



STRATEGIC MANAGEMENT PRACTICES AND TEACHER ENGAGEMENT: AN IMPACT ANALYSIS ON SCHOOLS

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Abstract

This study aims to analyze the relationship between strategic management, teacher participation, and school performance in public elementary schools, focusing on how leadership practices influence institutional outcomes. The research addresses a growing need to understand how strategic decision-making processes can be effectively aligned with grassroots teacher involvement to enhance educational quality and accountability. This study employs a quantitative correlational design using a validated and reliable 5-point Likert scale questionnaire administered to randomly selected public elementary school teachers. Data analysis was conducted using Structural Equation Modeling-Partial Least Squares (SEM-PLS) to test the hypothesized relationships among the three key variables. The results show that strategic management has a strong positive influence on teacher participation, with a contribution of 81.1%, and significantly impacts school performance with a contribution of 68.5%. However, the rejection of the third and fourth hypotheses which posited that teacher participation would mediate the relationship between strategic management and school performance suggests that teacher involvement in strategic planning is still peripheral rather than integral. External factors such as educational policy limitations, resource disparities, and administrative rigidity are identified as contributing barriers. This study introduces a novel model that maps the strategic alignment between management practices and teacher engagement, offering a deeper understanding of why participatory leadership may fail to translate into improved outcomes. It recommends a collaborative strategic management framework that genuinely embeds teacher input to optimize school performance and create sustainable educational change.

Keywords: Education, School Performance, SEM-PLS, Strategic Management, Teacher



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INTRODUCTION

The dynamic evolution of the global education system has amplified the demand for effective and professional strategies in achieving educational goals. As educational institutions strive for

excellence, the formulation and implementation of strategic management practices have become increasingly essential. School performance is influenced by various factors, among which strategic management and active teacher participation stand out as pivotal components. Strategic management encompasses the formulation of goals, the allocation of resources, and the ongoing monitoring and evaluation of performance, all directed toward ensuring organizational success (Ahlstrand et al., 2001; Kaplan, 2004; Bryson, 2018; Hasibuan et al., 2024). In educational institutions, particularly schools, the integration of strategic management practices can enhance the overall effectiveness of teaching and learning.

Teacher participation, meanwhile, contributes significantly to fostering a collaborative and inclusive school environment. It functions not only as a support mechanism for school leadership but also as a catalyst for holistic school improvement (Goddard et al., 2010; Fullan, 2014; Smith & Gümüş, 2022; Mpangala & Urio, 2024). The synergy between strategic management and teacher involvement is critical, as both elements intersect at the core of educational success and institutional development. Schools, as complex and dynamic organizations, must respond to the ever-changing demands of education by adopting strategic approaches that are responsive, adaptable, and sustainable. In this context, strategic management is not merely an administrative task but a transformative process that involves planning, monitoring, evaluating, and aligning educational practices with broader institutional goals (Smith & Gümüş, 2022; Mpangala & Urio, 2024; Rahmayanti & Kwalat, 2024). It entails managing resources efficiently, engaging relevant stakeholders, and fostering a culture of continuous improvement (Bryson, 2018). Furthermore, schools require strategies that not only address policy and structural aspects but also incorporate human elements, such as teacher engagement, emotional commitment, and professional autonomy.

Several studies have investigated the role of strategic management in improving school quality and institutional performance. For example, Nguyen et al. (2022) demonstrated the benefits of strategic planning in elevating educational quality, while Ha et al. (2024) noted the significance of teacher participation in achieving desired outcomes. However, the mechanisms through which teacher involvement directly contributes to or enhances the outcomes of strategic management remain underexplored, particularly in the context of developing countries where systemic limitations and socio-cultural factors may alter the effectiveness of such strategies (Ahmed et al., 2021; Hallinger & Heck, 2010; Yokuş, 2022; Muis et al., 2024; Rachmanto, & Akande, 2024). Although there is a growing body of literature on strategic management in education, most studies have focused on either institutional policy or leadership strategies in isolation. At the same time, research on teacher participation has often been limited to professional development or classroom-level engagement without linking it explicitly to broader strategic goals. There is a critical research gap in understanding the intersection between strategic management and teacher participation as mutually reinforcing elements that collectively influence school performance.

Moreover, the majority of prior research has been conducted in developed countries, with limited empirical evidence from developing regions. This geographic bias overlooks how resource constraints, hierarchical structures, and cultural dimensions in developing countries might shape both strategic planning and the extent of teacher involvement (Goddard et al., 2010; Ha et al., 2024). Additionally, school performance is often measured narrowly by academic achievement, ignoring broader dimensions such as social development, community engagement, and the long-term sustainability of education systems areas that are central to the Sustainable Development Goals (SDG 4: Quality Education) (Alcántara-Rubio et al., 2022; Maryanti et al., 2022).

