

Communicative School Climate and Digital Pedagogical Competence in Driving Teacher Performance: Evidence from Malaysia's TS25 Reform

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DOI: <https://doi.org/10.47772/IJRISS.2026.10200612>

Received: 01 March 2026; Accepted: 06 March 2026; Published: 23 March 2026

ABSTRACT

Improving teacher performance remains a central priority within Malaysia's TS25 reform, which seeks to enhance instructional quality and school effectiveness nationwide. Although leadership and innovation have been widely examined, limited empirical evidence explains how communicative school climates and teachers' digital pedagogical competence jointly shape professional performance. This study addresses this gap by examining the direct and complementary effects of school climate communication and digital competence on teacher performance in TS25 secondary schools in Sabah. A quantitative survey was conducted with 350 teachers selected through stratified random sampling, and the data were analyzed using descriptive statistics and structural equation modeling (SEM) to test the hypothesized relationships. The findings reveal that school climate communication is the strongest predictor of teacher performance, highlighting the importance of transparent dialogue, collaborative culture, and supportive leadership in strengthening instructional effectiveness. Digital pedagogical competence also demonstrates a significant positive effect, particularly in enhancing teachers' capacity to implement innovative and adaptive instructional practices. Furthermore, a supportive communicative climate amplifies the contribution of digital competence, indicating a complementary interaction between organizational and individual resources. Theoretically, the study advances organizational communication and teacher effectiveness literature by situating digital competence within the Job Demands–Resources framework, emphasizing the synergy between contextual and personal resources in shaping performance outcomes. Practically, the findings underscore the need for policymakers and school leaders to cultivate supportive communicative environments while sustaining continuous digital professional development, especially in reform-driven and resource-diverse contexts such as Sabah where teacher performance is critical to long-term educational transformation.

Keywords: Teacher Performance, School Climate Communication, Digital Pedagogical Competence, TS25 Schools, Sabah

INTRODUCTION

Improving teacher performance remains a defining challenge in contemporary education reform, as policy transformation ultimately materializes through teachers' instructional practice rather than structural redesign alone (Day & Gu, 2022; Collie, 2022). Despite ambitious reform agendas worldwide, variability in teacher effectiveness persists, raising fundamental questions about the organizational and professional conditions that sustain performance. In Malaysia, the Transformasi Sekolah 2025 (TS25) initiative was introduced under the Malaysia Education Blueprint 2013–2025 to institutionalize collaborative cultures, instructional leadership, and continuous improvement. While TS25 aspires to cultivate high-performing model schools, emerging evidence reveals uneven teacher performance across implementation sites, particularly in Sabah, where geographical dispersion, infrastructural disparities, and resource heterogeneity complicate reform fidelity (Abdul Raji & Ambotang, 2024). These inconsistencies suggest that reform success depends not only on policy design but also on the alignment between organizational environments and teachers' professional capabilities.

One underexamined yet theoretically consequential factor is communicative school climate. Communication constitutes the relational architecture through which reform intentions are interpreted, negotiated, and enacted

within educational organizations (Skaalvik & Skaalvik, 2021; Avidov-Ungar & Forkosh-Baruch, 2023). Supportive communicative climates characterized by openness, trust, professional dialogue, and shared meaning-making strengthen collective efficacy and facilitate instructional coherence. Conversely, rigid or hierarchical communication structures may suppress professional agency, weaken collaboration, and undermine the sustainability of reform initiatives (Collie et al., 2022). Although school climate has been widely examined in educational research, it is commonly conceptualized as a broad construct encompassing multiple dimensions such as safety, leadership, relationships, and learning environments (Wang & Degol, 2016). Within this broad framework, the communicative dimension is often subsumed under general climate indicators, obscuring its distinctive role as a relational mechanism shaping professional interaction and organizational learning. A more focused examination of communicative school climate is therefore necessary to understand how interactional processes within schools influence teacher performance, particularly in reform-oriented systems where policy implementation relies heavily on professional dialogue and collaboration.

