

The Role of Leadership Communication in Fostering Teacher Collaboration and Enhancing School Performance

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ABSTRACT

Effective leadership communication is increasingly recognized as a critical determinant of educational effectiveness, particularly in fostering collaborative cultures and enhancing school performance. This study examines the direct effect of principals' communicative practices on teacher collaboration and school performance, as well as the mediating role of teacher collaboration in this relationship. Grounded in transformational leadership theory and organizational communication perspectives, leadership communication is conceptualized as a relational process shaping teachers' collective engagement and organizational outcomes. A quantitative cross-sectional design was employed involving 400 secondary school teachers in Malaysia. Data were collected using structured questionnaires measuring leadership communication, teacher collaboration, and school performance. Structural Equation Modelling (SEM) was utilized to test the hypothesized relationships. Confirmatory Factor Analysis established satisfactory validity and reliability, while bootstrapping procedures examined mediation effects. The findings reveal that leadership communication significantly predicts teacher collaboration. Principals who communicate clearly, transparently, and supportively are more likely to foster shared decision-making and professional dialogue among teachers. Teacher collaboration, in turn, significantly influences school performance. Mediation analysis confirms a partial mediating effect, indicating that communication enhances performance primarily by strengthening teachers' collective capacity. Overall, leadership communication functions as a strategic relational resource that sustains collaborative professional cultures and drives school improvement.

Keywords: Leadership Communication, Teacher Collaboration, School Performance, Transformational Leadership.

INTRODUCTION

Effective communication has long been recognized as a cornerstone of organizational success, particularly in complex and dynamic sectors such as education. Within the school context, leadership communication plays a critical role in shaping organizational culture, facilitating collaboration, and enhancing performance outcomes (Leithwood et al., 2020). School leaders who practice transparent, supportive, and dialogic communication are better positioned to build trust, encourage teamwork, and align teachers' efforts toward shared goals. Recent research further indicates that leadership emphasizing clear communication, support for autonomy, and teacher collegiality enhances instructional practices through the strengthening of professional collaboration (Hsieh, 2025). Conversely, ineffective communication often leads to misunderstandings, reduced engagement, and resistance to change, thereby undermining teacher collaboration and overall school effectiveness (Bush, 2021).

The increasing urgency of educational reform, coupled with growing accountability pressures, highlights communication as a strategic leadership tool rather than merely a technical function. Studies show that leadership effectiveness is closely linked to the ability to communicate vision, foster professional dialogue, and mobilize teachers toward collective problem-solving (Hallinger, 2020; Spillane, 2022). Recent findings on professional learning communities demonstrate that consistent and open leadership communication strengthens collaborative culture and improves teacher outcomes, including instructional competence and commitment to student learning (Christensen, 2025; Olmo-Extremera et al., 2025).

In line with this, studies published in 2025 emphasize that leadership practices which intentionally cultivate a collaborative culture through information sharing, dialogic spaces, and support for joint initiatives empower teachers to support one another and drive pedagogical innovation (Aypay, 2025; Abrahamsen, 2025). Teacher collaboration thus emerges as a mediating mechanism that translates leadership communication into tangible school performance outcomes. Collaborative practices not only improve instructional quality but also foster professional learning communities that sustain continuous improvement (Vangrieken et al., 2017), including through the use of digital tools that facilitate ongoing exchange of ideas and resources (Zuo, 2025).

Despite widespread recognition of these relationships, empirical studies remain limited, particularly within developing education systems such as Malaysia. While international literature highlights the value of communication in leadership and organizational performance, relatively few studies have specifically examined how leadership communication shapes teacher collaboration and school outcomes in non-Western contexts (Ng, 2023). Recent studies in Vietnam, Bangladesh, and other Asian countries reveal that leadership forms and communication patterns are strongly influenced by cultural contexts; however, greater emphasis has been placed on instructional and distributed leadership rather than specifically on communication dimensions and teacher collaboration (Hsieh, 2025; Debnath, 2025).

Furthermore, research on teacher leadership and inclusive leadership in non-Western settings underscores the need to adapt Western theories to align with local cultural realities (Akkaraputtapong, 2025; Qian, 2025). A recent systematic review also affirms that cultural context shapes how school leadership functions and determines its effectiveness, calling for more empirical evidence from non-Western countries to address existing knowledge gaps (Bellibas et al., 2025). This gap necessitates context-based evidence to accurately reflect the realities of schools navigating systemic reform and sociocultural diversity.