This research offers both theoretical and practical contributions. Theoretically, it proposes a comprehensive framework for understanding how strategic management and teacher participation can jointly enhance school performance. Practically, it supports the development of inclusive, participatory policies and leadership models in schools. The findings are expected to inform the design of professional development programs that empower school leaders and teachers with the skills needed to contribute to strategic processes (Kaplan, 2004; Ha et al., 2024).

Moreover, the study aligns with the global education agenda by addressing SDG 4: ensuring inclusive, equitable, and quality education. It emphasizes the importance of strategic governance and collaborative leadership in adapting to community needs and promoting lifelong learning (Fullan, 2014; Bryson, 2018; Unesco, 2021). This study explores the nuanced dynamics between strategic management and teacher participation in shaping school performance. By addressing under-researched areas, incorporating contextual variables, and integrating theory with practice, the study aims to generate

actionable insights that support the development of effective and inclusive educational strategies. These insights will be valuable not only to researchers and educators but also to policymakers seeking to optimize education systems in diverse and evolving contexts.

This study aims to examine the interrelationship between strategic management implementation and teacher participation in influencing school performance. It seeks to explore how these two factors interact and contribute to the holistic development of educational institutions, especially in the context of developing countries. Unlike previous studies that examine these aspects independently, this research adopts a dual-focus, integrative approach investigating their combined effects and the synergistic potential of their interaction. This holistic lens is expected to provide more comprehensive and practical insights for improving education management practices.

RESEARCH METHOD

This study employs a quantitative approach with a correlational design to examine the relationship between strategic management practices, teacher engagement, and the performance of public schools. The correlational design is appropriate for identifying the strength and direction of associations between variables without manipulating them. The population in this research consists of teachers from various purposively selected public schools, ensuring the inclusion of schools with diverse organizational and performance characteristics. From this population, a total of 92 respondents were selected using a simple random sampling technique, a number deemed adequate for analysis using the Structural Equation Modeling–Partial Least Squares (SEM-PLS) method, as suggested by Hair Jr. et al. (2021). SEM-PLS is particularly well-suited for complex models involving multiple constructs and is robust even with relatively small sample sizes.

The research instrument used in this study was a structured questionnaire designed to measure teachers' perceptions of strategic management practices, their level of engagement, and perceived school performance. The questionnaire employed a 5-point Likert scale, ranging from strongly disagree (1) to strongly agree (5), to capture nuanced attitudes and perceptions. Prior to data collection, the instrument underwent a rigorous validity and reliability assessment, including Exploratory Factor Analysis (EFA) to ensure construct validity and Cronbach's alpha tests to confirm internal consistency and reliability of the measurement scales, as recommended by Kock (2017).

Data collection was conducted through both online and offline channels to ensure broader participation and convenience for respondents. The combination of distribution methods also helped mitigate potential biases arising from technological limitations or access issues. Once the data were collected, SEM-PLS analysis was performed using the latest version of SmartPLS software. The analysis process involved two primary stages: (1) evaluation of the measurement model, which included tests for convergent validity, discriminant validity, and reliability; and (2) evaluation of the structural model, where the hypothesized relationships among constructs were tested. Bootstrapping techniques were employed to assess the statistical significance of path coefficients and to evaluate direct and indirect effects between the variables (Hair et al., 2021).

This methodological approach allows for a comprehensive understanding of the complex interrelationships between strategic management practices and teacher engagement, and how these factors influence public school performance. The findings are expected to provide evidence-based insights and practical recommendations for enhancing strategic planning and teacher motivation as a pathway to improving educational outcomes in public schools.

RESULTS AND DISCUSSION

Assessing the validity of the variables in the structural model is the goal of the evaluation of the outer research model. The convergent and discriminant validity tests are the ones that are employed to assess the outer model (Hair Jr et al., 2021). Additionally, the reliability of the variables in the research structural model was assessed in order to assess the outer model (Hair & Alamer, 2022). The outcomes of the evaluation of the outer model are shown in Figure 1.

Convergent Validity

Validity Convergence The purpose of the convergent validity test is to assess how well variable indicators measure the construct. If an indicator's loading factor value is greater than 0.7, it has strong convergent validity (Hair Jr et al., 2021). Table 1 was displaying the findings of the convergent validity

test. It may be concluded that all of the research variable's indicators are valid for measuring the construct because table 1 shows that each indicator has a loading factor value greater than 0.7.

