairah Study Group. The regression analysis reveals that 44.2% of the variation in teacher quality and 60.4% of the variation in teacher performance are influenced by the principal's role. This underscores that principals function not only as managers but also as motivators and educators who foster and support teachers in their professional development. The findings, derived from interviews, direct observations, and documentation, emphasize the principal's pivotal role in professionalizing educators within the Deli Serdang Regency study group. An effective principal fulfills multiple roles: communicator, guide, trainer, and motivator, ensuring that teachers are consistently superior in quality and performance.

The main responsibilities of a principal—leading, motivating, managing, and supervising—are critical in establishing a work atmosphere that encourages innovation and continuous improvement in education quality. Furthermore, the principal's ability to create a safe, conducive school environment directly contributes to a positive learning process, where students are well-conditioned and grasp lessons effectively. The implication of these findings is that principals must sustain and enhance good leadership practices while fostering an environment supportive of teacher and institutional growth. In light of this, it is recommended that education stakeholders prioritize the optimization of school management and leadership to achieve better educational outcomes. Future efforts should focus on training principals to meet the ideal standards of leadership, thereby ensuring the sustained development of teacher quality and performance.

References

Ajepri, F., Vienti, O., & Rusmiyati, R. (2022). Principal's Strategy in Improving Teacher Performance. *Mindset: Journal of Islamic Education Management*, 130–149. https://doi.org/10.58561/mindset.v1i2.53

Akgöz, E. E., Şahin, F., & Erdoğan, O. (2024). The mediator role of school climate in the relationship between instructional leadership behaviors of school principals and teacher autonomy. *International Journal of Educational Management*, *38*(4), 1142–1159. Scopus. https://doi.org/10.1108/IJEM-07-2023-0323

Arjunaita, A., Fitria, H., & Rohana, R. (2020). The Role of the Principal in Implementing Teacher Work Discipline. *Tambusai Education Journal*, *4*(2), 1667–1675. https://doi.org/10.31004/jptam.v4i2.631

Badawi, B., Hakiki, M., Sahroni, S., Prihatmojo, A., & Hidayah, Y. (2024). Aligning Principal Leadership and Teacher Roles with the Demographic Bonus Towards Golden Indonesia 2045: The Case Study of a Vocational High School. *TEM Journal*, *13*(3), 2226–2236. Scopus. https://doi.org/10.18421/TEM133-50

Bhakti, Y., Astuti, I., & Dasmo, D. (2019). Improving Teacher Competence through PhET Simulation Training for MGMP Physics Teachers in Serang Regency. *J-ABDIPAMAS (Journal of Community Service)*, *3*(2), 55–62.

Can, S., & Güneş, D. Z. (2023). The Effect of the Leadership Styles of Secondary Schools Principals on Job Performance of Teachers. *Milli Egitim*, *52*(240), 2663–2680. Scopus. https://doi.org/10.37669/milliegitim.1178130

Carrasco, A., & Montoya, C. (2024). Caring leadership practices in Chilean educational communities: Perceptions of school principals and teachers. *Educational Management Administration and Leadership*. Scopus. https://doi.org/10.1177/17411432241293563

Çevik, M. S., Culha, A., & Çevik, M. N. (2023). The Moderating Role of Gender and Age in the Relationship Between School Principals' Inclusive Leadership Behaviors and Teachers' Organizational Cynicism Levels. *Participatory Educational Research*, *10*(3), 191–208. Scopus. https://doi.org/10.17275/per.23.51.10.3

Chang, C.-M., Hsieh, H.-H., Chou, Y.-H., & Huang, H.-C. (2021). The relationship between physical education teachers' perceptions of principals' transformational leadership and creative teaching behavior at junior and senior high schools: A cross-level moderating effect on innovative school climates. *Sustainability (Switzerland)*, *13*(15). Scopus. https://doi.org/10.3390/su13158184

Dağlı, E., & Kalkan, F. (2021). The Relationship Between Empowering Leadership Behaviors of School Principals and Teachers' Self-Efficacy Perceptions and Job Satisfaction Levels. *Egitim ve Bilim*, *46*(208), 105–123. Scopus. https://doi.org/10.15390/EB.2021.10083

Dutta, V., & Sahney, S. (2022). Relation of principal instructional leadership, school climate, teacher job performance and student achievement. *Journal of Educational Administration*, *60*(2), 148–166. Scopus. https://doi.org/10.1108/JEA-01-2021-0010

