

To Assess the Mediating Effect of Leadership in the Relationship between PK03 (via SPSK) and Teachers' Performance

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DOI Link: <http://dx.doi.org/10.6007/IJARBSS/v15-i10/26646>

Published Date: 02 October 2025

Abstract

Quality management in education has become increasingly important in ensuring that schools meet international standards of accountability and performance. In Malaysia, the Quality School Management System (*Sistem Pengurusan Sekolah Kualiti (SPSK)*), aligned with ISO 9001:2015 principles, was introduced to improve the effectiveness of school management. Within this framework, *Pengurusan Pengajaran dan Pembelajaran (PK03)* plays a crucial role in monitoring teaching and learning processes. However, previous studies have shown mixed results regarding the impact of SPSK on teacher performance, raising questions about the factors that may influence this relationship. This study aimed to assess the mediating effect of leadership in the relationship between PK03 practices and teachers' performance. A quantitative survey design was employed, involving teachers from secondary schools in Kuala Lumpur that had implemented SPSK. Stratified sampling ensured representation across school types, and data were analyzed using Partial Least Squares–Structural Equation Modeling (PLS-SEM). Constructs were measured using validated instruments: PK03 indicators were based on ISO procedures, leadership was operationalized using Bass and Avolio's (1994) Transformational Leadership dimensions, and teacher performance was assessed using Borman and Motowidlo's (1993) model. The findings revealed that PK03 practices significantly influenced leadership, which in turn positively affected teachers' performance. Mediation testing confirmed that leadership partially mediated the relationship between PK03 and teacher performance. These results underscore the importance of leadership in transforming quality management practices into improved teacher outcomes. The study concludes that leadership development and supportive SPSK implementation are essential for enhancing school effectiveness.

Keywords: Leadership, Teacher Performance, PK03, SPSK, ISO 9001

Introduction

Quality management has become a crucial agenda in education systems worldwide, with ISO 9000 serving as an international benchmark for organizational excellence since its introduction in 1987 (International Organization for Standardization [ISO], 2019). In Malaysia, the Ministry of Education has adopted MS ISO 9000 to strengthen school management through the Sistem Pengurusan Sekolah Kualiti (SPSK), which provides standardized procedures to ensure efficiency, accountability, and continuous improvement (Hairuddin, Muhd Bustaman, & Mohd Al Shaari, 1999). Within SPSK, the *Pengurusan Pengajaran dan Pembelajaran* (PK03) plays a central role in monitoring teaching and learning processes, highlighting the importance of teacher performance as a driver of educational outcomes (Standard Guru Malaysia, KPM, 2009).

Teachers' performance is closely linked to leadership practices, as principals act as the highest authority responsible for ensuring that quality procedures are executed effectively (Bush, 2003). Leadership supervises the direction of the organization but also motivates teachers, supervises instructional processes, and creates a conducive environment for professional growth (Leithwood, Day, Sammons, Harris, & Hopkins, 2006). Previous studies affirm that effective school leadership significantly influences teacher productivity and classroom practices (Nursyafina, Aida Hanim, & Ghazali, 2018). Thus, leadership may act as a mediating factor in strengthening the relationship between SPSK implementation and teachers' performance.

Despite the recognized importance of quality management and leadership, research on SPSK, particularly at the school level in Malaysia, remains limited (Gamboa & Melão, 2012). Existing studies have mostly focused on higher education or vocational institutions, with insufficient attention given to the interplay of ISO-based quality practices, leadership, and teacher performance (Abd Rahim & Khadijah, 2014). Therefore, this study seeks to bridge the gap by examining whether leadership mediates the relationship between PK03 practices in SPSK and teachers' performance. Understanding this relationship is essential to strengthening Malaysia's education quality and aligning it with international standards.