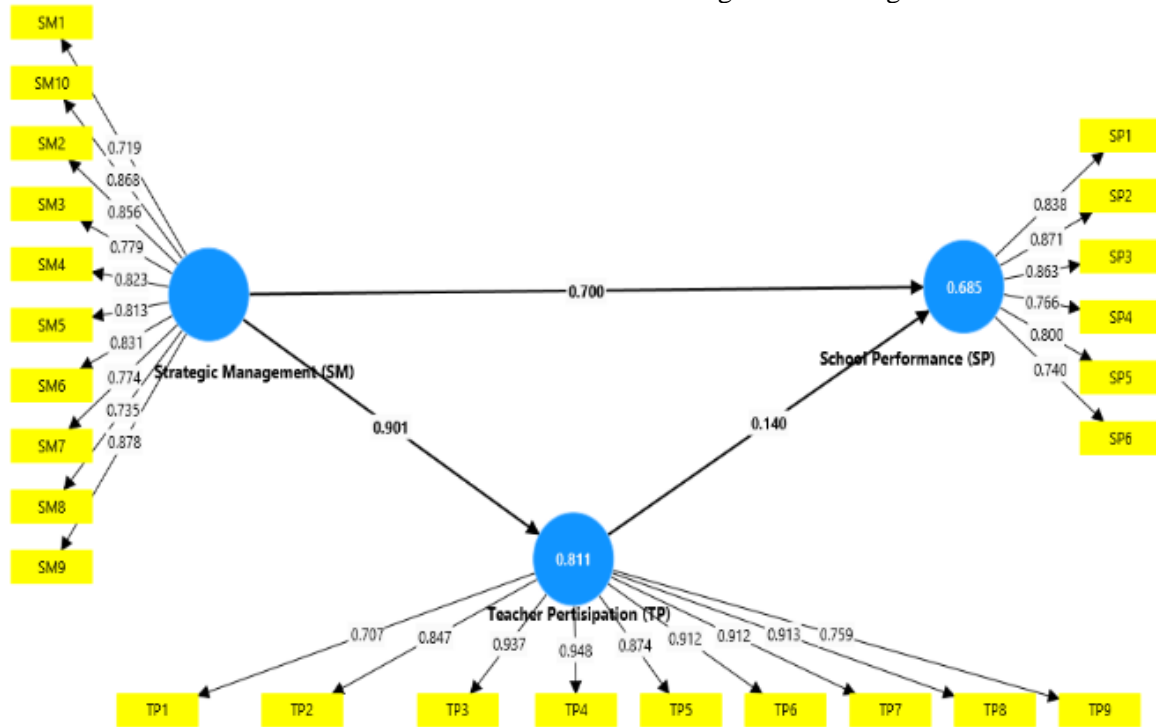


Figure 1. Evaluation Results of the Research Structural Model

Table 1. Convergent Validity Test Results

	School Performance (SP)	Strategic Management (SM)	Teacher Participation (TP)
SM1		0.719	
SM10		0.868	
SM2		0.856	
SM3		0.779	
SM4		0.823	
SM5		0.813	
SM6		0.831	
SM7		0.774	
SM8		0.735	
SM9		0.878	
SP1	0.838		
SP2	0.871		
SP3	0.863		
SP4	0.766		
SP5	0.800		
SP6	0.740		
TP1			0.707
TP2			0.847
TP3			0.937
TP4			0.948
TP5			0.874
TP6			0.912
TP7			0.912
TP8			0.913
TP9			0.759

All valid elements of the indicators showed loading factor values above the 0.7 criterion, as seen in the above figures and tables, confirming that each indicator has sufficient convergent validity

(Hair Jr et al., 2021). This suggests that the underlying constructions of the observable variables are consistently represented. In accordance with the guidelines for reflective measurement models, high loading factor values guarantee that the indicators make a significant contribution to their corresponding latent variables (Sarstedt et al., 2021). Additionally, the outcomes satisfy the minimal standards for internal consistency set by earlier structural equation modeling research, guaranteeing the measurement model's correctness and resilience).

Discriminant Validity

The purpose of the discriminant validity test is to determine how one variable differs from another (Harris & Jones, 2023). The Fornell-Lacker criteria are employed to assess discriminant validity. If a variable's loading value differs and is greater than that of other variables, it can be sufficiently differentiated from other variables (Afthanorhan, Awang, Abd Majid, et al., 2021). Table 2 displays the findings of the research variables' discriminant validity test. Since each variable in Table 2 has a unique loading value, it can be concluded that there is sufficient distinction between them all.

Table 2. Discriminant Validity Test Results

	School Performance (SP)	Strategic Management (SM)	Teacher Particiapation (TP)
School Performance (SP)	0.814		
Strategic Management (SM)	0.826	0.847	
Teacher Particiapation (TP)	0.770	0.901	0.911

Discriminant validity indicates the extent to which the constructs in the measurement model are truly different from each other, thus ensuring that each variable is measured uniquely (Dijkstra & Henseler, 2015). In this study, the evaluation of discriminant validity using the Fornell-Larcker and Heterotrait-Monotrait Ratio (HTMT) criteria showed that each variable had an adequate value. This confirms that the construct has the ability to differentiate itself significantly from other constructs in the model.

