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ORGANIZATIONAL CLIMATE, TEACHER EMPOWERMENT, WORK MOTIVATION AND ICT EFFECTIVENESS IN IMPROVING TEACHER PERFORMANCE

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ABSTRACT

Teacher performance plays a critical role in improving educational quality, particularly in vocational schools facing rapid curricular and technological changes. This study examines the direct and indirect effects of organizational climate, teacher empowerment, work motivation, and ICT effectiveness on teacher performance in private vocational schools. A quantitative survey design was employed involving 156 permanent teachers from private vocational schools in Pontianak City, Indonesia. Data were collected using validated questionnaires and analyzed through path analysis and Sobel tests to identify mediating effects. The findings indicate that organizational climate, teacher empowerment, work motivation, and ICT effectiveness have significant direct effects on teacher performance. Furthermore, work motivation and ICT effectiveness mediate the relationships between organizational climate and teacher empowerment on teacher performance. The Scientific Identification Theory to Conduct Operation Research in Education Management (SITOREM) method was applied to determine priority indicators for improvement. This study contributes to educational management literature by proposing an integrated model of teacher performance and providing strategic recommendations for vocational education institutions.

Keywords: *Teacher performance; Organizational climate; Teacher empowerment; Work motivation; ICT effectiveness.*

INTRODUCTION

Teacher performance is widely acknowledged as a crucial determinant of educational quality and learning effectiveness. In educational institutions, teachers function as key agents who translate policies, curricula, and institutional goals into meaningful learning experiences. The effectiveness with which teachers perform their professional roles directly affects student achievement, engagement, and institutional outcomes. High-performing teachers demonstrate not only strong pedagogical competence and subject-matter mastery but also adaptability to organizational demands, responsiveness to diverse learner needs, and the ability to integrate technological innovations into instructional practices. Consequently, improving teacher performance has become a strategic priority for educational systems aiming to enhance academic outcomes and institutional sustainability.

Teacher performance should not be viewed solely as an individual attribute but rather as the result of complex interactions among personal, organizational, and contextual factors. According to Mangkunegara (2017), performance is shaped by the interaction between ability and motivation, both of which are influenced by organizational systems and work environments. Similarly, Robbins and Judge (2017) emphasize that

performance depends on the alignment between individual capability, motivation, and organizational support. Within educational settings, these perspectives indicate that teacher performance emerges from the dynamic interplay between psychological factors and organizational conditions.

One of the most influential organizational determinants of teacher performance is organizational climate, which reflects teachers' perceptions of their work environment (Hoy & Miskel, 2016; Litwin & Stringer, 1968). A positive school climate is characterized by supportive leadership, open communication, mutual trust, and collaborative professional relationships. Such conditions foster job satisfaction, commitment, and engagement, thereby enhancing performance. Empirical evidence consistently shows that schools with supportive climates tend to demonstrate higher levels of teacher effectiveness and organizational productivity (Hoy & Miskel, 2016). However, although the direct influence of organizational climate on performance has been widely examined, its indirect effects through psychological mechanisms remain insufficiently explored.

Another critical factor influencing teacher performance is teacher empowerment. Empowerment refers to the extent to which teachers are granted autonomy, authority, and participation in decision-making processes affecting their work (Short & Rinehart, 1992; Spreitzer, 1995). Research indicates that empowerment positively influences teacher commitment and performance (Cansoy, 2019). Empowered teachers are more likely to adopt innovative instructional strategies, collaborate with colleagues, and contribute to school improvement. Despite this evidence, integrative research that examines empowerment alongside other organizational and psychological variables remains limited, particularly within vocational education contexts.

Work motivation serves as a key psychological mechanism linking organizational conditions to performance outcomes. Motivation reflects the internal drive that directs effort, persistence, and behavior toward achieving goals. It includes intrinsic and extrinsic dimensions (Ryan & Deci, 2020) and is influenced by both hygiene and motivational factors (Herzberg et al., 1959). Robbins and Judge (2017) highlight motivation as a central determinant of sustained performance. In educational contexts, motivated teachers are more likely to engage in professional development, implement innovative teaching practices, and maintain high instructional standards. Nevertheless, empirical studies that position motivation as a mediating variable within comprehensive structural models remain limited, particularly in private vocational schools.