Simultaneously, the rapid digitalization of education has reshaped the professional demands placed upon teachers. Post-pandemic schooling increasingly requires teachers to integrate digital technologies not merely as supplementary tools but as integral components of instructional design, assessment, and student engagement (Trust et al., 2022; Almås & Krumsvik, 2023). Digital pedagogical competence extends beyond technical proficiency to include adaptive expertise, pedagogical decision-making, and the capacity to innovate within technologically mediated learning environments. However, in resource-diverse regions such as Sabah, disparities in digital infrastructure, training opportunities, and technological access continue to complicate the effective integration of digital pedagogy (Ahmad et al., 2021). While international scholarship consistently links digital competence with instructional effectiveness and teacher adaptability (Valtonen et al., 2021), many studies conceptualize digital competence as an isolated individual capability rather than a professional resource embedded within broader organizational and communicative contexts.

The omission of this interaction represents a critical theoretical and empirical gap. Existing studies frequently examine communication as an organizational determinant and digital competence as an individual attribute, rarely integrating these factors within a unified explanatory framework. From a Job Demands–Resources (JD-R) perspective, however, organizational and personal resources often operate synergistically in shaping professional outcomes (Bakker & Demerouti, 2018). Communicative school climates can provide the relational infrastructure through which digital practices are shared, legitimized, and collectively refined. Conversely, digitally competent teachers may enrich professional dialogue by introducing innovative instructional practices and extending collaborative capacity within schools. Without a supportive communicative climate, digital competence may remain underutilized; without sufficient digital capability, communication may lack innovative substance. Despite the theoretical plausibility of such interaction, empirical investigations simultaneously examining these complementary resources remain limited, particularly within Malaysia's TS25 secondary school context.

To address this gap, the present study examines how communicative school climate and digital pedagogical competence jointly influence teacher performance in TS25 secondary schools in Sabah. By situating the analysis within a reform-driven and resource-diverse context, the study contributes to broader debates on sustaining teacher effectiveness under systemic transformation. Sabah represents a theoretically significant setting, as its heterogeneous educational conditions provide a rigorous context for examining how organizational and individual resources interact to support professional outcomes. Theoretically, this study advances the Job Demands–Resources (JD-R) model by conceptualizing communicative school climate and digital pedagogical competence as complementary professional resources that mitigate contextual demands and enhance teacher performance. It further contributes to organizational communication scholarship by positioning digital competence not merely as a technical capability but as a communicative resource embedded within institutional interaction processes. Practically, the findings aim to inform reform strategies by highlighting the importance of strengthening communicative infrastructures alongside sustained digital professional development as integrated pathways for improving teacher effectiveness in large-scale educational reform initiatives.

Accordingly, this study investigates:

(1) the relationship between communicative school climate and teacher performance,

(2) the influence of digital pedagogical competence on teacher performance, and

(3) the combined effects of these resources in shaping professional outcomes within Malaysia's TS25 secondary schools.

LITERATURE REVIEW

Teacher performance is increasingly conceptualized as a multidimensional and context-sensitive construct encompassing instructional quality, classroom management, professional collaboration, and continuous professional development. Contemporary scholarship has moved beyond compliance-based interpretations of performance and instead recognizes it as an emergent outcome shaped by the dynamic interaction between individual capabilities and organizational conditions (Day & Gu, 2022; Collie, 2022). Within Malaysia's Transformasi Sekolah 2025 (TS25) reform, teacher performance functions as a central mechanism through which policy aspirations are translated into classroom practice. However, persistent disparities across TS25 schools, particularly in Sabah, indicate that reform mandates alone are insufficient to ensure consistent professional effectiveness (Abdul Raji & Ambotang, 2024). These variations highlight the need to examine how organizational environments and teacher competencies jointly influence professional performance under reform conditions.

The Job Demands–Resources (JD-R) model offers a robust theoretical framework for explaining such dynamics. The model posits that employee performance and well-being improve when job resources help individuals manage contextual demands and sustain work motivation (Bakker & Demerouti, 2018). Job resources may include organizational support, relational environments, and professional competencies that enable individuals to cope with workload pressures and role complexity. In reform-driven educational environments characterized by heightened accountability, curriculum changes, and technological adaptation, the presence of adequate organizational and personal resources becomes particularly critical (Skaalvik & Skaalvik, 2021). Within the TS25 context, two resources appear especially salient: communicative school climate as an organizational resource and digital pedagogical competence as a personal professional resource.