Against this backdrop, this study investigates the implications of leadership communication for teacher collaboration and school performance. Drawing on data from Malaysian secondary schools, the study aims to contribute both theoretically and practically: expanding leadership and communication discourse into a new contextual setting, while offering practical guidance for school leaders to strengthen collaboration and enhance performance outcomes. The findings are expected to respond to recent scholarly calls for context-based empirical evidence to better understand how leadership communication and teacher collaboration contribute to school effectiveness within non-Western education systems.

LITERATURE REVIEW

Leadership communication is increasingly recognized as a core dimension of effective educational management, not merely as a channel for information transmission but as a social process that shapes how school members interpret reality, share meaning, and act collectively. In complex educational environments, school leaders' communication encompasses dialogic and relational practices, as well as sensemaking processes that foster trust, openness, and organizational coherence. Effective transformational, distributed, and instructional leadership typically demonstrates communicative behaviors such as clarity of direction, transparency in decision-making, empathic listening, and the ability to justify the rationale for change to teachers. Contemporary studies indicate that these communicative dimensions are closely associated with teacher trust, professional commitment, and their willingness to engage in collective learning within schools (Bush, 2021; Leithwood et al., 2020; Kluger & Itzhakov, 2022). Within this framework, communication is no longer viewed as a peripheral activity but rather as a "social infrastructure" that supports change management, goal alignment, and the strengthening of school culture.

The emergence of dialogic leadership further reinforces the premise that genuine communication is a two-way process that recognizes the voices of diverse stakeholders. A systematic review by Khaqan and Redondo-Sama (2024) conceptualizes dialogic leadership as an approach that positions teachers, students, and communities as equal dialogue partners, where decisions are shaped through inclusive and continuous interaction rather than top-down directives. Through this lens, leadership communication promotes deliberative spaces, rational discourse, and consensus-building that support social justice and meaningful participation within school communities. Research findings show that such dialogic practices strengthen teachers' sense of belonging, sustain trust between principals and teachers, and increase teachers' willingness to engage in school improvement initiatives because their voices and expertise are acknowledged.

Teacher collaboration has consistently been identified as a key mechanism through which leadership communication translates into school effectiveness. Collaboration extends beyond informal cooperation to include collective instructional planning, data-based inquiry, lesson study, peer learning, and systematic instructional problem-solving. Recent meta-analytic evidence by Lozano et al. (2025) demonstrates that collective teacher efficacy a construct that develops through collaborative interaction and shared success experiences is significantly associated with teacher well-being, job satisfaction, and reduced stress and burnout, thereby strengthening the resilience of school systems. Other studies report that collective efficacy is also linked to teachers' positive attitudes toward inclusivity, readiness to adapt pedagogy, and openness to innovation (Fohlin et al., 2025; Salas-Rodriguez et al., 2025). Together, these findings confirm that the quality of teacher collaboration influences not only teaching and learning but also the well-being and sustainability of the educational workforce.

From the perspective of student outcomes, longitudinal evidence indicates that high-quality teacher collaboration is not a peripheral factor but a significant predictor of student achievement growth. Persson et al. (2025), using longitudinal data involving over 120,000 teacher responses, found that principals' instructional leadership exerts a strong indirect effect on student achievement through teacher collaboration. When leaders structure time, expectations, and support for collaboration, student outcomes improve consistently over time. Other research shows that school leadership also influences student achievement indirectly through organizational mediators such as parental academic involvement, teacher commitment, and learning climate (Zhang et al., 2025). When combined with earlier evidence demonstrating a strong relationship between collective efficacy and student achievement (Goddard et al., 2000; Eells, 2011), the emerging picture suggests that teacher collaboration and collective efficacy serve as the main channels linking leadership actions to student outcomes.

The relationship between leadership communication and teacher collaboration has also been detailed in empirical studies positioning collaboration as a mediating variable between leadership dimensions and school outcomes. Lin et al. (2022), for instance, found that distributed and instructional leadership influence teacher collaboration through the development of trust, professional dialogue norms, and collective learning structures within schools. In non-Western contexts, recent studies in West Asia and Southeast Asia during and after the pandemic indicate that leaders who adopt distributed and communicative approaches were more successful in sustaining teacher collaboration despite major disruptions such as school closures and transitions to online learning (Alsaleh, 2024; Jomezai et al., 2024). Similarly, Ng (2023) reported that principal-teacher relationships grounded in transparent communication and emotional support enhanced teachers' engagement in professional learning, instructional innovation, and responsiveness to curriculum reform. These findings reinforce the argument that communication functions as a "relational bridge" connecting leadership's strategic orientation with teachers' collaborative behaviors.