In addition to organizational and psychological factors, the rapid advancement of information and communication technology (ICT) has introduced new dimensions to teacher performance. ICT plays a significant role in instructional delivery, assessment, and professional collaboration. Kozma (2011) argues that ICT enhances educational quality when effectively integrated into pedagogy, while UNESCO (2018) identifies digital competence as a core component of teacher professionalism. ICT integration enhances instructional effectiveness and digital competencies (UNESCO, 2018; OECD, 2021). However, disparities in ICT effectiveness persist, especially in vocational education, where technological demands evolve rapidly.

Vocational education presents unique challenges because teachers must integrate theoretical knowledge with practical skills and adapt to industry developments. These demands require strong organizational support, empowerment, motivation, and effective

ICT utilization. Despite the importance of vocational education in workforce development, empirical studies examining teacher performance within this contextparticularly those employing integrative analytical frameworksremain scarce.

Although previous studies have examined organizational climate, teacher empowerment, work motivation, and ICT effectiveness individually, relatively few have explored their combined direct and indirect relationships within a single model. This fragmented approach limits a comprehensive understanding of teacher performance dynamics and constrains the development of holistic improvement strategies. Furthermore, decision-support approaches such as the Scientific Identification Theory to Conduct Operation Research in Education Management (SITOREM), which integrates statistical analysis with expert judgment (Hardhienata, 2017), remain underutilized in teacher performance research.

Recent empirical evidence underscores the importance of organizational climate in shaping teacher engagement and effectiveness (Hallinger & Kulophas, 2020) and highlights empowerment as a driver of professional commitment and instructional quality (Ghaffari et al., 2024). Additionally, teachers' readiness and competence are critical for effective ICT integration (Tondeur et al., 2022). However, limited research simultaneously examines how organizational climate and empowerment influence performance through motivation and ICT effectiveness within an integrated framework, particularly in vocational schools.

Therefore, this study aims to develop a comprehensive model of teacher performance by analyzing the direct and indirect relationships among organizational climate, teacher empowerment, work motivation, ICT effectiveness, and teacher performance using path analysis. Additionally, the study applies SITOREM analysis to identify priority indicators for improvement. By integrating organizational, psychological, and technological perspectives within a single empirical framework, this study seeks to contribute to the theoretical advancement of teacher performance research and provide practical guidance for educational leaders and policymakers.

RESEARCH METHODS

This study employed a quantitative approach using a survey design to examine the direct and indirect relationships among organizational climate, teacher empowerment, work motivation, ICT effectiveness, and teacher performance. A causal research design was applied to identify both direct effects and mediating mechanisms among the variables. The survey method was considered appropriate as it allows for the collection of standardized data from a large number of respondents to test theoretical relationships empirically. Path analysis was utilized to assess the structural relationships among variables and to determine the strength of direct and indirect effects within the proposed model. Additionally, this design enables a comprehensive evaluation of complex interrelationships among organizational, psychological, and technological factors influencing teacher performance.

The population consisted of permanent foundation teachers (Guru Tetap Yayasan) working in private vocational schools in Pontianak City, Indonesia. From a total population of 254 teachers across 30 private vocational schools, a sample of 156 teachers was selected using proportional random sampling. Proportional random sampling was applied

to ensure that each school was represented in the sample according to its proportion of teachers in the population. This sampling technique was chosen to minimize sampling bias and enhance the representativeness of the sample. All participants had a minimum of one year of teaching experience to ensure sufficient familiarity with the organizational environment. Participation was voluntary, and confidentiality of respondents' information was strictly maintained throughout the research process. The sample size was determined based on Yamane's (1967) formula with a 5% margin of error, which is expressed as follows: "n = N / (1 + N(e)^2)", where n represents the sample size, N denotes the population size, and e refers to the margin of error.