Although school climate has long been associated with teacher engagement, well-being, and effectiveness (Wang & Degol, 2016), the communicative dimension of climate remains conceptually underdeveloped in educational research. School climate is generally defined as a broad organizational construct encompassing various dimensions such as safety, leadership practices, relationships, and institutional norms. Within this broad conceptualization, communication is often treated as one element among many rather than examined as a distinct organizational process. Communicative school climate, however, specifically refers to the patterns of interaction, openness of dialogue, and transparency of information exchange that shape how members of the school community interpret and respond to organizational expectations. Communication therefore functions as a relational infrastructure through which reform goals are negotiated, interpreted, and operationalized (Avidov-Ungar & Forkosh-Baruch, 2023). Supportive communicative climates characterized by trust, professional dialogue, and collaborative sense-making strengthen psychological safety and collective efficacy, thereby facilitating instructional coherence. In contrast, fragmented or hierarchical communication structures may create ambiguity, suppress professional agency, and weaken the sustainability of reform initiatives (Collie et al., 2022). Regional studies further demonstrate that open communication practices can enhance teacher innovation and reform commitment in Southeast Asian school systems (Hadiyanto & Subhi, 2021; Khalid et al., 2024). Despite this evidence, communication remains frequently subsumed within broader climate constructs, obscuring its strategic role as an organizational resource influencing professional performance, particularly within centralized education systems such as Malaysia.

Alongside organizational climate, digital pedagogical competence has emerged as an increasingly important professional resource for teachers. Beyond technical proficiency, digital competence involves adaptive expertise and the ability to integrate technological tools meaningfully into instructional design, classroom interaction, and assessment practices (Valtonen et al., 2021). In the post-pandemic educational landscape, digital competence is widely recognized as a critical factor supporting instructional resilience, student engagement, and pedagogical innovation (Trust et al., 2022; Almås & Krumsvik, 2023). In Malaysia, digital transformation constitutes a key pillar of education reform; however, disparities in technological infrastructure and professional development

opportunities continue to affect the implementation of digital pedagogy, particularly in geographically dispersed regions such as Sabah (Ahmad et al., 2021). Although empirical research consistently demonstrates a positive association between teachers' digital competence and instructional effectiveness (Gudmundsdottir & Hatlevik, 2020; Yunus et al., 2022), many studies conceptualize digital competence primarily as an individual skill rather than situating it within the broader communicative and organizational environment in which teaching occurs.

The limited integration of these perspectives represents a significant theoretical gap. From a JD-R perspective, organizational and personal resources rarely operate independently; instead, they interact in ways that may amplify professional outcomes. Communicative school climates can provide the relational scaffolding through which digital practices are exchanged, legitimized, and collectively refined within professional communities. Conversely, teachers possessing strong digital pedagogical competence can enrich communicative processes by introducing innovative instructional strategies and expanding collaborative learning opportunities among colleagues. In the absence of a supportive communicative climate, digital competence may remain underutilized, while communication without sufficient technological capability may fail to translate professional dialogue into pedagogical innovation. Despite the conceptual relevance of this interaction, empirical studies simultaneously examining communicative school climate and digital pedagogical competence remain scarce, particularly within Malaysia's TS25 secondary school context.

By integrating communicative school climate and digital pedagogical competence within a unified JD-R framework, the present study advances a more systemic explanation of teacher performance in reform-driven and resource-diverse educational environments. Rather than treating organizational and individual factors as independent predictors, this study conceptualizes them as complementary professional resources that may operate synergistically to support teacher effectiveness under conditions of educational transformation.

Conceptual Framework And Hypotheses Development

Grounded in the Job Demands–Resources (JD-R) model, this study conceptualizes teacher performance as an outcome shaped by the availability and alignment of professional resources within reform-driven educational environments. The JD-R framework posits that job resources—defined as organizational, social, or personal factors that facilitate goal attainment and support professional functioning—play a critical role in sustaining employee motivation and performance under demanding conditions (Bakker & Demerouti, 2018). In large-scale educational reforms such as Malaysia's Transformasi Sekolah 2025 (TS25), teachers are required to navigate increasing instructional expectations, accountability pressures, and pedagogical innovation. Within such contexts, the presence of supportive organizational environments and relevant professional competencies becomes essential for sustaining effective teaching practice.