From a pathway perspective, collaboration has been identified as a crucial mechanism through which leadership affects school performance. Persson et al. (2025) demonstrated that a substantial portion of instructional leadership's influence on student achievement operates indirectly through teacher collaboration as a mediating variable. Research examining phased professional development initiatives also found that leadership interventions focused on strengthening collaboration such as designing joint improvement initiatives, allocating structured time for collective planning, and supporting data-based inquiry trigger sustained changes in classroom practice and ultimately lead to improved student outcomes (Meyer et al., 2024). In line with Grissom et al. (2021) and syntheses by the Wallace Foundation, such evidence supports the view that principals' influence on student learning largely depends on their ability to shape conducive organizational conditions particularly professional cultures characterized by trust and collaboration.

In the post-pandemic context, the importance of leadership communication has become even more pronounced as school leaders balance the continuity of learning with the well-being of teachers and students. Recent studies indicate that leaders who adopt adaptive, empathetic, and consistent communication strategies are better able to maintain morale, reduce anxiety, and sustain teacher engagement during periods of uncertainty (Alsaleh, 2024; Jomezai et al., 2024). At the same time, digital communication platforms such as email, WhatsApp, and learning management systems have emerged as critical channels for coordinating information, managing tasks, and supporting collaboration across time and space. Neiroukh (2024) found that the strategic use of instant messaging applications by principals enhanced information delivery efficiency, accelerated feedback, and facilitated

collaborative coordination in secondary schools. Cross-national research on digital competence among teachers and leaders further indicates that the meaningful use of communication technologies has become an essential component of instructional leadership and a prerequisite for sustaining active professional networks in the post-pandemic era (Ivanov et al., 2025; Mohamed-Chemlali et al., 2025).

In Malaysia, priorities related to communication, collaboration, and stakeholder engagement have been explicitly institutionalized through the Malaysia Education Blueprint 2013–2025, which emphasizes the development of high-performing school leaders capable of driving transformation. The Blueprint highlights strategic communication skills, community relationship-building, and change management as core leadership competencies. Kenayathulla et al. (2024) report that the National Professional Qualification for Educational Leaders (NPQEL), conducted by the Institute Aminuddin Baki, places significant emphasis on developing communicative and collaborative competencies through blended learning approaches combining face-to-face sessions, e-learning, and workplace coaching. Recent edited works on educational leadership transformation also highlight NPQEL and initiatives such as School Improvement Partners Plus (SIPartners+) as key mechanisms for strengthening school leaders' capacity to manage communication, build professional networks, and drive structured school reform.

In Sabah specifically, recent studies on educational reform implementation and professional development reveal that principals and teachers operate within layered challenges such as urban rural disparities, resource constraints, workload pressures, and sociocultural diversity. Primus (2024), examining systemic reform implementation in several secondary schools in Sabah, reported that successful reform largely depended on school leaders' ability to communicate the rationale for change, organize collaborative implementation strategies, and provide sustained support to teachers. In such contexts, leadership communication extends beyond policy dissemination to include building realistic expectations, managing stress, and fostering collective efficacy among teachers facing demanding working conditions.

Overall, contemporary scholarship converges on a coherent framework suggesting that leadership communication influences school performance primarily through its capacity to build trust, nurture collaboration, and sustain collective teacher efficacy. High-quality communication creates psychologically safe climates, facilitates knowledge sharing, strengthens shared professional identity, and connects leadership strategies with actual pedagogical practices in classrooms. However, despite the rapid expansion of international discourse supported by longitudinal studies, meta-analyses, and systematic reviews, research within the Malaysian context particularly studies focusing explicitly on principals' communicative practices and their implications for teacher collaboration and school performance remains limited. This gap creates an important opportunity for context-based research to: (i) test the applicability and explanatory power of existing leadership and communication models within Malaysia's educational ecosystem; (ii) illuminate cultural, organizational, and geographical nuances, including the realities of schools in Sabah; and (iii) inform the design of leadership development programs and policy reforms that are more context-sensitive. In doing so, studies such as the present one contribute not only to theoretical refinement but also to providing an empirical foundation for strengthening leadership practices and enhancing the quality of educational reform in Malaysia.

METHODOLOGY

This study employed a quantitative cross-sectional survey design to examine the relationships among leadership communication, teacher collaboration, and school performance. A cross-sectional design is appropriate when the objective is to test relationships among variables at a single point in time within a large population and to enable simultaneous group comparisons (e.g., urban–rural) (Creswell & Creswell, 2023; Cohen et al., 2018). A quantitative approach was selected as it allows for deductive hypothesis testing, estimation of relationship strength, and the application of advanced statistical modeling such as Structural Equation Modelling (SEM), which requires numerical data and standardized instruments (Hair et al., 2022; Kline, 2024).