Data were collected using structured questionnaires designed to measure five key variables: organizational climate, teacher empowerment, work motivation, ICT effectiveness, and teacher performance. All instruments were developed based on well-established theoretical frameworks and previous empirical studies, and were carefully adapted to suit the context of private vocational schools. The organizational climate instrument captured teachers' perceptions of leadership support, communication, collegial relationships, and work environment. Teacher empowerment was measured through indicators of professional autonomy, participation in decision-making, competence, and perceived impact.

Work motivation was assessed using indicators reflecting both intrinsic and extrinsic motivational factors, including achievement, recognition, responsibility, and work satisfaction. ICT effectiveness was measured by evaluating the extent to which information and communication technology supported instructional activities, administrative tasks, and professional collaboration. Teacher performance was assessed using a behavior rating scale encompassing instructional planning, classroom management, instructional delivery, evaluation practices, and professional responsibilities.

Responses were measured using Likert-type and behavior rating scales ranging from 1 (never/strongly disagree) to 5 (always/strongly agree). Prior to data collection, all instruments were pilot-tested to ensure clarity, validity, and reliability. Item validity was assessed using Pearson's product-moment correlation, while internal consistency reliability was evaluated using Cronbach's alpha coefficients, all of which met acceptable reliability standards ($\alpha > 0.70$), indicating that the instruments were suitable for subsequent data analysis.

Data analysis was conducted using both descriptive and inferential statistical techniques. Descriptive statistics were employed to summarize the characteristics of each research variable, including mean scores, standard deviations, and distribution patterns, to provide an overview of teachers' perceptions and performance levels. Inferential statistical analysis was subsequently applied to test the proposed research model and hypotheses.

Path analysis was used to examine the direct and indirect relationships among organizational climate, teacher empowerment, work motivation, ICT effectiveness, and teacher performance. This analytical technique was selected because it enables the simultaneous estimation of multiple causal relationships and the identification of mediating effects within a comprehensive structural model. To test the significance of indirect effects, Sobel tests were conducted to determine the mediating roles of work

motivation and ICT effectiveness in the relationships between the independent variables and teacher performance.

All statistical analyses were performed using IBM SPSS Statistics version 25, which was utilized for descriptive analysis, assumption testing, and path coefficient estimation. Prior to hypothesis testing, key statistical assumptions, including normality, linearity, multicollinearity, and homogeneity, were examined and confirmed to meet acceptable criteria, ensuring the robustness of the analytical results.

In addition to path analysis, the Scientific Identification Theory to Conduct Operation Research in Education Management (SITOREM) method was employed to identify priority indicators for improvement (Hardhienata, 2017). SITOREM integrates empirical statistical results with expert judgment to rank indicators based on their contribution to performance enhancement. The results of the SITOREM analysis were used to generate practical and strategic recommendations for improving teacher performance in private vocational schools. Participation in this study was voluntary, and respondents were informed about the purpose of the research. Confidentiality and anonymity of the participants were assured throughout the research process.

RESULTS AND DISCUSSION

A. Descriptive Results

Table 1. Descriptive Statistics of Research Variables

Variable	N	Mean	SD
Teacher Performance	156	78.21	9.18
Work Motivation	156	76.34	8.95
Organizational Climate	156	74.88	9.02
Teacher Empowerment	156	75.67	8.73
ICT Effectiveness	156	77.10	9.05

The descriptive analysis shows that all research variables are perceived at a moderate to high level. Teacher performance and ICT effectiveness demonstrate the highest mean scores, indicating their dominant roles in the instructional process.

B. Hypothesis Testing Results

Table 2. Direct Effects among Variables

Path	β	t	p
Work Motivation → Teacher Performance	0.312	4.52	< 0.001
Organizational Climate → Teacher Performance	0.284	3.97	< 0.001
Teacher Empowerment → Teacher Performance	0.261	3.68	< 0.001
ICT Effectiveness → Teacher Performance	0.298	4.21	< 0.001

The results indicate that all independent variables have significant direct effects on teacher performance ($p < 0.05$). Work motivation shows the strongest influence, followed by ICT utilization.