Table 3. Reliability test results for research variable

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_b)	Average variance extracted (AVE)
School Performance (SP)	0.898	0.904	0.922	0.663
Strategic Management (SM)	0.941	0.945	0.950	0.655
Teacher Particiapation (TP)	0.959	0.960	0.966	0.759

Based on the table 3, each variable has a Cronbach's alpha value above 0.7, which indicates that all data have a high level of reliability (Dijkstra & Henseler, 2015). Cronbach's alpha is used to measure the internal consistency of a research instrument, ensuring that items in one construct are well correlated with each other (Nunnally & Bernstein, 1994). Values above 0.7 are considered to meet the minimum reliability standards for social and management research. With high reliability, these results indicate that the instrument used is able to provide consistent and reliable results in measuring the intended construct.

Reliability

The purpose of the research variable reliability test is to evaluate how well variables work together to construct a structural model. The Cronbach's alpha value is used to assess the reliability of study variables. If a variable's Cronbach's alpha value is more than 0.7, it can be considered dependable (Nunnally & Bernstein, 1994). The findings of the reliability test for the research variable are displayed in Table 3. All of the research variables have Cronbach's alpha values above 0.7, which indicates that they are all considered to have good reliability, according to Table 3.

Inner Model

Assessing the correlation between the variables in the research structural model is the goal of the inner model evaluation. The evaluation of the inner model is divided into two phases: the R-square value analysis phase and the hypothesis testing phase (Harris & Jones, 2019).

Hypothesis Testing

If the t-statistic value is greater than 1.96 and the probability value is less than 0.05 or 5%, the study hypothesis can be accepted (Ghozali, n.d.; Hair et al., 2017; Hair & Alamer, 2022). The findings of the esearch hypothesis test are displayed in Table 4.

Table 4. Hypothesis test results

	Original Sample	T values	P values	Information
<i>Direct effect</i>				
Strategic Management (SM) -> School Performance (SP)	0.700	2.959	0.003	H1 Accepted
Strategic Management (SM) -> Teacher Particiapation (TP)	0.901	32.465	0.000	H2 Accepted
Teacher Particiapation (TP) -> School Performance (SP)	0.140	0.501	0.617	H3 Rejected
<i>Indirect Effect</i>				
Strategic Management (SM) -> Teacher Particiapation (TP) -> School Performance (SP)	0.126	0.503	0.615	H4 Rejected

Based on Table 4 it is clear that the third and fourth hypotheses are rejected. This shows that the condition of school performance is not correlated with teacher participation directly. Then, in the fourth hypothesis, there is no significant relationship between strategic management and school performance through teacher participation. The rejection of the hypothesis is thought to be caused by the lack of theoretical relevance to the current conditions or other factors. Assessing the concurrent impact of multiple independent variables on the dependent variable is the goal of the r-square value study (Purwanto & Sudargini, 2021). Table 5 was displaying the findings of determining the research model's r-squared value.

Table 5. R-Square Value of Research Model

	R-square	R-square adjusted
School Performance (SP)	0.685	0.677
Teacher Participation (TP)	0.811	0.809

The study's findings demonstrated that teacher participation and strategic management techniques had a 68.5% impact on school performance, suggesting that both factors significantly contribute to school success. This result is consistent with strategic management theory, which holds that active teacher participation and the execution of a planned strategy generate synergy to increase organizational effectiveness and efficiency (Bryson, 2018). Furthermore, an inclusive strategic management strategy can promote teacher involvement in the decision-making process and execution of school strategies, as evidenced by the 81.1% influence of strategic management techniques on teacher participation (Fullan, 2014). This relationship demonstrates how crucial strategic management is to creating a collaborative culture, which eventually improves academic performance.

The findings of this study, particularly the rejection of the third and fourth hypotheses, offer critical insights into the complex interplay between strategic management practices, teacher participation, and school performance. Contrary to expectations, the results reveal that teacher participation does not mediate the relationship between strategic management and school performance, nor does it exert a significant direct influence on school outcomes. This suggests that the success of a school cannot solely be attributed to teacher involvement unless it is strategically aligned with broader institutional goals and supported by a conducive system. As Viennet and Pont (2017) argue, school performance is a multifaceted construct that depends on an array of variables including leadership quality, educational policies, systemic support, and resource availability. Fullan (2020) further

emphasizes that for teacher participation to be impactful, it must be embedded in a supportive environment that includes collaborative team structures, ongoing professional development, and recognition of teacher contributions. Without strategic integration, teacher engagement risks becoming a symbolic rather than a substantive element of school development.