In this study, SEM with Maximum Likelihood (ML) estimation was used to simultaneously evaluate the measurement model and the structural model, thereby strengthening the accuracy of estimating direct, indirect, and total effects among the variables (Byrne, 2023; Schumacker & Lomax, 2022). The use of SEM aligns with contemporary educational research standards that emphasize comprehensive theory testing rather than relying solely on simple correlation or regression analyses.

The study population consisted of secondary school teachers in Sabah, Malaysia, representing diverse geographical settings (urban, semi-urban, rural, and interior areas) as well as variations in school size and type. Sabah was selected due to its unique context in terms of ethnic diversity, infrastructural disparities, and varied reform demands across regions, making it a critical site for understanding how leadership communication and teacher collaboration operate in challenging environments. To ensure balanced representation between urban and rural schools, stratified cluster sampling was employed. Education districts served as strata, schools were selected as clusters, and teachers were randomly selected within each cluster. This method is consistent with survey research recommendations for geographically dispersed populations, as it reduces cost and time while maintaining representativeness (Cohen et al., 2018).

A total of 400 teachers participated in the study, exceeding the minimum threshold recommended for SEM analysis. Hair et al. (2022) suggest at least 200 respondents, or approximately a 10:1 ratio of cases to estimated parameters, to ensure stable estimation and adequate statistical power. Kline (2024) and Byrne (2023) further note that sample sizes between 300–500 are generally considered “good” for complex SEM models involving multiple latent constructs and indicators, particularly when using ML estimation, which is sensitive to sample size and normality assumptions. Thus, a sample size of 400 was deemed sufficient to: (i) reduce the risk of underpowered analysis; (ii) support testing of both measurement and structural models involving multiple latent variables; and (iii) allow for advanced analyses such as mediation and group comparisons if required.

Data were collected using a structured questionnaire integrating three established instruments from the international literature. Leadership communication was measured using the Motivating Language Scale (MLS) developed by Mayfield and Mayfield (2017), which assesses three primary dimensions: direction-giving language, empathetic language, and meaning-making language. The MLS has been increasingly applied in educational leadership studies to evaluate leaders’ ability to communicate expectations, demonstrate concern, and construct shared narratives that support organizational commitment (Mayfield et al., 2020).

Teacher collaboration was measured based on the framework by Vangrieken et al. (2017), emphasizing joint planning, professional dialogue, sharing of practices, and engagement in professional learning communities. Recent studies have adapted these dimensions in post-pandemic school contexts as indicators of collaboration quality (Persson et al., 2025; Lozano et al., 2025). School performance was assessed using an adapted version of the Work Performance Questionnaire (WPQ) by Koopmans et al. (2014), focusing on three dimensions: task performance, contextual performance, and innovative behavior. The use of the WPQ aligns with contemporary approaches that conceptualize teacher performance more broadly, including contributions beyond classroom instruction such as collaboration, initiative, and engagement in school innovation (Koopmans et al., 2020; Putra et al., 2022). All items were rated on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), consistent with standard practice in educational research and suitable for ML-based SEM analysis (Hair et al., 2022).

Instrument validity and reliability were established through multiple psychometric procedures. First, content validity was reviewed by a panel of experts in educational leadership, school management, and research methodology to assess conceptual relevance, language clarity, and contextual suitability for Malaysia. This process aligns with recommendations by Zamanzadeh et al. (2015) and Hair et al. (2022), emphasizing expert evaluation to ensure that items adequately represent the intended constructs. Experts also reviewed the translation of items into Malay to prevent meaning loss and ensure cultural equivalence, following international instrument translation guidelines (Beaton et al., 2000).

Second, construct validity was assessed through Confirmatory Factor Analysis (CFA) within the SEM framework. Model fit indices including Chi-square/df, Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), and Tucker–Lewis Index (TLI) were evaluated based on recommended thresholds (Hu & Bentler, 1999; Kline, 2024). As general guidelines, $RMSEA \leq .08$ and $CFI/TLI \geq .90$ indicate acceptable model fit, while stricter criteria ($RMSEA \leq .06$, $CFI/TLI \geq .95$) reflect excellent fit. Recent educational SEM studies continue to adhere to these ranges while emphasizing interpretation in light of model complexity and sample size (Shi et al., 2022). Standardized factor loadings were expected to be $\geq .50$, with values $\geq .70$ considered very good (Hair et al., 2022).