Problem Statement

Quality in education is a critical issue that continues to shape national development agendas. Globalization and rapid technological advancement demand education systems that are both adaptable and internationally competitive (Padhi, 2007). In Malaysia, the Ministry of Education has recognized the urgency of continuous quality improvement by introducing the Sistem Pengurusan Sekolah Kualiti (SPSK), guided by MS ISO 9001 standards. SPSK emphasizes structured documentation, evidence-based decision making, and continuous improvement, yet its effective implementation depends heavily on teachers as executors and school leaders as quality drivers (Jabatan Standard Malaysia, 2010).

However, despite widespread adoption, research indicates gaps in the practical effectiveness of ISO-based quality systems in schools. Studies suggest that while ISO 9001 enhances efficiency and accountability, its heavy reliance on documentation may burden teachers, sometimes cause emotional stress and reducing innovation (Yahya, Rozali, & Syed Mohd Syafeq, 2003; Tsim, Yeung, & Leung, 2002). Moreover, empirical evidence on the direct link between SPSK implementation and teacher performance remains inconclusive. For

example, Abd Rahim and Khadijah (2014) found no significant relationship between SPSK practices and teacher productivity in Johor schools.

Leadership emerges as a critical but underexplored factor in this context. Research demonstrates that effective school leadership strongly influences teacher performance and school outcomes (Leithwood et al., 2006). Principals are central in guiding quality management processes, yet the extent to which their leadership mediates the relationship between SPSK practices and teacher performance remains insufficiently studied in Malaysian schools (Nursyafina, Aida Hanim, & Ghazali, 2018). This gap is significant because without effective leadership, ISO-based systems risk being reduced to compliance exercises rather than instruments of meaningful improvement.

Therefore, the problem this study addresses is the limited empirical evidence on the mediating role of leadership in linking PK03 practices of SPSK to teacher performance. Bridging this gap is essential for ensuring that SPSK implementation not only aligns with international standards but also translates into tangible improvements in teaching quality and student learning outcomes.

Literature Review

ISO-based school quality systems in Malaysia (SPSK) institutionalize standardized, documented processes to drive effectiveness and continuous improvement, with PK03 operationalizing teaching–learning management through auditable procedures (records of teaching aids, special rooms, and 100% syllabus coverage). These practices are situated within the ISO 9001:2015 principles—leadership, process approach, evidence-based decisions, improvement, and people involvement—providing the normative logic for consistent instructional management. The thesis further anchors SPSK/PK03 in Deming’s PDCA cycle, positioning school routines as iterative Plan–Do–Check–Act loops that enable corrective action and quality gains.

Within this quality infrastructure, leadership is repeatedly identified as the engine that translates procedures into practice: principals set direction, supervise instruction, and mobilize staff—functions consistently linked to school outcomes beyond classroom instruction alone. In the Malaysian school context, effective leadership is emphasized as pivotal for executing SPSK to standard and for raising teacher performance. The study specifies Transformational Leadership (Bass & Avolio, 1994) as the mediating mechanism—via idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration—through which PK03 practices are expected to exert stronger effects on teachers’ performance. Prior discussions in the document note broad evidence that leadership is the next most important factor after classroom teaching, reinforcing the plausibility of a mediation role.

Teacher performance is conceptualized using Borman & Motowidlo’s (1993) model, encompassing task performance and (implicitly) contextual facets that are sensitive to management climate and leadership practices. While ISO adoption can improve consistency and accountability, implementation burdens and documentation intensity can also dampen innovation if not stewarded well—again pointing to leadership as a critical success factor. Synthesizing these strands, the literature in the thesis justifies testing leadership as a

mediator between PK03 (via SPSK) and teachers' performance within a PDCA-driven, ISO-principled school quality system

Methodology

This study adopted a quantitative research design using a survey method to examine the mediating effect of leadership on the relationship between PK03 practices through the Sistem Pengurusan Sekolah Kualiti (SPSK) and teachers' performance. The survey method was chosen as it enables the collection of standardized data from a large population of respondents and allows statistical testing of mediation relationships (Creswell, 2014).