C. Model Explanation Power

Table 3. Coefficient of Determination

Dependent Variable	R^2
Teacher Performance	0.67

The structural model explains 67% of the variance in teacher performance, indicating a strong explanatory power.

D. SITOREM-Based Priority Analysis

Table 4. Priority Indicators for Improvement

Indicator	Category
ICT-based Learning Media	Priority Improvement
Instructional Innovation	Priority Improvement
Achievement Motivation	Maintain
Organizational Support	Maintain

The SITOREM analysis highlights ICT-based learning media and instructional creativity as priority areas for improvement.

Direct Effects on Teacher Performance

The results of this study indicate that organizational climate has a positive and significant direct effect on teacher performance in private vocational schools. A supportive organizational climatecharacterized by fairness, collegial relationships, transparent communication, and institutional supportcreates psychological safety and professional comfort for teachers. These conditions enable teachers to concentrate on instructional responsibilities, collaborate with colleagues, and consistently meet professional standards. In vocational education settings, where instructional activities often involve complex practice-based learning, a positive organizational climate plays a crucial role in sustaining instructional effectiveness and professional responsibility.

Teacher empowerment was also found to have a significant positive direct effect on teacher performance. Empowered teachers tend to demonstrate greater autonomy, initiative, and accountability in carrying out instructional tasks. Involvement in decision-making processes, curriculum development, and instructional planning fosters a sense of ownership and professional responsibility. This finding confirms that empowerment is not merely an administrative concept but a strategic mechanism that enables teachers to optimize their professional potential. In private vocational schools, empowerment allows teachers to adapt instructional content to industry needs and technological developments, thereby improving instructional relevance and quality.

Work motivation significantly influences teacher performance as a direct determinant. Teachers with higher levels of motivation exhibit stronger commitment, persistence, and engagement in the teaching and learning process. Motivation functions as an internal driving force that encourages teachers to continuously improve instructional quality, manage classroom challenges, and participate in professional development activities despite organizational constraints. This finding supports motivational theories that emphasize motivation as a key determinant of performance, particularly in professions that require sustained cognitive and emotional involvement such as teaching.

The effectiveness of ICT effectiveness also shows a significant positive direct effect on teacher performance. Teachers who effectively integrate ICT into their instructional practices demonstrate improved lesson planning, classroom interaction, and learning facilitation. ICT supports access to diverse learning resources, interactive instructional strategies, and efficient administrative processes. In vocational education, effective ICT use enhances instructional relevance by enabling teachers to simulate industry practices and technology-based work environments. This finding confirms that digital competence has become an essential component of teacher professionalism.

Indirect Effects through Work Motivation and ICT Effectiveness

The results indicate that work motivation mediates the relationship between organizational climate and teacher performance. A positive organizational climate strengthens teachers' motivation, which subsequently enhances their performance. This mediation effect highlights that organizational support alone is insufficient unless it is translated into increased motivational states among teachers.

Similarly, teacher empowerment indirectly affects teacher performance through work motivation. Empowerment practices that involve teachers in decision-making processes and professional development initiatives increase their motivation, which in turn improves performance outcomes.

In addition, ICT effectiveness mediates the influence of organizational climate and teacher empowerment on teacher performance. Supportive organizational conditions and empowerment initiatives encourage teachers to utilize ICT more effectively, leading to improved instructional performance.

Strategic Findings Based on SITOREM Analysis

The SITOREM analysis identified strategic priority indicators for improving teacher performance in private vocational schools. Key priority areas include strengthening work motivation, improving ICT competencies, and enhancing empowerment practices. These indicators were identified as having high contributions to teacher performance but relatively lower achievement levels, making them critical leverage points for improvement.

Motivation-related indicators, such as professional recognition and career development opportunities, emerged as areas requiring immediate attention. ICT-related indicators, including access to technology, digital skills training, and continuous ICT support, were also identified as strategic priorities. In addition, empowerment-related indicatorssuch as participation in decision-making and professional autonomywere highlighted as essential for sustainable performance improvement.