In the present study, communicative school climate and digital pedagogical competence are conceptualized as complementary professional resources operating across organizational and individual levels. Communicative school climate represents an organizational resource that structures interaction patterns within the school environment. Through transparent information exchange, professional dialogue, and collaborative meaning-making, communicative climates reduce role ambiguity, strengthen psychological safety, and facilitate collective interpretation of reform goals. Within reform-oriented schools, effective communication enables teachers to coordinate instructional practices, share pedagogical strategies, and collectively adapt to policy expectations. Consistent with the JD-R framework, such relational and structural resources can enhance motivation and professional engagement, thereby contributing to improved teacher performance.

Digital pedagogical competence, in contrast, represents an individual professional resource that enables teachers to effectively translate reform expectations into classroom practice. Beyond technical proficiency, digital competence encompasses adaptive expertise, pedagogical decision-making, and the capacity to integrate technology meaningfully into teaching and learning processes. Teachers possessing higher levels of digital pedagogical competence are better equipped to design technology-enhanced learning environments, sustain student engagement, and respond flexibly to emerging instructional challenges. From a JD-R perspective, such competence-based resources strengthen teachers' capacity to manage job demands while maintaining instructional effectiveness.

Importantly, the JD-R framework also recognizes that job resources may operate interactively rather than independently. When multiple resources are aligned, their combined influence can produce stronger motivational and performance outcomes than when each resource operates in isolation. Within reform-driven school systems, communicative school climates provide the social infrastructure through which professional knowledge—including digital teaching practices—is exchanged, legitimized, and refined. At the same time, teachers with strong digital pedagogical competence contribute innovative practices that enrich professional dialogue and collaborative learning processes within the school community. Consequently, communicative school climate and digital pedagogical competence may reinforce one another, creating a synergistic resource configuration that enhances teacher performance. This integrative perspective shifts the explanation of teacher effectiveness from isolated predictors toward a resource-interaction model consistent with the JD-R framework.

Accordingly, the following hypotheses are proposed:

H1: Communicative school climate is positively associated with teacher performance, as supportive communication enhances professional collaboration, psychological safety, and alignment with reform objectives.

H2: Digital pedagogical competence is positively associated with teacher performance, as higher levels of digital expertise strengthen instructional adaptability, pedagogical innovation, and classroom effectiveness.

H3: Communicative school climate and digital pedagogical competence interact synergistically such that the positive effect of communicative school climate on teacher performance becomes stronger when teachers possess higher levels of digital pedagogical competence.

METHODOLOGY

A cross-sectional quantitative design was employed to examine the direct and interactive effects of communicative school climate (SCC) and digital pedagogical competence (DPC) on teacher performance (TP) in TS25 secondary schools in Sabah. This design allows for the examination of theoretically specified relationships among constructs within a reform-driven educational context. Structural equation modeling (SEM) was used to simultaneously assess measurement validity and structural relationships, which is appropriate for testing complex relationships among latent variables and interaction effects (Hair et al., 2022). The analytical approach is consistent with the multidimensional nature of the constructs and the resource-interaction perspective derived from the Job Demands–Resources (JD-R) framework.

A multi-stage probability sampling strategy was employed to enhance representativeness. TS25 secondary schools were first randomly selected across Sabah's 24 educational districts, followed by stratified random sampling of teachers based on gender and teaching experience. This procedure ensured that the sample reflected key demographic characteristics of the teaching population within TS25 schools. After data screening, 350 valid responses were retained for analysis, exceeding recommended sample size thresholds for latent variable modeling and ensuring adequate statistical power for SEM analysis (Kline, 2016). Sabah provides a theoretically relevant research setting due to its geographical diversity, infrastructural variation, and uneven access to digital resources, offering a rigorous context for examining the proposed relationships.

Validated measurement instruments were adapted to the Malaysian educational context. Communicative school climate (SCC) was measured using communicative dimensions derived from the Organizational Climate Description Questionnaire (Hoy & Tarter, 1997), consisting of 10 items capturing openness of communication, professional dialogue, and transparency in information exchange. Digital pedagogical competence (DPC) was operationalized using measures aligned with the DigCompEdu framework that capture teachers' ability to integrate digital technologies into pedagogical practice (Valtonen et al., 2021), comprising 9 items. Teacher performance (TP) was assessed through a localized adaptation of Danielson's (2007) Framework for Teaching, including 12 items reflecting instructional effectiveness, classroom management, and professional engagement. All constructs were measured using five-point Likert scales ranging from strongly disagree to strongly agree.