Moreover, the rejection of the fourth hypothesis suggests potential shortcomings in the application of management techniques, particularly in fostering meaningful teacher involvement. Bryson (2018) highlights that effective strategic management requires active stakeholder participation in decision-making processes, while Mintzberg (2021) stresses the need for a balance between formal structures and adaptive strategies tailored to contextual needs. If such management practices are inadequately implemented especially in schools with rigid hierarchies or insufficient communication teacher participation may become disconnected from actual institutional planning and impact. This disconnect may also be influenced by external pressures such as shifting educational policies, excessive teacher workloads, or an unsupportive work environment, all of which can dampen the potential of even well-designed strategies (Hallinger & Heck, 2010; Leithwood, 2021).

A notable novelty of this study lies in its attempt to simultaneously examine the direct and mediating effects of teacher participation within a strategic management framework. While much prior research has treated these variables separately, this study integrates them into a holistic model, offering a more nuanced view of how organizational dynamics function in real-world educational settings. It also draws attention to the potential gap between theoretical management designs and their practical implementation in schools. This underscores the importance of not only adopting strategic plans but also evaluating the conditions under which these plans are enacted, including leadership approach, resource accessibility, and institutional culture.

The implications of these findings are substantial for school leaders, policymakers, and education reformers. First, they highlight the need for a more deliberate alignment between teacher participation and school strategic goals. Active teacher involvement must move beyond formality to become an integrated element of strategic planning and school governance. Second, the results suggest that training programs for both school leaders and teachers should focus on building collaborative capacities, empowering educators with leadership skills, and leveraging technology for inclusive participation. For example, digital platforms that facilitate ongoing feedback, peer dialogue, and shared decision-making can be powerful tools to enhance both engagement and efficiency (Brodie, 2021).

Despite its contributions, the study is not without limitations. The cross-sectional design restricts the ability to infer causality between the variables, and the scope may be limited to specific contextual settings that do not represent the diversity of school environments nationally or globally. Moreover, the research did not account for variations in leadership style, cultural norms, or regional policy frameworks, all of which could significantly influence the dynamics observed. Another limitation is the potential lack of depth in measuring “teacher participation” a multidimensional construct that may require more granular analysis, such as distinguishing between symbolic versus substantive engagement or measuring levels of influence across different decision-making domains.

Based on these limitations, future research should consider employing longitudinal designs to better understand the long-term effects of teacher participation and strategic management on school performance. Comparative studies across different educational systems or policy environments would also enrich the findings and increase their generalizability. Additionally, deeper qualitative investigations such as interviews or case studies could uncover the underlying perceptions, challenges, and motivations of teachers and school leaders in enacting strategic plans. Furthermore, future models should integrate variables such as leadership style (e.g., transformational or distributed), technological readiness, and community involvement to better capture the ecosystem influencing school effectiveness.

CONCLUSION

This study concludes that strategic management plays a crucial role in enhancing overall school performance, with a substantial influence of 68.5%. This underscores the importance of schools adopting planned, data-informed, and goal-oriented strategies that are responsive to the evolving demands of education particularly in the context of science learning, which requires continual innovation, updated resources, and interdisciplinary integration. Strategic management that prioritizes curriculum relevance, teacher development, and learner engagement can lead to more effective implementation of science programs and better student outcomes. Moreover, the study reveals that strategic management significantly increases teacher participation, with a notable contribution of

81.1%. This finding suggests that when school leadership involves teachers in strategic processes—such as planning, curriculum development, and instructional design—it fosters a sense of ownership and professional empowerment. This is especially important in science education, where teachers must adapt to new scientific discoveries, utilize technology, and facilitate inquiry-based learning. Teachers who are actively engaged in shaping school strategy are more likely to initiate and sustain meaningful improvements in their science instruction. However, despite high levels of teacher participation, the study found no significant direct relationship between teacher participation and school performance, and no mediating effect of teacher participation on the link between strategic management and performance. This suggests that teacher involvement alone is insufficient to drive measurable improvements in outcomes, particularly in science learning, unless it is deeply aligned with strategic priorities, supported with adequate resources, and embedded in a culture of collaboration and continuous professional development.