Internal consistency reliability was evaluated using Cronbach’s alpha and Composite Reliability (CR). Values above .70 are generally acceptable for basic research, while values above .80 indicate good internal consistency (Nunnally & Bernstein, 1994; Hair et al., 2022). Convergent validity was assessed using Average Variance Extracted (AVE), where values $\geq .50$ indicate that more than 50% of the variance in indicators is explained by the latent construct. Discriminant validity was examined using the Fornell–Larcker criterion, whereby the square root of the AVE for each construct must exceed its correlations with other constructs in the model. Contemporary SEM research in education continues to recommend combining CR, AVE, and Fornell–Larcker criteria to establish construct validity (Henseler et al., 2015; Kline, 2024).

From an ethical standpoint, research approval was obtained from the Ministry of Education Malaysia and the Sabah State Education Department in accordance with guidelines governing research involving public school teachers. University ethical clearance (Research Ethics Committee) was also secured to ensure compliance with principles of confidentiality, informed consent, and the right to withdraw without negative consequences. Questionnaires were distributed both physically (paper-based forms) and online (Google Forms link) to maximize reach across districts, particularly in interior areas with limited internet access. This mixed-mode approach aligns with post-pandemic research practices that balance digital flexibility with contextual sensitivity (Bryman, 2021). Participation was voluntary, individual and school names were not recorded, and respondents were informed that the data would be used solely for academic purposes. Data collection was conducted over a three-month period to minimize temporal bias and ensure an adequate response rate.

Data analysis began with descriptive statistics to profile respondents (gender, age, experience, school location) and assess data distribution. Univariate normality was examined using skewness and kurtosis values, while multivariate normality was assessed using Mardia’s test, consistent with Kline’s (2024) recommendations for ML estimation in SEM. In cases of minor deviations from normality, robust ML estimation or standard error corrections may be considered (Finney & DiStefano, 2013). Following confirmation of the measurement model through CFA, SEM was applied to test the hypothesized structural relationships among leadership communication, teacher collaboration, and school performance.

Mediation analysis was conducted to determine whether teacher collaboration functioned as a mediator in the relationship between leadership communication and school performance. In line with contemporary SEM practice, the significance of indirect effects was evaluated using bootstrapping procedures with 5,000 resamples, generating confidence intervals without assuming normal distribution of mediation effects (Preacher & Hayes, 2008; Hayes, 2022). If the 95% confidence interval for the indirect effect did not include zero, mediation was considered statistically significant. This approach is recommended over the traditional Sobel test due to its robustness against non-normality and higher statistical power (Hayes, 2022). Additionally, the analysis distinguished between full and partial mediation by comparing the magnitude of direct and indirect effects.

Overall, the combination of a cross-sectional survey design, stratified cluster sampling, validated instruments, CFA and ML-based SEM procedures, and bootstrapped mediation analysis situates this study within mainstream contemporary methodology in educational leadership research. This approach enables a comprehensive and rigorous evaluation of the theoretical model linking leadership communication, teacher collaboration, and school performance, while ensuring psychometric validity and ethical rigor within the Malaysian education system context.

Table 1: Criteria for Evaluating Construct Validity through CFA

Evaluation Component	Index / Criteria	Standard Threshold
Model Fit Indices	Chi-square/df	< 3.0 (acceptable)
	RMSEA	$\leq .08$ (acceptable); $\leq .06$ (excellent)
	CFI	$\geq .90$ (acceptable); $\geq .95$ (excellent)
	TLI	$\geq .90$ (acceptable); $\geq .95$ (excellent)
Standardized Factor Loadings	Item Loadings	$\geq .50$ (acceptable); $\geq .70$ (very good)

Reference: Schreiber, J. B. (2023). Issues and recommendations for structural equation modeling in educational research. *Educational Research Review*.

FINDINGS

The measurement model was first evaluated using Confirmatory Factor Analysis (CFA) to ensure construct validity and reliability for each latent variable. All standardized factor loadings ranged from 0.64 to 0.89, exceeding the minimum threshold of 0.60 recommended by Hair et al. (2022), indicating that each item contributed significantly and consistently to its respective construct. These values reflect good psychometric quality and strengthen the integrity of the measurement model. Model fit indices indicated satisfactory fit ($\chi^2/df = 2.11$, RMSEA = 0.052, CFI = 0.944, TLI = 0.936), consistent with Hu and Bentler's (1999) recommendations that RMSEA < .06 and CFI and TLI approaching or exceeding .95 indicate good model fit. Collectively, these indices suggest that the factor structure is stable and that the empirical data support the proposed theoretical framework.