The population comprised teachers from secondary schools in Kuala Lumpur implementing SPSK. A stratified sampling technique was employed to ensure representation across different school types (e.g., Sekolah Menengah Harian and Sekolah Kluster Kecemerlangan), reflecting contextual diversity in SPSK practices. The sample size was determined based on Krejcie and Morgan's (1970) table to ensure adequacy for structural equation modeling (SEM) procedures. The research instrument was a structured questionnaire divided into three main sections:

- i. PK03 practices via SPSK – measured using indicators of ISO 9001:2015 principles and PK03 quality procedures (teaching aids record, special-room usage, and syllabus completion).
- ii. Leadership – measured using Bass and Avolio's (1994) Transformational Leadership dimensions: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration.
- iii. Teachers' performance – measured with Borman and Motowidlo's (1993) job performance model focusing on task and contextual performance.

Content validity of the instrument was established through expert review, while a pilot study was conducted to ensure reliability using Cronbach's alpha thresholds above 0.70 (Nunnally & Bernstein, 1994). The research procedure involved distributing questionnaires to teachers with approval from the Ministry of Education and respective school administrations. Ethical considerations such as informed consent and confidentiality of responses were strictly maintained. By employing this methodology, the study ensured rigorous data collection to test whether leadership mediates the relationship between PK03 implementation in SPSK and teachers' performance, aligning with the objective.

Data Analysis

To achieve the objective of assessing the mediating effect of leadership, the study applied Partial Least Squares–Structural Equation Modeling (PLS-SEM) using SmartPLS software. PLS-SEM is suitable for studies emphasizing prediction and theory development, particularly when examining mediation effects among latent constructs (Hair, Hult, Ringle, & Sarstedt, 2017).

The analysis followed a two-stage approach. First, the measurement model was assessed to ensure reliability and validity of constructs. Convergent validity was established when Average Variance Extracted (AVE) values exceeded 0.50 and Composite Reliability (CR) values were above 0.70 (Fornell & Larcker, 1981; Nunnally & Bernstein, 1994). Discriminant validity was confirmed using HTMT ratio thresholds below 0.85.

Second, the structural model was tested to determine path relationships among PK03, leadership, and teachers' performance. Bootstrapping with 5,000 subsamples was conducted to generate path coefficients, t-values, and p-values. The mediation effect was tested following Baron and Kenny's (1986) causal steps and further verified using the Variance Accounted For (VAF) method, which determines the extent to which leadership mediates the PK03–performance relationship.

The findings indicated that PK03 practices significantly influenced leadership, and leadership in turn significantly influenced teacher performance. The direct effect of PK03 on performance was reduced but remained significant when leadership was included, suggesting partial mediation.

Table 1

Mediation Testing Results

Path Relationship	β (Beta)	t-value	p-value	Result
PK03 → Leadership	0.62	11.34	0.000	Significant
Leadership → Teacher Performance	0.55	10.21	0.000	Significant
PK03 → Teacher Performance	0.41	6.27	0.000	Significant
Indirect Effect (PK03 → Leadership → Performance)	0.34	8.45	0.000	Mediation confirmed

Discussion and Conclusion

The findings of this study demonstrate that leadership plays a significant mediating role in the relationship between PK03 practices under the Sistem Pengurusan Sekolah Kualiti (SPSK) and teachers' performance. Specifically, PK03 practices were found to positively influence leadership behaviors, while leadership in turn significantly improved teachers' performance. The reduction of the direct effect of PK03 on teacher performance when leadership was included indicates partial mediation, suggesting that although PK03 contributes directly to teacher performance, its impact is substantially enhanced when filtered through effective leadership.

This result aligns with earlier studies emphasizing the importance of leadership in educational quality management. Leithwood et al. (2006) concluded that school leadership is second only to classroom instruction in influencing student outcomes, indirectly shaping teacher performance by fostering motivation, vision, and professional development. Similarly, Nursyafina, Aida Hanim, and Ghazali (2018) highlighted the role of transformational leadership in guiding teachers towards higher productivity and commitment. Within the SPSK context, principals act as custodians of ISO 9001 principles, ensuring procedures are not merely compliance exercises but vehicles for continuous improvement (Deming, 1986; ISO, 2015).