These findings indicate a misalignment between the strategic vision and the practical realities faced by science teachers in the classroom. Factors such as insufficient support for science-specific pedagogy, lack of access to scientific equipment and laboratories, or the absence of collaborative time to engage in interdisciplinary planning may hinder the translation of participation into performance. It also points to a possible disconnect between policy-level decisions and classroom-level implementation, especially in STEM fields where innovation and rapid content shifts demand agile, responsive, and well-supported teaching strategies. The implications for science learning are clear: strategic management in schools must not only be inclusive but also adaptive, evidence-based, and specifically responsive to the needs of science educators and learners. Schools must develop mechanisms to ensure that teacher input particularly from science departments is meaningfully incorporated into strategic goals and resource allocation. This includes investing in professional development focused on scientific inquiry, problem-solving pedagogy, and integrating digital tools that support science instruction. Furthermore, a culture of reflective practice and shared leadership can enhance both the relevance and impact of teacher participation. Collaborative structures such as science learning communities, peer mentoring, and joint curriculum planning can help ensure that teacher engagement translates into instructional innovation and improved student understanding in science.

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AUTHOR CONTRIBUTIONS

Author 1 creates articles and creates instruments and is responsible for research, author 2 Analyzes research data that has been collected, author 3 assists in research data analysis, instrument validation and input research data.

CONFLICTS OF INTEREST

The author(s) declare no conflict of interest.

REFERENCES

- Adebayo, A. O., Abidoye, L. A., Adeoye, L. A., & Ojeleye, A. D. (2023). The influence of ownership structure on intellectual capital of listed non-financial firms In Nigeria. *TSU-International Journal of Accounting and Finance*, 2(2), 1–16.
- Admiraal, W., Schenke, W., De Jong, L., Emmelot, Y., & Sligte, H. (2021). Schools as professional learning communities: what can schools do to support professional development of their teachers? *Professional Development in Education*, 47(4), 684–698. <http://doi.org/10.1080/19415257.2019.1665573>.
- Afthanorhan, A., Awang, Z., Abd Majid, N., Foziah, H., Ismail, I., Al Halbusi, H., & Tehseen, S. (2021). Gain more insight from common latent factor in structural equation modeling. *Journal of Physics: Conference Series*, 1793(1), 12030. <http://doi.org/10.1088/1742-6596/1793/1/012030>.
- Afthanorhan, A., Awang, Z., Aimran, N., & Arifin, J. (2021). An extensive comparison between CBSEM and consistent PLS-SEM on producing the estimates of construct correlation in applied research. *Journal of Physics: Conference Series*, 1874(1), 12083. <http://doi.org/10.1088/1742->

[6596/1874/1/012083](https://doi.org/10.24127/ijtm.v5i1.659618741012083).

- Ahlstrand, B., Lampel, J., & Mintzberg, H. (2001). *Strategy safari: A guided tour through the wilds of strategic management*. Simon and Schuster.
- Ahmed, S., Taqi, H. M. M., Farabi, Y. I., Sarker, M., Ali, S. M., & Sankaranarayanan, B. (2021). Evaluation of flexible strategies to manage the COVID-19 pandemic in the education sector. *Global Journal of Flexible Systems Management*, 1–25. <http://doi.org/10.1007/s40171-021-00267-9>.
- Alcántara-Rubio, L., Valderrama-Hernández, R., Solís-Espallargas, C., & Ruiz-Morales, J. (2022). The implementation of the SDGs in universities: a systematic review. *Environmental Education Research*, 28(11), 1585–1615. <http://doi.org/10.1080/13504622.2022.2063798>.
- Bellibaş, M. Ş., Gümüş, S., & Liu, Y. (2021). Does school leadership matter for teachers' classroom practice? The influence of instructional leadership and distributed leadership on instructional quality. *School Effectiveness and School Improvement*, 32(3), 387–412. <http://doi.org/10.1080/09243453.2020.1858119>.
- Brodie, K. (2021). Teacher agency in professional learning communities. *Professional Development in Education*, 47(4), 560–573. <http://doi.org/10.1080/19415257.2019.1689523>.
- Bryson, J. M. (2018). *Strategic planning for public and nonprofit organizations: A guide to strengthening and sustaining organizational achievement*. John Wiley & Sons.
- Bush, T., Fadare, M., Chirimambowa, T., Enukorah, E., Musa, D., Nur, H., Nyawo, T., & Shipota, M. (2022). Instructional leadership in sub-Saharan Africa: policy and practice. *International Journal of Educational Management*, 36(1), 14–31. <https://doi.org/10.1108/IJEM-01-2021-0027>.
- Carney, S. (2022). *Reimagining our futures together: a new social contract for education: by UNESCO, Paris, UNESCO, 2021, 186*. Taylor & Francis.
- Chandwani, S., Singh, N., & Singh, G. (2021). Attitude of faculty towards online teaching and learning in relation to certain variables: A study during Coronavirus (COVID-19) pandemic in India. *Library Philosophy and Practice*, 1–13.
- Daly, B. P., Resnikoff, A., & Litke, S. (2025). Effective School Leadership for Supporting Students' Mental Health: Findings from a Narrative Literature Review. *Behavioral Sciences*, 15(1), 36. <https://doi.org/10.3390/bs15010036>.
- Day, C., Gu, Q., & Sammons, P. (2016). The impact of leadership on student outcomes: How successful school leaders use transformational and instructional strategies to make a difference. *Educational Administration Quarterly*, 52(2), 221–258. <https://doi.org/10.1177/0013161X15616863>.
- Day, C., & Gurr, D. (2024). Researching successful school leadership: Working with complexity. In *How Successful Schools Are More than Effective: Principals Who Build and Sustain Teacher and Student Wellbeing and Achievement* (pp. 1–19). Springer. http://doi.org/10.1007/978-3-031-62735-4_1.
- Dijkstra, T. K., & Henseler, J. (2015). Consistent partial least squares path modeling. *MIS Quarterly*, 39(2), 297–316. <http://doi.org/10.25300/MISQ/2015/39.2.02>.
- Fullan, M. (2014). *Three keys to maximizing impact*. Jossey-Bass and Ontario Principal's Council, Toronto.
- Fullan, M. (2020). The nature of leadership is changing. *European Journal of Education*, 55(2), 139–142. <https://doi.org/10.1111/ejed.12388>.
- Ghozali, I. (n.d.). *Latan, hengky.(2015). Partial Least Squares: Concepts, Techniques and Applications using SmartPLS 3*. Diponegoro University Press.
- Goddard, Y. L., Miller, R., Larsen, R., Goddard, R., Madsen, J., & Schroeder, P. (2010). Connecting Principal Leadership, Teacher Collaboration, and Student Achievement. *Online Submission*.
- Gümüş, S., Arar, K., & Oplatka, I. (2021). Review of international research on school leadership for social justice, equity and diversity. *Journal of Educational Administration and History*, 53(1), 81–99. <https://doi.org/10.1080/00220620.2020.1862767>.
- Gurr, D. (2023). A think-piece on leadership and education. *UNESCO*.
- Ha, V., Andre, J., Kim, A. T., & Thu, H. N. T. (2024). Total factor productivity and institutional quality in Vietnam: which institutions matter most? *Asia-Pacific Journal of Regional Science*, 1–32. <http://doi.org/10.1007/s41685-024-00343-9>.
- Hair, J., & Alamer, A. (2022). Partial Least Squares Structural Equation Modeling (PLS-SEM) in