Overall, the SITOREM findings confirm that teacher performance improvement should be approached as a structured, evidence-based, and strategic process. By focusing on priority indicators while maintaining well-performing aspects, school leaders and policymakers can design targeted interventions that effectively enhance teacher performance in private vocational school contexts.

Discussion

The findings of this study confirm that organizational climate is a fundamental determinant of teacher performance in private vocational schools. A positive organizational climate fosters psychological safety, trust, open communication, and professional collaboration, which collectively support sustained teacher engagement and effectiveness. When teachers perceive their working environment as supportive and conducive to professional growth, they are more likely to demonstrate commitment to instructional quality and institutional goals. This reinforces the perspective that teacher performance is not solely determined by individual competence but is embedded within the broader organizational context. The results are consistent with prior research emphasizing that motivation mediates organizational influences on performance (Van Waeyenberg et al., 2022).

The significant role of organizational climate aligns with theories of organizational behavior and educational management that highlight contextual influences on employee performance. Schools characterized by transparent leadership, collegial relationships, and participatory decision-making tend to cultivate stronger job satisfaction and organizational commitment. In vocational education, where teaching tasks are complex and often aligned with industry demands, supportive climates become even more critical. Teachers are required to continuously update technical knowledge, adapt instructional approaches, and respond to labor market needs, all of which necessitate environments that encourage collaboration and continuous learning.

Importantly, the results indicate that organizational climate influences teacher performance not only directly but also indirectly through psychological and behavioral mechanisms. A positive climate strengthens teachers' sense of belonging and professional value, thereby enhancing motivation and willingness to exceed minimum performance expectations. This finding supports the view that a healthy organizational climate is a foundational condition for sustainable school improvement and effective teaching. Consequently, interventions aimed at improving teacher performance should prioritize climate development as a central strategy rather than treating it as a peripheral factor.

Teacher empowerment also emerged as a significant predictor of performance, highlighting its importance as a practical mechanism for improving educational quality. Empowerment enables teachers to exercise professional autonomy, participate in decision-making, and assume responsibility for instructional and organizational outcomes. When teachers perceive their roles as meaningful and aligned with institutional objectives, their intrinsic motivation and professional commitment increase. This finding supports contemporary educational management perspectives that position empowerment as a driver of innovation and organizational effectiveness.

Within vocational education, empowerment is particularly relevant due to the dynamic nature of curricula and the need for instructional flexibility. Empowered teachers are better positioned to adapt learning materials, integrate industry practices, and design innovative teaching strategies aligned with students' practical skill development. The observed positive relationship between empowerment and performance indicates that providing teachers with voice and autonomy can enhance instructional quality and accountability. Moreover, empowerment contributes to performance both directly and

indirectly through increased work motivation and ICT effectiveness, illustrating its multidimensional influence.

Work motivation was identified as a critical mediating factor linking organizational climate and teacher empowerment to performance outcomes. This finding underscores motivation as a central psychological mechanism translating supportive organizational conditions into behavioral performance improvements. Teachers who experience supportive environments and empowerment demonstrate higher motivation, which enhances engagement, persistence, and adaptability in instructional practice. This result aligns with motivational theories such as Herzberg's two-factor theory, emphasizing the importance of both contextual and intrinsic drivers of performance.

The mediating role of motivation is particularly meaningful in private vocational schools, where resource constraints may limit external incentives. In such contexts, intrinsic motivation becomes essential for sustaining performance. The findings indicate that without sufficient motivational support, improvements in organizational climate or empowerment may not fully translate into enhanced performance. Therefore, performance improvement strategies should address teachers' psychological needs alongside structural reforms.

ICT effectiveness also plays a significant role in shaping teacher performance, reflecting the increasing importance of digital competence in contemporary education. Teachers who effectively integrate ICT into instructional practices can design more engaging learning experiences, improve instructional efficiency, and address diverse student needs. In vocational education, ICT is especially important because many competencies are technology-driven and closely linked to industry standards. Effective ICT use enables teachers to simulate real-world environments and enhance practical learning outcomes.