Several procedural steps were implemented to reduce potential common method bias associated with self-reported survey data. Respondent anonymity was assured, participation was voluntary, and items were carefully worded to minimize evaluation apprehension. In addition, established measurement instruments were used and items representing different constructs were presented in mixed order within the questionnaire. Statistical assessments were also conducted during data analysis to evaluate potential method variance.

Content validity was confirmed through expert review and back-translation procedures to ensure linguistic and conceptual equivalence. A pilot study demonstrated satisfactory reliability across constructs (Cronbach’s $\alpha > .80$). Prior to hypothesis testing, the dataset was screened for missing values, outliers, and normality assumptions. Confirmatory factor analysis (CFA) was conducted to establish construct validity, with standardized factor loadings exceeding .60, composite reliability (CR) above .70, and average variance extracted (AVE) above .50. Model fit was evaluated using multiple indices including the Comparative Fit Index (CFI), Tucker–Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR).

The structural model tested the hypothesized direct relationships between communicative school climate and teacher performance ($SCC \rightarrow TP$), and digital pedagogical competence and teacher performance ($DPC \rightarrow TP$). In addition, a latent interaction effect ($SCC \times DPC \rightarrow TP$) was estimated using latent moderated structural equation modeling to capture the synergistic influence of organizational and personal resources as proposed by the JD-R framework. Gender, teaching experience, and school location were included as control variables to account for potential contextual influences on teacher performance. Bootstrapping with 5,000 resamples was employed to ensure the robustness of parameter estimates and significance testing.

Ethical clearance for the study was obtained from the Universiti Malaysia Sabah Ethics Committee and the Sabah State Education Department. Participation was voluntary, informed consent was obtained from all respondents, and confidentiality of responses was strictly maintained throughout the research process.

FINDINGS

Respondent Characteristics

The final sample comprised 350 teachers from TS25 secondary schools across Sabah. Female teachers represented 62% of respondents, and the majority (54%) were aged between 31 and 45 years. Teaching experience was well distributed (46% reporting 6–15 years), and respondents were drawn from urban (58%) and rural (42%) schools, reflecting contextual diversity.

Independent t-tests indicated no significant gender differences across constructs. However, urban teachers reported significantly higher digital pedagogical competence than rural teachers ($p < .05$), highlighting contextual digital disparities.

Descriptive Statistics and Correlations

Table 1 presents descriptive statistics, reliability coefficients, and inter-construct correlations.

Table 1 Descriptive Statistics, Reliability, and Correlations (N = 350)

Variable	Mean	SD	Skew	Kurtosis	α	1	2	3
1. SCC	3.72	0.56	-0.32	0.21	.87	–		
2. DPC	3.68	0.59	-0.18	-0.66	.85	.44**	–	
3. TP	3.75	0.54	-0.41	0.49	.89	.48**	.52**	–

Note. SCC = School Climate Communication; DPC = Digital Pedagogical Competence; TP = Teacher Performance. $p < .01$.

All constructs exceeded the midpoint of the scale, indicating moderately positive perceptions. Reliability values were strong ($\alpha = .85-.89$). Correlations were positive and moderate, supporting construct distinctiveness while indicating meaningful associations.

Measurement Model

The three-factor CFA demonstrated good model fit:

$\chi^2/df = 1.92$, CFI = .95, TLI = .94, RMSEA = .051, SRMR = .045.

All standardized loadings were significant ($p < .001$) and ranged from .64 to .86.

Table 2 Measurement Model Results

Construct	Example Item	Loading	CR	AVE	α
SCC	Communication in my school is clear and timely	.78	.87	.56	.87
DPC	I redesign lessons using digital tools for engagement	.81	.85	.58	.85
TP	I refine teaching strategies based on student outcomes	.83	.89	.61	.89

Convergent validity was established ($CR \geq .70$; $AVE \geq .50$). Discriminant validity was confirmed via Fornell-Larcker criteria and HTMT ($< .85$).