- second language and education research: Guidelines using an applied example. *Research Methods in Applied Linguistics*, 1(3), 100027. <https://doi.org/10.1016/j.rmal.2022.100027>.
- Hair, J., Hollingsworth, C. L., Randolph, A. B., & Chong, A. Y. L. (2017). An updated and expanded assessment of PLS-SEM in information systems research. *Industrial Management & Data Systems*, 117(3), 442–458. <https://doi.org/10.1108/IMDS-04-2016-0130>.
- Hair Jr, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., & Ray, S. (2021). *Partial least squares structural equation modeling (PLS-SEM) using R: A workbook*. Springer Nature.
- Hallinger, P., & Heck, R. H. (2010). Collaborative leadership and school improvement: Understanding the impact on school capacity and student learning. *School Leadership and Management*, 30(2), 95–110. <https://doi.org/10.1080/13632431003663214>.
- Harris, A., & Jones, M. (2019). Leading professional learning with impact. In *School Leadership & Management*, 39(1), 1–4. Taylor & Francis. <https://doi.org/10.1080/13632434.2018.1530892>.
- Harris, A., & Jones, M. (2023). The importance of school leadership? What we know. In *School Leadership & Management*, 43(5), 449–453. Taylor & Francis. <https://doi.org/10.1080/13632434.2023.2287806>.
- Hasibuan, S., Chu, C. T., & Godh, W. A. (2024). Enhancing creative thinking in circle topics through the realistic mathematics learning approach. *Interval: Indonesian Journal of Mathematical Education*, 2(2), 106–114. <https://doi.org/10.37251/ijome.v2i2.1148>.
- Irawati, S., Juniar, A., & Handayani, S. A. (2024). SWOT Analysis of Participation in Governance (Study at UNUKASE). *Asian Journal of Management, Entrepreneurship and Social Science*, 4(03), 927–947.
- Kaplan, R. S. (2004). Strategy maps: Converting intangible assets into tangible outcomes. *Harvard Business School*.
- Kock, N. (2017). WarpPLS user manual: Version 6.0. *ScriptWarp Systems: Laredo, TX, USA*, 141, 47–60.
- Kutsyuruba, B., Godden, L., & Walker, K. (2024). Teacher Induction Policy Development and Implementation: A Case of Ontario’s New Teacher Induction Program (NTIP). *International Journal of Education Policy and Leadership*, 20(2), 1–25. <http://doi.org/10.22230/ijepl.2024v20n2a1337>.
- Leithwood, K. (2021). A review of evidence about equitable school leadership. *Education Sciences*, 11(8), 377. <https://doi.org/10.3390/educsci11080377>.
- Malandrino, A., & Sager, F. (2021). Can teachers’ discretion enhance the role of professionalism in times of crisis? A comparative policy analysis of distance teaching in Italy and Switzerland during the COVID-19 pandemic. *Journal of Comparative Policy Analysis: Research and Practice*, 23(1), 74–84. <http://dx.doi.org/10.1080/13876988.2020.1844544>.
- Maryanti, R., Rahayu, N. I., Muktiarni, M., Al Husaeni, D. F., Hufad, A., Sunardi, S., & Nandiyanto, A. B. D. (2022). Sustainable development goals (SDGs) in science education: Definition, literature review, and bibliometric analysis. *Journal of Engineering Science and Technology*, 17, 161–181.
- McCray, C. R., Beachum, F. D., & Reggio, P. F. (2021). *School leadership in a diverse society: Helping schools prepare all students for success*. IAP.
- Mintzberg, H. (2021). Pathway to balance. In *Social Scientists Confronting Global Crises* (pp. 59–62). Routledge.
- Mpangala, C. S., & Urrio, P. J. (2024). School Leadership Styles and Teachers’ Satisfaction: A Case of Secondary Schools in Kigamboni District, Tanzania. *East African Journal of Management and Business Studies*, 4(2), 1–12.
- Muhammad, A., & Oyewobi, L. O. (N.D.). *Assessment Of Absorptive Capacity On Performance Of Small And Medium Sized Enterprises (Smes) In Abuja*.
- Muis, A., Pholboon, M., & Kamali, A. N. (2024). Geomics as interactive geography learning media: a development study on environmental material in high schools. *Journal of Educational Technology and Learning Creativity*, 2(2), 192–200. <https://doi.org/10.37251/jetlc.v2i2.1089>.
- Nunnally, J., & Bernstein, I. (1994). *Psychometric Theory 3rd edition* (MacGraw-Hill, New York).
- Plenty, S., Magnusson, C., & Låftman, S. B. (2021). Internalising and externalising problems during adolescence and the subsequent likelihood of being Not in Employment, Education or Training (NEET) among males and females: The mediating role of school performance. *SSM-Population Health*, 15, 100873. <https://doi.org/10.1016/j.ssmph.2021.100873>.