ERBAŞ KELEBEK, E. F. (2023). The Moderating Role of Professional Identification on the Links Between the Authentic Leadership of School Principals and the Teacher Autonomy. *Milli Egitim*, *52*(239), 1599–1626. Scopus. https://doi.org/10.37669/milliegitim.1117508

Faridah, R., Supratno, H., & Mudjito, M. (2022). Leadership style of high-achieving school principals in teacher professionalism. *Cypriot Journal of Educational Sciences*, *17*(9), 3160–3169. Scopus. https://doi.org/10.18844/cjes.v17i9.6958

Fatoni, M. (2017). The Role of the Principal in Improving the Quality of Teachers at Mts Nurul Falah Talok Kresek, Tangerang Regency. *Tarbawi: Journal of Educational Management Science*, *3*(2), 168. https://doi.org/10.32678/tarbawi.v3i02.1787

Fitriatin, Y. (2020). Situational Leadership of School Principals in Improving Teacher Professionalism. *Indonesian Journal of Education Management & Administration Review*, *3*(2), 111–116.

Fitriyah, I., & Santosa, A. (2020). Principal leadership in facing the era of the industrial revolution 4.0 to improve school quality. *JMKSP (Journal of Management, Leadership, and Educational Supervision)*, *5*(1), 65–70.

Hadi, S., Imron, A., Pristian, R., Ranu, M. E., & Jamil, A. S. (2024). Adapted Integrated Transformational-Instructional Leadership Behaviors: Construct Validity and Perceptions among Teachers and Principals in Indonesian Vocational Schools. *Eurasian Journal of Educational Research*, *2024*(109), 238–259. Scopus. https://doi.org/10.14689/ejer.2024.109.013

Hanim, Z., Saleh, M., Soe'oed, R., Kasuma, J., & Fhaeizdhyall, A. (2020). Interaction effect of teacher certification and principal leadership styles towards teacher performance: Empirical evidence of elementary school at Berau district of East Kalimantan province, Indonesia. *International Journal of Advanced and Applied Sciences*, *7*(2), 57–62. Scopus. https://doi.org/10.21833/ijaas.2020.02.008

Hsieh, C.-C., Lin, S.-H., & Li, H.-C. (2022). Spirituality can make a difference: The impact of principals' spiritual leadership on teachers' psychological capital and organizational commitment in high-school environment. *KEDI Journal of Educational Policy*, *19*(1), 27–44. Scopus. https://doi.org/10.22804/kjep.2022.19.1.002

Hyseni Duraku, Z., & Hoxha, L. (2021). Impact of Transformational and Transactional Attributes of School Principal Leadership on Teachers' Motivation for Work. *Frontiers in Education*, *6*. Scopus. https://doi.org/10.3389/feduc.2021.659919

Istiqomah, N. (2021). Psychological well-being of honorary teachers at SMA Negeri 13 Depok. *TERAPUTIK: Journal of Guidance and Counseling*, *5*(1), 48–54. https://doi.org/10.26539/teraputik.51555

Karacabey, M. F., Bellibaş, M. Ş., & Adams, D. (2022). Principal leadership and teacher professional learning in Turkish schools: Examining the mediating effects of collective teacher efficacy and teacher trust. *Educational Studies*, *48*(2), 253–272. Scopus. https://doi.org/10.1080/03055698.2020.1749835

Karatas, S., Arslan Dönmez, S., Yörük, T., Yanık Özdemir, S. N., Gök, R., & Doğan, A. (2024). Teachers' Perceptions Regarding Effective School Features and Effective Leadership Qualifications of School Principals in Turkey. *SAGE Open*, *14*(1). Scopus. https://doi.org/10.1177/21582440241233978

Kazemi, E., Resnick, A. F., & Gibbons, L. (2022). Principal Leadership for School-Wide Transformation of Elementary Mathematics Teaching: Why the Principal's Conception of Teacher Learning Matters. *American Educational Research Journal*, *59*(6), 1051–1089. Scopus. https://doi.org/10.3102/00028312221130706

Khanyi, J. G., & Naidoo, P. (2020). Principals' role in leadership capacity development of post level one teachers for school leadership. *Perspectives in Education*, *8*(2), 168–184. Scopus. https://doi.org/10.18820/2519593X/PIE.V38.I2.11