Importantly, the results also caution that PK03 practices alone may not fully explain variations in teacher performance. Without effective leadership, procedural compliance could risk being mechanical, potentially causing stress and disengagement (Yahya, Rozali, & Syed Mohd Syafeq, 2003). Leadership thus serves as the mechanism that translates quality management structures into professional growth and improved teaching practices.

In conclusion, this study affirms that leadership partially mediates the relationship between PK03 practices via SPSK and teacher performance. While quality procedures under ISO 9001 provide a structural foundation, leadership—particularly transformational leadership—adds the human dimension that motivates, inspires, and sustains teacher effectiveness. These findings underscore the dual necessity of strong quality systems and visionary leadership in advancing Malaysia's educational goals. Future initiatives should strengthen leadership training for principals, ensuring they are equipped to act as mediators between policy and practice. By doing so, SPSK implementation can achieve its intended purpose of improving not only administrative efficiency but also the quality of teaching and learning outcomes.

Theoretical and Contextual Contributions

This study contributes theoretically by extending the application of transformational leadership theory (Bass & Avolio, 1994) within the framework of ISO-based school quality management. While transformational leadership has been widely studied in educational contexts, its mediating role between structured quality practices such as PK03 in SPSK and teacher performance has not been extensively tested. By integrating ISO 9001:2015 quality principles, Deming's PDCA model, and leadership theory, this research advances knowledge on how management systems and human factors interact to influence teacher outcomes. Contextually, the study provides important insights into the Malaysian school system, where SPSK is mandated yet often perceived as compliance driven. The findings demonstrate that leadership transforms SPSK from a procedural mechanism into a meaningful driver of teacher performance, thereby highlighting the necessity of leadership development as part of quality assurance reforms. This dual contribution enriches the literature on educational management by showing that the effectiveness of quality frameworks depends not only on structured processes but also on the mediating role of leadership in shaping teachers' professional practice. Consequently, this study offers a contextualized model that bridges quality management systems and educational leadership, providing both scholars and practitioners with evidence of how policy implementation can be translated into improved school effectiveness in Malaysia.

Suggestions

This study highlights the critical role of leadership as a mediator in enhancing the relationship between PK03 practices via SPSK and teacher performance. Therefore, several practical measures should be taken. First, leadership development among school principals should be prioritized, focusing on transformational leadership skills such as building vision, providing inspiration, stimulating critical thinking, and offering individualized support (Bass & Avolio, 1994). These competencies will ensure that SPSK is implemented not merely as a procedural requirement but as a meaningful driver of teacher performance. Second, the Ministry of Education should strengthen SPSK implementation support through continuous coaching, mentoring, and school audits that emphasize teacher development rather than compliance.

alone. This step would minimize the negative perceptions of SPSK as a bureaucratic burden (Yahya, Rozali, & Syed Mohd Syafeq, 2003). Third, teacher professional development programs should be closely linked with PK03 documentation processes, enabling SPSK to serve as a tool for reflective practice, capacity building, and improvement of classroom instruction. Finally, SPSK monitoring and evaluation should be aligned with the Malaysia Education Blueprint (2013–2025) to ensure that leadership effectiveness and teacher performance are key performance indicators for school quality.

From an academic perspective, this study provides opportunities for future research to expand its scope. First, researchers should replicate the mediation model in different educational contexts, such as rural and urban schools, boarding schools, and cluster versus non-cluster schools, to determine whether the mediating role of leadership varies by school type. Second, future studies could employ mixed methods approaches, combining surveys with interviews or case studies, to capture both the statistical relationships and teachers lived experiences of SPSK implementation. Third, further investigation is recommended into other potential mediators or moderators, such as organizational culture, teacher motivation, or resource availability, which may also influence the PK03–performance link. By extending research in these directions, scholars can build a more comprehensive understanding of how ISO-based quality systems interact with leadership and teaching practices, thereby strengthening the evidence base for policy and practice.

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