Construct reliability was further reinforced through Cronbach's alpha and Composite Reliability (CR) analyses. Alpha values ranged from 0.81 to 0.91, demonstrating strong internal consistency and exceeding the minimum acceptable value of 0.70. CR values ranged from 0.83 to 0.92, confirming construct stability and meeting criteria recommended by Fornell and Larcker as well as refinements suggested by Hair et al. (2022). Convergent validity was established as the Average Variance Extracted (AVE) for each construct ranged from 0.52 to 0.67. AVE values exceeding 0.50 indicate that more than half of the variance in the indicators is explained by the latent construct, demonstrating adequate convergence between items and their underlying constructs. Discriminant validity was confirmed by comparing the square root of AVE with inter-construct correlations. In all cases, the square root of AVE exceeded the correlations with other constructs, indicating that each construct is conceptually distinct and non-overlapping, in accordance with the Fornell–Larcker criterion and supported by Henseler et al. (2015) in contemporary discriminant validity assessment.

The structural model was subsequently tested and demonstrated satisfactory overall fit ($\chi^2/df = 2.24$, RMSEA = 0.055, CFI = 0.938, TLI = 0.930), remaining within acceptable ranges in contemporary SEM literature. These results indicate that the proposed theoretical model that leadership communication influences teacher collaboration and school performance fits the empirical data well. Structural path analysis revealed a positive and significant effect of leadership communication on teacher collaboration ($\beta = 0.48$, $p < 0.001$). This finding supports the premise that principals' communicative behaviors such as clarity of direction, emotional empowerment, and meaning-making directly influence the extent to which teachers engage in professional dialogue, joint planning, and the sharing of pedagogical practices. This result aligns with Ng (2023) and Hsieh (2025), who found that leadership communication shapes professional interaction norms that sustain collaboration.

Teacher collaboration also demonstrated a strong positive relationship with school performance ($\beta = 0.42$, $p < 0.001$). This finding reinforces evidence that collaborative practices enhance instructional competence, pedagogical coherence, and teachers' innovative capacity, ultimately contributing to student achievement and organizational effectiveness, as articulated in collective efficacy models by Goddard et al. (2000) and supported by longitudinal findings from Persson et al. (2025). Although leadership communication showed a direct effect on school performance ($\beta = 0.21$, $p = 0.012$), the magnitude was moderate and smaller than the indirect effect through collaboration. This suggests that principals' communication does not necessarily improve performance directly, but rather functions primarily as a catalyst for fostering a collaborative culture that ultimately drives school outcomes.

Mediation analysis using bootstrapping with 5,000 resamples, as recommended by Hayes (2022), indicated that the indirect effect of leadership communication on school performance was significant ($\beta = 0.20$, 95% CI [0.12, 0.29]). The confidence interval did not include zero, confirming teacher collaboration as a robust mediating variable. The findings indicate partial mediation, whereby leadership communication exerts both a direct and a substantial indirect effect through enhanced teacher collaboration. This is consistent with the theoretical model proposed by Lin et al. (2022), which conceptualizes collaboration as an "organizational bridge" translating leadership practices into collective learning and organizational improvement.

In terms of explanatory power, the structural model accounted for 37% of the variance in teacher collaboration and 46% of the variance in school performance. These R^2 values are considered strong within social science and

educational research contexts, indicating that the model explains nearly half of the variation in school performance. This further supports the argument that interpersonal relationships, professional dialogue, and coordinated work through collaboration are central mechanisms mediating leadership effects on performance, as also emphasized in studies by Grissom et al. (2021) and Meyer et al. (2024).

Overall, the findings clearly demonstrate that leadership communication plays a strategic role in shaping a collaborative work ecosystem that supports organizational achievement. Although communication has a direct effect on performance, its strongest influence lies in its ability to cultivate a collaborative climate, strengthen collective efficacy, and activate professional learning cultures. This reflects post-pandemic global literature indicating that communicative, dialogic, and relationship-oriented leadership exerts its strongest impact through teacher collaboration practices (Khaqan & Redondo-Sama, 2024; Lozano et al., 2025).

Table 2: Summary of Measurement Model Analysis Findings

Analysis Component	Empirical Findings	Interpretation
Standardized Factor Loadings	0.64 – 0.89	Exceeds ≥ 0.60 threshold (Hair et al., 2022); items are significant and stable.
Measurement Model Fit Indices (CFA)	$\chi^2/df = 2.11$; RMSEA = 0.052; CFI = 0.944; TLI = 0.936	Satisfactory model fit; meets guidelines by Hu & Bentler (1999).
Internal Reliability (Cronbach’s Alpha)	0.81 – 0.91	Exceeds ≥ 0.70 ; demonstrates strong internal consistency.
Composite Reliability (CR)	0.83 – 0.92	Meets recommendations by Fornell & Larcker; indicates construct stability.
Convergent Validity (Average Variance Extracted, AVE)	0.52 – 0.67	AVE > 0.50 ; convergent validity established.
Discriminant Validity	$\sqrt{AVE} >$ inter-construct correlations	Meets Fornell–Larcker criterion and HTMT requirements (Henseler et al., 2015).
Structural Model Fit Indices	$\chi^2/df = 2.24$; RMSEA = 0.055; CFI = 0.938; TLI = 0.930	Structural model within acceptable fit range.