Khaola, P. P., & Oni, F. A. (2020). The influence of school principals' leadership behaviour and act of fairness on innovative work behaviours amongst teachers. *SA Journal of Human Resource Management*, *18*, 1–8. Scopus. https://doi.org/10.4102/sajhrm.v18i0.1417

Lingam, G. I., Lingam, N., & Singh, S. K. (2021). Instructional Leadership Practices: Teachers' Perceptions of a Rural School Principal in Fiji. *Australian Journal of Teacher Education*, *46*(6), 20–35. Scopus. https://doi.org/10.14221/ajte.2021v46n6.2

Liswati, T. W., Hariyati, N., & Uulaa, R. F. R. (2023). Actualization of Principal's Visionary Leadership in Improving Teacher Skills in Managing Learning Innovations in Senior High Schools. *Journal of Educational and Social Research*, *13*(1), 45–56. Scopus. https://doi.org/10.36941/jesr-2023-0005

Mardizal, J., Handayani, E., Ghazali, A., Al Haddar, G., Anggriawan, F., & Arifudin, O. (2023). Transformational, Visionary and Authentic Leadership Model of School Principals in Improving the Quality of Education in the 4.0 Era. *Innovative: Journal Of Social Science Research*, *3*(5), 2994–3003.

Meng, W., & Chang, Y.-C. (2024). The Effect of Perceived Principal's Instructional Leadership on the Occupational Well-being among Rural Elementary and Middle School Teachers. *Open Psychology Journal*, *17*. Scopus. https://doi.org/10.2174/0118743501317478240902051149

Mgaiwa, S. J., & Hamis, Y. J. (2022). School principals versus teachers' expectations: The interplay between school leadership and teachers' job satisfaction in rural Tanzania. *SN Social Sciences*, *2*(12). Scopus. https://doi.org/10.1007/s43545-022-00578-3

Mohamed, A. (2023). Scrutinising Driving Forces: Principal Leadership and Academic Emphasis for Teacher Leadership in Schools. *Asia Pacific Journal of Educators and Education*, *38*(2), 155–174. Scopus. https://doi.org/10.21315/apjee2023.38.2.9

Mulyani, H., Meirawan, D., & Rahmadani, A. (2020). Increasing school effectiveness through principals' leadership and teachers' teaching performance, is it possible? *Cakrawala Pendidikan*, *39*(2), 279–292. Scopus. https://doi.org/10.21831/cp.v39i2.28864

Naidoo, P. (2019). Perceptions of teachers and school management teams of the leadership roles of public school principals. *South African Journal of Education*, *39*(2). Scopus. https://doi.org/10.15700/saje.v39n2a1534

Nasution, S., Ningsih, E., & Neliwati, N. (2023). The Role of Principal Leadership in Improving the Quality of Education. *Journal of Education and Counseling (JPDK)*, *5*(4), 862–872. https://doi.org/10.31004/jpdk.v5i4.19466

Obeidat, B. F., AlKhaza'leh, M. S., Hadi, S. A., Elyat, M. N. I., & Mustafa, M. B. (2024). Examining Transcendent Leadership Practices: Perspectives of Public-School Principals in Amman as Perceived by Teachers. *Journal of Educational and Social Research*, *14*(3), 16–26. Scopus. https://doi.org/10.36941/jesr-2024-0051

Okçu, V., Ay, İ., Sevgi, M., & Burul, C. (2023). Investigation of the Relationship Between School Principals' Narcissistic Leadership Behaviors and Teachers' Organizational Trust and Organizational Cynicism Levels (Path Analysis). *Research in Educational Administration and Leadership*, *8*(1), 43–86. Scopus. https://doi.org/10.30828/real.1024163

Özgenel, M., Yazıcı, Ş., & Asmaz, A. (2022). The Mediator Role of Organizational Justice in the Relationship Between School Principals' Agile Leadership Characteristics and Teachers' Job Satisfaction. *Frontiers in Psychology*, *13*. Scopus. https://doi.org/10.3389/fpsyg.2022.895540

Palembangan, C., & Sihotang, H. (2023). Transformational Leadership of School Principals in Improving Teacher Performance. *Tambusai Education Journal*, *7*(3), 26725–26736.