The findings indicate that ICT effectiveness influences performance both directly and indirectly, suggesting that technology integration is not merely a technical matter but also a pedagogical and organizational process. Successful ICT utilization depends on institutional support, training opportunities, and teachers' readiness to adopt technology. This supports previous research emphasizing that effective ICT integration requires alignment between organizational context, teacher motivation, and technological infrastructure.

The combined mediating effects of work motivation and ICT effectiveness provide a more holistic understanding of teacher performance dynamics. Organizational climate and empowerment create enabling conditions that enhance motivation and technology use, which subsequently improve performance outcomes. This integrative perspective advances existing literature by demonstrating that teacher performance is shaped by interconnected organizational, psychological, and technological factors rather than isolated influences.

From a theoretical standpoint, this study contributes to educational management research by integrating organizational behavior theory, motivation theory, and educational technology perspectives into a single empirical model. Examining both direct and indirect relationships offers a nuanced understanding of how contextual and individual factors interact to influence teacher performance, addressing limitations of prior studies that examined these variables separately.

From a practical perspective, the use of the SITOREM method provides valuable implications for educational leadership and policy. By combining statistical findings with expert judgment, SITOREM enables the identification of priority areas for intervention. The results suggest that strengthening organizational climate, enhancing empowerment practices, sustaining motivation, and improving ICT capacity should be prioritized to achieve meaningful performance improvements. This approach is particularly relevant for private vocational schools, where strategic prioritization is essential due to limited resources.

Overall, the study demonstrates that improving teacher performance requires a systemic and integrated approach. Organizational climate, empowerment, motivation, and ICT effectiveness operate as interdependent factors that collectively shape teacher performance. Addressing these dimensions simultaneously is essential for achieving sustainable improvements in educational quality. By aligning organizational structures, psychological support, and technological capacity, vocational education institutions can create conditions that enable teachers to perform optimally and contribute to improved student outcomes and institutional effectiveness.

Finally, this study is limited to private vocational schools in Pontianak City, and therefore the generalizability of findings to other contexts should be approached cautiously. The cross-sectional design also limits causal inference over time. Future research could expand the geographical scope, employ longitudinal designs, and incorporate additional variables such as leadership style, organizational commitment, or digital readiness to further enrich the explanatory model.

The results of this study provide robust evidence that organizational climate plays a central role in shaping teacher performance in private vocational schools. However, rather than merely confirming its positive influence, the findings suggest that organizational climate operates as a structural precondition that enables or constrains teachers' professional agency. This perspective extends beyond descriptive interpretations by positioning climate as a systemic factor that influences how teachers interpret expectations, allocate effort, and engage with instructional innovation. The mediating role of motivation observed in this study reinforces prior evidence that organizational factors exert their strongest effects when translated into psychological states (Van Waeyenberg et al., 2022). Thus, the findings challenge purely behavioral views of performance and support more nuanced socio-organizational interpretations.

From a theoretical standpoint, the strong influence of organizational climate aligns with organizational behavior theory but also raises questions about contextual dependency. While positive climate has consistently been associated with improved performance, the magnitude of its effect in this study suggests that climate may function differently in vocational education contexts compared to general education settings. Vocational schools operate within industry-oriented environments that demand adaptability and collaboration, which may amplify the importance of supportive climates. This indicates that future research should consider sector-specific organizational dynamics rather than assuming uniform effects across educational levels.

The significant effect of teacher empowerment further supports the argument that professional autonomy is a key mechanism for enhancing performance. However, the findings also reveal that empowerment alone is insufficient unless supported by

motivational and technological pathways. This highlights a critical nuance often overlooked in empowerment literature: autonomy does not automatically translate into improved outcomes unless teachers possess both the motivation and capacity to utilize that autonomy effectively. By demonstrating both direct and indirect effects, the study contributes to a more complex understanding of empowerment as a multidimensional construct that interacts with psychological and technological factors rather than functioning as a standalone predictor.

In the context of vocational education, empowerment appears particularly salient because instructional tasks require contextual adaptation and responsiveness to industry developments. Nevertheless, the findings also raise the possibility that excessive autonomy without adequate institutional support could lead to inconsistencies in instructional quality. This suggests that empowerment should be conceptualized not merely as increased discretion but as structured autonomy supported by professional development and organizational guidance.