Structural Model

The structural model demonstrated satisfactory fit:

$\chi^2/df = 2.00$, CFI = .94, TLI = .93, RMSEA = .055, SRMR = .048.

Both SCC and DPC significantly predicted teacher performance.

Table 3 Structural Path Estimates and Effect Sizes

Path	β	SE	t	p	f ²	Result
SCC → TP	.29	.07	4.21	<.001	.12	Supported (H1)
DPC → TP	.36	.06	5.67	<.001	.18	Supported (H2)
SCC × DPC → TP	.15	.06	2.44	.015	.05	Supported (H3)

The model explained 46% of the variance in teacher performance ($R^2 = .46$). The interaction model accounted for an additional 5% variance beyond main effects ($\Delta R^2 = .05$, $p < .05$), indicating incremental explanatory power.

Summary of Findings

All three hypotheses were supported. Communicative school climate and digital pedagogical competence independently predicted teacher performance, and their interaction produced additional explanatory power. The findings substantiate a resource-interaction model, demonstrating that organizational and competence-based resources operate synergistically in reform-driven contexts such as TS25 secondary schools in Sabah.

DISCUSSION

The present study examined how communicative school climate and digital pedagogical competence jointly relate to teacher performance in reform-driven educational contexts. Consistent with the Job Demands–Resources (JD-R) framework, both constructs were positively associated with teacher performance, and their interaction contributed additional explanatory power to the model. These findings suggest that professional effectiveness in TS25 secondary schools is linked not only to the presence of organizational or individual resources independently, but also to the alignment between relational and competence-based resources within the school environment.

The significant relationship between communicative school climate and teacher performance highlights the importance of communication as a distinct organizational resource. While previous research has widely examined school climate as a multidimensional construct encompassing safety, relationships, and leadership, the present study isolates the communicative dimension as a specific relational mechanism shaping professional interaction. In reform-oriented environments, communicative infrastructures influence how policy expectations are interpreted, negotiated, and enacted by teachers. Transparent dialogue, shared meaning-making, and professional trust may strengthen instructional coherence and enhance teachers' sense of professional agency. In centralized education systems such as Malaysia's, communicative school climate may also mitigate hierarchical rigidity by fostering psychological safety and collaborative problem-solving. These findings therefore reinforce the view that reform success depends not solely on structural policy design but also on relational conditions that enable professional engagement.

Digital pedagogical competence was also positively associated with teacher performance, with a comparatively stronger direct effect observed in the model. This finding underscores the importance of competence-based resources in contemporary technology-mediated schooling environments. Teachers who possess stronger digital pedagogical capabilities are better equipped to redesign instruction, facilitate interactive learning experiences, and respond adaptively to evolving classroom demands. In geographically diverse and resource-constrained regions such as Sabah, digital competence may function as a professional capacity that enables teachers to navigate infrastructural limitations while maintaining instructional effectiveness. From the perspective of the JD-R framework, such personal resources strengthen teachers' ability to manage job demands while sustaining professional performance.

The interaction between communicative school climate and digital pedagogical competence represents the central contribution of this study. The results indicate that the association between communicative climate and teacher performance becomes stronger when teachers possess higher levels of digital pedagogical competence. This pattern suggests the presence of a resource-synergy mechanism in which organizational and personal resources reinforce one another. Supportive communication environments facilitate professional dialogue and knowledge sharing, while digitally competent teachers contribute innovative instructional practices that enrich collaborative learning processes within schools. Rather than operating independently, these resources appear to function in combination, strengthening the relationship between professional interaction and instructional effectiveness. This finding contributes to JD-R scholarship by empirically illustrating how cross-level resource alignment may shape teacher performance within reform-oriented educational systems.

Within the Sabah context, disparities in digital competence between urban and rural schools reflect broader structural inequalities in access to technological infrastructure and professional development opportunities. Although such disparities remain a challenge, the observed interaction suggests that strengthening teachers' digital capability may partially enhance the effectiveness of communicative processes in resource-constrained environments. Overall, the findings indicate that teacher performance within TS25 schools is closely associated with the alignment of relational and technological resources rather than with reform mandates alone.

Theoretical Implications

This study contributes to the literature in several ways. First, it extends the application of the Job Demands–Resources (JD-R) framework within educational reform contexts by demonstrating that organizational and competence-based resources may interact to support teacher performance. Rather than treating organizational

climate and professional competence as independent predictors, the findings highlight the importance of resource alignment in shaping professional effectiveness.