Pan, H.-L. W., & Chen, W.-Y. (2024). School context matters? Faculty trust and academic emphasis moderating the effects of principals' distributed leadership on teacher leadership. *Journal of Educational Administration*, *62*(2), 181–196. Scopus. https://doi.org/10.1108/JEA-10-2022-0188

Rosalina, M., & Wati, L. (2020). The Influence of Leadership Style on Work Discipline and Its Impact on Employee Performance. *Jurnal Ekobis: Ekonomi Bisnis & Manajemen*, *10*(1), 18–32. https://doi.org/10.37932/jev10i1.26

Sahlin, S. (2023). Teachers Making Sense of Principals' Leadership in Collaboration Within and Beyond School. *Scandinavian Journal of Educational Research*, *67*(5), 754–774. Scopus. https://doi.org/10.1080/00313831.2022.2043429

Septyarini, E., & Pratiwi, R. (2020). The Influence of Organizational Justice and Leadership Professionalism on Employee Psychological Well-being. *Maker: Journal of Management*, *6*(2), 157–168. https://doi.org/10.37403/mjm.v6i2.197

Shen, J., Ma, X., Mansberger, N., Wu, H., Palmer, L. A. B., Poppink, S., & Reeves, P. L. (2021). The relationship between growth in principal leadership and growth in school performance: The teacher perspective. *Studies in Educational Evaluation*, *70*. Scopus. https://doi.org/10.1016/j.stueduc.2021.101023

Spyropoulou, E., & Koutroukis, T. (2024). Principal–Teacher Relationships Under the Pressure of the COVID-19 Pandemic: Critical Factors and Implications for School Leadership During Crises. *Societies*, *14*(10). Scopus. https://doi.org/10.3390/soc14100209

Sulfemi, W. & Arsyad. (2019). Effective and Excellent School Management. -, *2*(9), 1–19.

Susanto, B., & Mattalatta, M. (2018). The influence of principal leadership, school climate and teacher competence on the quality of education at MTS Jeneponto district. *YUME: Journal of Management*, *1*(2).

Sutikno, Y., Hosan, H., & Irawati, I. (2022). The Role of the Principal in Improving the Quality of Education. *Maitreyawira Journal*, *3*(1), 1–7.

Tanjung, D. (2020). Participative Leadership Style of the Principal to Improve the Performance of MAN Binjai Teachers. *Journal of Elementary, Middle and Higher Education Management [JMP-DMT]*, *1*(1), 1–9.

Thien, L. M., & Adams, D. (2024). INVESTIGATING THE RELATIONSHIPS BETWEEN PRINCIPAL INSTRUCTIONAL LEADERSHIP AND TEACHERS' AFFECTIVE COMMITMENT THROUGH COLLECTIVE TEACHER EFFICACY IN MALAYSIAN RURAL AND URBAN PRIMARY SCHOOLS. *Malaysian Online Journal of Educational Management*, *12*(2), 1–15. Scopus.

Töre, E., & Uzun, B. (2024). The Effect of Empowering Leadership Characteristics of School Principals According to Teachers' Perceptions on Teachers' Psychological Ownership and Work Engagement. *Participatory Educational Research*, *11*(3), 165–183. Scopus. https://doi.org/10.17275/per.24.40.11.3

Torres Clark, J., & Chrispeels, J. H. (2022). Using multiple leadership frames to understand how two school principals are influencing teachers' practices and achievement of Hispanic English learners. *Journal of Educational Administration*, *60*(3), 303–322. Scopus. https://doi.org/10.1108/JEA-03-2021-0054

Ucar, R., & Dalgic, S. (2021). Relationship between school principals' strategic leadership characteristics and school teachers' organizatıonal commitment levels. *Eurasian Journal of Educational Research*, *2021*(91), 105–126. Scopus. https://doi.org/10.14689/ejer.2021.91.6

Werang, B. R., Agung, A. A. G., Pio, R. J., Asaloei, S. I., & Leba, S. M. R. (2023). School Principal Leadership, Teachers' Commitment and Morale in Remote Elementary Schools of Indonesia. *Multidisciplinary Journal of Educational Research*, *13*(3), 325–347. Scopus. https://doi.org/10.17583/remie.9546

Zeinabadi, H. (2022). Principals' role in teachers' knowledge-sharing beliefs, intention and behaviour in Iranian schools: Exploring the impact of knowledge-sharing leadership. *Journal of Educational Administration*, *60*(5), 493–510. Scopus. https://doi.org/10.1108/JEA-09-2021-0168