Work motivation emerged as a pivotal mediating variable, confirming its role as the psychological bridge between organizational conditions and performance outcomes. The findings support motivational frameworks such as Herzberg's theory by demonstrating that both contextual factors (climate and empowerment) and intrinsic drivers jointly influence performance. However, the strength of the mediating effect also indicates that structural improvements alone may yield limited impact if they fail to enhance teachers' intrinsic engagement. This underscores the importance of integrating motivational strategies into organizational reforms rather than treating motivation as a secondary outcome.

The significance of motivation is particularly noteworthy in private vocational schools, where financial incentives and career structures may be less stable than in public institutions. In such contexts, intrinsic motivation becomes a critical resource sustaining professional commitment. This finding contributes to ongoing debates in educational management regarding whether performance improvement should prioritize structural reforms or psychological interventions, suggesting that effective strategies must integrate both dimensions.

ICT effectiveness also demonstrated substantial influence on teacher performance, reinforcing the view that digital competence has become an essential component of professional effectiveness. However, the results indicate that ICT effectiveness is not purely a technical variable; rather, it reflects the intersection of teacher readiness, institutional support, and pedagogical orientation. This finding supports integrative technology adoption models that emphasize contextual and human factors alongside infrastructure availability.

At the same time, the mediating role of ICT effectiveness highlights a potential risk: technology initiatives that focus primarily on infrastructure without addressing organizational culture and teacher motivation may fail to produce meaningful performance gains. Thus, the findings challenge technocentric approaches to educational reform and advocate for a more holistic perspective on digital transformation in schools.

By examining the combined mediating roles of work motivation and ICT effectiveness, this study advances a systems-oriented understanding of teacher performance. The results demonstrate that performance is shaped by a network of

interdependent influences rather than isolated variables, reinforcing the value of integrative analytical frameworks. This contribution is particularly important because much of the existing literature adopts fragmented approaches, limiting the ability to capture the complexity of real-world educational environments.

From a theoretical perspective, the study extends existing models by integrating organizational, psychological, and technological dimensions into a single explanatory framework. This integration not only confirms prior findings but also reveals how these dimensions interact dynamically. The study therefore contributes to bridging gaps between organizational behavior, motivation theory, and educational technology research, offering a more comprehensive conceptualization of teacher performance.

From a practical standpoint, the application of the SITOREM method provides an important contribution by translating empirical relationships into actionable priorities. While many studies identify determinants of performance, fewer offer decision-support mechanisms for practitioners. By identifying priority indicators such as motivation, ICT competence, and empowerment practices, the study demonstrates how analytical findings can inform strategic planning. This is particularly relevant for private vocational schools, where resource constraints necessitate targeted interventions rather than broad reforms.

Despite these contributions, the findings should be interpreted within the study's limitations. The focus on a single geographic context limits generalizability, as organizational cultures and institutional conditions may vary significantly across regions. Additionally, the cross-sectional design restricts causal inference, meaning that reciprocal relationshipssuch as high-performing teachers shaping organizational climatecannot be ruled out. Future research employing longitudinal or mixed-method approaches could provide deeper insights into causal mechanisms and contextual variations.

Overall, this study underscores that improving teacher performance requires moving beyond single-factor explanations toward a systemic perspective. Organizational climate and empowerment establish enabling conditions, while motivation and ICT effectiveness translate these conditions into behavioral outcomes. The findings highlight the importance of aligning structural, psychological, and technological interventions to achieve sustainable improvements in educational quality. Such an integrated approach is particularly critical in vocational education, where performance demands are multidimensional and closely linked to evolving industry expectations.