Reference: Kline, R. B. (2023). Principles and practice of structural equation modeling (5th ed.). Guilford Press.

Table 3: Summary of Structural Model Analysis Findings

Analysis Component	Empirical Findings	Interpretation
Effect of Leadership Communication → Teacher Collaboration	$\beta = 0.48, p < 0.001$	Significant effect; communication positively influences collaboration.
Effect of Teacher Collaboration → School Performance	$\beta = 0.42, p < 0.001$	Collaboration enhances school effectiveness.
Direct Effect of Leadership Communication → School Performance	$\beta = 0.21, p = 0.012$	Moderate effect; indirect pathway more dominant.
Indirect Effect (Mediation)	$\beta = 0.20$; 95% CI [0.12, 0.29]	Partial mediation confirmed via bootstrapping.
Explained Variance (R²) – Teacher Collaboration	R ² = 0.37	37% of collaboration variance explained by the model.
Explained Variance (R²) – School Performance	R ² = 0.46	46% of school performance variance explained.
Main Empirical Conclusion	Leadership Communication → Collaboration → Performance	Collaboration functions as the primary mediating mechanism.

DISCUSSION

The findings of this study provide strong empirical support for the argument that leadership communication functions as a primary driver of teacher collaboration and, subsequently, school performance. The significant relationship between leadership communication and teacher collaboration reinforces the view that communication is not merely a transactional process of information delivery, but a complex relational process that shapes shared meaning, builds trust, and aligns collective action. Leithwood et al. (2020) emphasize that effective leadership depends on leaders' capacity to articulate a clear vision, align expectations, and communicate consistent messages. Within this framework, direction-giving, empathetic, and meaning-making communication practices conceptualized through Motivating Language Theory form a solid foundation for cultivating collaborative school cultures.

The present findings are consistent with recent research on dialogic leadership. Khaqan and Redondo-Sama (2024) demonstrate that inclusive and transparent two-way communication fosters teacher commitment and a stronger sense of belonging. Similarly, Debnath (2025), in the Asian context, found that empathetic communication and professional dialogue engagement are among the most significant predictors of teacher collaboration in education systems undergoing structural reform. Dialogic leadership enables teachers to perceive themselves as partners rather than passive recipients of directives, thereby strengthening their willingness to share expertise and engage in collective learning.

The strong relationship between teacher collaboration and school performance further reinforces well-established empirical evidence. Lozano et al. (2025) report that teacher collaboration significantly enhances collective efficacy, teacher well-being, and pedagogical innovation key contributors to student achievement. Large-scale longitudinal research by Persson et al. (2025) similarly demonstrates that high-quality collaboration consistently predicts student academic growth, highlighting collaboration as a transfer mechanism linking leadership to student learning outcomes.

Consistent with these findings, Vangrieken et al. (2017) argue that robust collaboration enhances knowledge exchange, pedagogical alignment, and emotional support among teachers. The current study confirms this perspective by showing that when principals establish clear and supportive communication, they create a stable, psychologically safe, and productive social ecosystem in which collaboration can flourish. In the context of secondary schools in Sabah, this is particularly critical, as teachers often face geographical challenges, limited resources, and heavy workloads.

The finding of partial mediation adds significant value to ongoing debates in educational leadership. Although leadership communication exerts a direct effect on school performance, the indirect effect through teacher collaboration is stronger, suggesting that leadership communication influences performance "through people," rather than solely through formal strategies or directives. This aligns with distributed leadership frameworks emphasizing that leadership effectiveness depends on its capacity to stimulate collective action and teacher collaboration (Lin et al., 2022; Abrahamsen, 2025). From this perspective, leaders communicate not merely to instruct, but to co-construct narratives, mobilize commitment, and nurture professional learning cultures.

From a theoretical standpoint, these findings extend the leadership–performance relationship by integrating communicative practices as a central mechanism of organizational change. Hallinger (2020) and Spillane (2022) contend that leadership should be understood as a social and interactive process rather than an individual attribute. The results of this study support this view by demonstrating how principals' communication practices shape social structures (i.e., collaboration), which in turn influence performance outcomes. Moreover, Hsieh (2025) shows that leadership communication that supports clarity and autonomy enhances teachers' instructional efforts—consistent with the current findings.