- Purwanto, A., & Sudargini, Y. (2021). Partial least squares structural equation modeling (PLS-SEM) analysis for social and management research: a literature review. *Journal of Industrial Engineering & Management Research*, 2(4), 114–123. <https://doi.org/10.7777/jiemar.v2i4.168>.
- Rachmanto, T. B., & Akande, I. O. (2024). Utilization of information technology in increasing the effectiveness of citizenship learning. *Journal of Educational Technology and Learning Creativity*, 2(2), 217-222. <https://doi.org/10.37251/jetlc.v2i2.1140>
- Rahmayanti, M., & Kwalat, K. S. (2024). Comparison of mathematics learning outcomes between students taught using direct teaching and discovery learning models. *Interval: Indonesian Journal of Mathematical Education*, 2(2), 115-123. <https://doi.org/10.37251/ijome.v2i2.1185>
- Rothaermel, F. T. (2019). *Strategic management*. McGraw-Hill.
- Sarstedt, M., Ringle, C. M., & Hair, J. F. (2021). Partial least squares structural equation modeling. In *Handbook of market research* (pp. 587–632). Springer.
- Singh, S., & Ryhal, P. C. (2023). The influence of teachers' emotional intelligence on academic performance with mediating effect of job satisfaction. *Journal of Education*, 203(3), 499–507. <https://doi.org/10.1177/00220574211032314>.
- Smith, E., & Gümüş, S. (2022). Socioeconomic achievement gaps and the role of school leadership: Addressing within-and between-school inequality in student achievement. *International Journal of Educational Research*, 112, 101951. <https://doi.org/10.1016/j.ijer.2022.101951>.
- Unesco, P. (2021). *Reimagining our futures together: A new social contract for education*. Educational and Cultural Organization of the United Nations Paris, France.
- Viennet, R., & Pont, B. (2017). *Education policy implementation: A literature review and proposed framework*.
- Yaakob, M. F. M., Musa, M. R., Habibi, A., & Othman, R. (2019). Strategic management and Strategic Planning in school: Is it worth for teachers? *Academy of Strategic Management Journal*, 18(3), 1–6.
- Yokuş, G. (2022). Developing a guiding model of educational leadership in higher education during the COVID-19 pandemic: A grounded theory study. *Participatory Educational Research*, 9(1), 362–387. <http://doi.org/10.17275/per.22.20.9.1>.