CONCLUSION

This study demonstrates that teacher performance (mean = 78.21) is significantly influenced by work motivation, organizational climate, teacher empowerment, and ICT effectiveness, with the research model explaining 67% of the performance variance. Work motivation proved to be the most dominant factor (β = 0.312), followed by ICT effectiveness. Strategic findings from the SITOREM analysis confirm that the main priority for improving performance should be focused on developing ICT-based learning media and teacher instructional innovation. It is recommended that school principals prioritize improving teacher competency in developing ICT-based media and learning innovations through regular training and the provision of adequate digital facilities, considering these two aspects are top priorities for enhancing performance. Furthermore, schools need to maintain a supportive organizational climate and a well-functioning empowerment

system, as these foundations have proven effective in maintaining teacher motivation, the most dominant factor in improving their performance. Schools and policymakers need to implement these findings by: (1) conducting intensive training to improve teacher competency in creating ICT-based learning media and innovative methods; (2) maintaining a supportive organizational climate and effective teacher empowerment strategies to maintain work motivation.

BIBLIOGRAPHY

Cansoy, G. (2019). The relationship between school principals' leadership behaviors and teachers' organizational commitment: The mediating role of teacher empowerment. *International Journal of Educational Management, 33*(7), 1320–1337. https://doi.org/10.1108/IJEM-08-2018-0244

Ghaffari, M., Riasati, M. J., & Bagheri, M. (2024). Effect of EFL teachers' experience and empowerment on their EFL students' achievement. *Journal of Language and Translation, 14*(1), 89–106. https://doi.org/10.30495/ttlt.2024.709391

Hallinger, P., & Kulophas, D. (2020). The evolving knowledge base on leadership and teacher professional learning: A bibliometric analysis. *Professional Development in Education, 46*(4), 521–540. https://doi.org/10.1080/19415257.2019.1642215

Hardhienata, S. (2017). The development of scientific identification theory to conduct operation research in education management. *IOP Conference Series: Materials Science and Engineering, 166*, 012007. https://doi.org/10.1088/1757-899X/166/1/012007

Herzberg, F., Mausner, B., & Snyderman, B. B. (1959). *The motivation to work* (2nd ed.). John Wiley & Sons.

Hoy, W. K., & Miskel, C. G. (2016). *Educational administration: Theory, research, and practice* (9th ed.). McGraw-Hill.

Kozma, R. B. (2011). A framework for ICT policies to transform education. In R. B. Kozma (Ed.), *Transforming education: The power of ICT policies* (pp. 19–36). UNESCO.

Litwin, G. H., & Stringer, R. A. (1968). *Motivation and organizational climate*. Harvard University Press.

Mangkunegara, A. A. A. P. (2017). *Manajemen sumber daya manusia perusahaan* (14th ed.). Remaja Rosdakarya.

OECD. (2021). *Education at a glance 2021: OECD indicators*. OECD Publishing.

Robbins, S. P., & Judge, T. A. (2017). *Organizational behavior* (17th ed.). Pearson.

Ryan, R. M., & Deci, E. L. (2020). Intrinsic and extrinsic motivation from a self-determination theory perspective: Definitions, theory, practices, and future directions. *Contemporary Educational Psychology, 61*, 101860. https://doi.org/10.1016/j.cedpsych.2020.101860

Short, P. M., & Rinehart, J. S. (1992). School participant empowerment scale: Assessment of level of empowerment within the school environment. *Educational and Psychological Measurement, 52*(4), 951–960. https://doi.org/10.1177/0013164492052004018

Spreitzer, G. M. (1995). Psychological empowerment in the workplace: Dimensions, measurement, and validation. *Academy of Management Journal, 38*(5), 1442–1465. https://doi.org/10.2307/256865

Tondeur, J., Scherer, R., Siddiq, F., & Baran, E. (2022). Enhancing teachers' readiness for technology integration: A systematic review. *Educational Research Review, 36*, 100450. https://doi.org/10.1016/j.edurev.2022.100450

UNESCO. (2018). *ICT competency framework for teachers* (Version 3). UNESCO.

Van Waeyenberg, T., Peccei, R., & Decramer, A. (2022). Performance management and teacher performance: The role of affective organizational commitment and exhaustion. *The International Journal of Human Resource Management, 33*(4), 623–646. https://doi.org/10.1080/09585192.2020.1754881

Yamane, T. (1967). *Statistics: An introductory analysis* (2nd ed.). Harper & Row.