Second, the study contributes to school climate research by foregrounding communication as a strategic relational infrastructure within schools. While previous studies frequently conceptualize school climate as a broad contextual backdrop, the present findings emphasize the communicative dimension as an interactional mechanism that facilitates professional collaboration, collective interpretation of reform goals, and instructional coordination.

Third, the study reconceptualizes digital pedagogical competence as an embedded professional resource situated within communicative ecosystems rather than as a purely technical skill. By highlighting the interplay between communication and digital capability, the findings offer a more integrated perspective for understanding how organizational and individual factors jointly shape teacher performance in reform-driven educational environments.

Practical Implications

From a practical perspective, the findings suggest that efforts to improve teacher performance should prioritize the development of both communicative and professional resources within schools. Strengthening communicative infrastructures—through transparent leadership communication, structured professional dialogue, and collaborative learning platforms—may enhance teachers' capacity to interpret and implement reform initiatives effectively.

At the same time, digital pedagogical competence should be cultivated through sustained and practice-embedded professional development rather than through isolated technical training programs. Professional learning opportunities that integrate pedagogical reflection, collaborative experimentation, and peer knowledge sharing may strengthen teachers' capacity to translate digital competence into effective classroom practice.

The interaction between communication and digital competence also indicates that reform strategies focusing on a single resource may be insufficient. Communication without adequate technological capability may limit instructional innovation, whereas digital expansion without supportive communicative environments may lead to fragmented practices. In resource-diverse regions such as Sabah, policy initiatives should therefore adopt integrated strategies that simultaneously address communication practices, digital capability development, and infrastructural disparities between urban and rural schools.

Limitations and Future Research

Several limitations should be considered when interpreting the findings of this study. First, the cross-sectional design restricts the ability to draw causal conclusions regarding the relationships among communicative school climate, digital pedagogical competence, and teacher performance. Future research employing longitudinal designs may provide deeper insights into how these professional resources evolve and interact over time within reform contexts.

Second, teacher performance was measured using self-reported survey data, which may introduce potential common method bias despite procedural safeguards implemented during data collection. Future studies may benefit from incorporating multi-source performance indicators such as classroom observations, administrative evaluations, or student learning outcomes in order to strengthen measurement validity.

Third, while Sabah provides a theoretically meaningful context due to its infrastructural diversity and reform implementation challenges, broader generalization requires comparative studies across different educational systems and policy environments.

Finally, future research may extend the present model by incorporating additional contextual moderators that influence resource interaction mechanisms. Variables such as instructional leadership, access to technological infrastructure, and the presence of professional learning communities may further illuminate how organizational and personal resources interact to shape teacher effectiveness within the Job Demands–Resources framework.

CONCLUSION

This study provides empirical evidence that teacher performance in reform-driven educational contexts is closely associated with the alignment of complementary professional resources rather than with isolated organizational or individual factors alone. Drawing on the Job Demands–Resources (JD-R) framework, the findings indicate that communicative school climate and digital pedagogical competence are both positively related to teacher performance, while their interaction contributes additional explanatory power. These results suggest that relational organizational environments and competence-based capabilities may operate in combination to support professional effectiveness within reform-oriented school systems.

By situating the analysis within Malaysia's TS25 reform and the resource-diverse context of Sabah, the study highlights the relevance of cross-level resource integration in large-scale educational transformation. Communicative school climates function as relational infrastructures that facilitate shared interpretation of reform goals, professional dialogue, and collaborative problem-solving among teachers. At the same time, digital pedagogical competence equips teachers with the capacity to translate such collaboration into innovative instructional practices within increasingly technology-mediated learning environments. The findings therefore suggest that the effectiveness of reform initiatives may depend not only on policy mandates but also on the extent to which organizational communication processes and teacher competencies are aligned within schools.

Overall, the study underscores the importance of simultaneously strengthening communicative infrastructures and digital pedagogical capability as interconnected dimensions of professional development. In reform-intensive and resource-diverse educational settings, strategic efforts that integrate these organizational and individual resources may contribute to more sustainable improvements in teacher performance and instructional practice.

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