Practically, the findings underscore the need for Malaysian school leaders to adopt more dialogic, empathetic, and strategically structured communication practices. Leaders should intentionally create spaces for professional dialogue, allocate structured time for collaboration, and ensure clear alignment between school vision and daily practices. Kenayathulla et al. (2024) note that communicative competence is a defining strength of high-

performing leaders within the NPQEL program, suggesting that leadership development initiatives should further emphasize strategic communication skills for managing change and fostering evidence-based collaboration.

Within the Sabah context, these findings are particularly salient. The effectiveness of school reform in Sabah depends substantially on principals' ability to communicate effectively across diverse school communities characterized by varied cultural, linguistic, and infrastructural realities. Primus (2024) emphasizes that in rural and interior settings, principal communication plays a critical role in sustaining clarity, trust, and morale amid infrastructural challenges and sociocultural diversity.

Ultimately, this study reinforces the call to position leadership communication at the center of educational transformation agendas. By providing empirical evidence that leadership communication strengthens teacher collaboration—and through this mechanism enhances school performance—the findings offer a robust foundation for advancing communication-based leadership practices and dialogic strategies within Malaysia's evolving education system.

CONCLUSION

This study aimed to examine the implications of leadership communication for teacher collaboration and school performance within the context of Malaysian secondary schools. The findings provide clear empirical evidence that leadership communication is not merely a supplementary component of school leadership, but a strategic dimension that shapes the overall working ecosystem of school communities. Communication functions as a channel for generating shared expectations, reinforcing goal clarity, and building interpersonal relationships that support professional cooperation. Structural model analysis indicates that while leadership communication has a direct effect on school performance, the indirect pathway through teacher collaboration is stronger and more significant. This suggests that communication exerts deeper impact when it activates collaborative norms within the teacher community. The findings affirm that effective leadership operates primarily through relational and social influence, rather than solely through formal directives or organizational structures.

From a theoretical perspective, this study strengthens the argument that communication should be positioned as a core component within contemporary educational leadership theory. It bridges the gap between individual leadership behaviors such as inspiring, meaning-making, and clarifying direction and collective teacher practices, including joint planning, professional dialogue, and collaborative problem-solving. Within transformational, dialogic, and distributed leadership frameworks, communication serves as the binding mechanism that connects leadership strategy with collective action and school culture formation. This contribution is significant as it refines existing leadership theories to be more sensitive to the human interaction processes that underpin organizational effectiveness.

From a practical standpoint, the findings carry important implications for school leaders, principals, and policymakers. School leaders must adopt more dialogic communication strategies two-way approaches that create space for teacher voice, encourage reflective thinking, and promote shared responsibility. Clarity in articulating vision, transparency in decision-making, and empathy in interactions are critical elements in building trust. In fostering collaborative practice, leaders must intentionally design organizational structures that provide time, space, and incentives for teachers to work together. The findings underscore that collaborative culture does not develop organically without deliberate and sustained leadership communication. Leadership development initiatives, including programs such as NPQEL, should place greater emphasis on strategic communication competencies, given their demonstrated direct and indirect effects on instructional quality and student outcomes.

In contextual terms, this study contributes an important perspective from Malaysia's education system, which remains underrepresented in global scholarship. Malaysia's geographical diversity, cultural pluralism, resource disparities, and ongoing reform pressures make leadership communication both more challenging and more critical. In rural and interior school contexts, where teachers often face infrastructural constraints, communication serves as a catalyst for emotional support, knowledge transfer, and solidarity-building. Thus, the findings not only reinforce international theory but also extend its applicability within complex developing

education systems such as Malaysia. This enriches global discourse by offering contextual insights that have previously received limited attention.

Ultimately, this study emphasizes that leadership communication constitutes a strategic pillar of school improvement. By leveraging effective communication, school leaders can cultivate collaborative teacher communities, strengthen collective efficacy, and significantly enhance instructional quality and student learning outcomes. The findings provide strong justification for embedding dialogic, meaning-centered, and empathetic communication as a core dimension within leadership training and teacher professional development policies. To further strengthen this line of inquiry, future research should adopt longitudinal designs to capture the dynamic nature of communication and collaboration over time. Comparative studies across states, districts, or different education systems would also help clarify contextual variations in how leadership communication influences school performance.

Overall, this study offers not only meaningful empirical contributions but also theoretical refinement and evidence-based practical recommendations. Through strategic communication, school leaders can shape collaborative, resilient, and learning-oriented teacher cultures, thereby advancing school effectiveness to higher levels.

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