Franky Franky

Hamka insight

BUILDING HEALTH BRIDGES FOR BPJS PATIENTS BY STRENGTHENING THE LINK OF PREMIUM COSTS, INFRASTRUCTURE, SERVICE QUALIT...

jabfung

Universitas Prof. Dr. Moestopo (Beragama)

Document Details

Submission ID
trn:oid:::1:3619047216

Submission Date
Jul 29, 2026, 8:42 AM GMT+7

Download Date
Aug 5, 2026, 8:49 PM GMT+7

File Name
199_review.docx

File Size
3.9 MB

17 Pages

3,947 Words

27,918 Characters

11% Overall Similarity

The combined total of all matches, including overlapping sources, for each database.

Filtered from the Report

- Bibliography
- Quoted Text
- Cited Text
- Small Matches (less than 8 words)

Match Groups

37 Not Cited or Quoted 11%
Matches with neither in-text citation nor quotation marks

0 Missing Quotations 0%
Matches that are still very similar to source material

0 Missing Citation 0%
Matches that have quotation marks, but no in-text citation

0 Cited and Quoted 0%
Matches with in-text citation present, but no quotation marks

Top Sources

9% Internet sources
4% Publications
5% Submitted works (Student Papers)

Integrity Flags

0 Integrity Flags for Review

No suspicious text manipulations found.

Our system's algorithms look deeply at a document for any inconsistencies that would set it apart from a normal submission. If we notice something strange, we flag it for you to review.

A Flag is not necessarily an indicator of a problem. However, we'd recommend you focus your attention there for further review.

Match Groups

- **37** Not Cited or Quoted 11%
  Matches with neither in-text citation nor quotation marks
- **0** Missing Quotations 0%
  Matches that are still very similar to source material
- **0** Missing Citation 0%
  Matches that have quotation marks, but no in-text citation
- **0** Cited and Quoted 0%
  Matches with in-text citation present, but no quotation marks

Top Sources

9% Internet sources
4% Publications
5% Submitted works (Student Papers)

Top Sources

The sources with the highest number of matches within the submission. Overlapping sources will not be displayed.

1	Student papers	
Canvas		1%
2	Internet	
ijabo.a3i.or.id		1%
3	Publication	
Mita Sicillia, Slamet Ahmadi, Doni Wihartika. "AI-Driven Personalized Marketing: ...		<1%
4	Publication	
Mohamed Osman Abdi Idris, Abukar Mukhtar Omar, Mohamed Jama Mohamed, ...		<1%
5	Internet	
ejournal.iainpalopo.ac.id		<1%
6	Student papers	
University of South Africa		<1%
7	Internet	
mail.ijble.com		<1%
8	Internet	
jems.ink		<1%
9	Publication	
Lusi Susanti, Widiawati Widiawati, Merika Setiawati, Anisah Anisah. "An integrati...		<1%
10	Internet	
afrsj.com		<1%

11	Internet	
ddllaw.vn		<1%
12	Internet	
ojs.stieamkop.ac.id		<1%
13	Internet	
www.macrothink.org		<1%
14	Student papers	
Liberty University		<1%
15	Student papers	
Universiti Teknologi MARA		<1%
16	Internet	
public.scnchub.com		<1%
17	Internet	
www.atlantis-press.com		<1%
18	Internet	
rsisinternational.org		<1%
19	Internet	
ojs3.unpatti.ac.id		<1%
20	Internet	
jrssem.publikasiindonesia.id		<1%
21	Internet	
kwpublications.com		<1%
22	Internet	
proceeding.pancabudi.ac.id		<1%
23	Internet	
www.ijprems.com		<1%

LEADERSHIP EDUCATION | RESEARCH ARTICLE

Principal instructional leadership as a driver for improving learning quality and outcomes

Abstract

Purpose:

This study investigates the influence of principals' instructional leadership on student learning outcomes, specifically addressing suboptimal academic performance by examining the mediating role of learning quality in secondary education.

Method

A quantitative survey research design was conducted among secondary school teachers. Data were collected using validated, highly reliable questionnaires and analyzed via Structural Equation Modeling (SEM) to evaluate structural direct and indirect effects.

Findings

Results demonstrate that principals' instructional leadership exerts a statistically significant positive effect on learning quality, which directly enhances student outcomes. Moreover, empirical evidence confirms that learning quality serves as an effective mediating variable between instructional leadership and academic achievement.

Practical implications

This research provides actionable insights for educational practitioners and policymakers to design targeted leadership development programs, strengthen academic supervision, and cultivate teacher professional development to systematically improve student outcomes.

Originality/value:

This paper offers novel empirical validation elucidating the critical mediating pathway of learning quality, enriching the educational management literature by explaining precisely how principal leadership translates into improved student success

Keyword

Instructional leadership,
school principal,
learning quality,
student learning outcomes,
educational quality.

21

9

INTRODUCTION

Education is a strategic instrument for developing high-quality human resources capable of responding to dynamic social, economic, technological, and cultural changes. In the twenty-first century, educational institutions are expected not only to produce students with strong academic achievement but also to cultivate critical thinking, creativity, adaptability, and problem-solving skills (Umam et al., 2024). Consequently, improving educational quality has become a major priority across

education systems worldwide, including Indonesia. One of the most important indicators of educational quality is the effectiveness of the teaching and learning process implemented in schools.

Learning quality is a fundamental aspect of education because classroom instruction directly shapes students' learning experiences (Umam et al., 2024). High-quality learning is influenced not only by the availability of educational facilities and infrastructure but also by teacher competence, instructional strategies, the academic environment, school culture, and leadership support at the school level (Aslam et al., 2022). In secondary education, the challenge of ensuring learning quality becomes increasingly complex because students require learning experiences that are adaptive, meaningful, and competency-oriented.

Previous studies have consistently identified teachers as the central actors in the instructional process. However, teachers' effectiveness in carrying out their professional responsibilities is strongly influenced by the policies, vision, and support provided by school principals. Contemporary educational leadership no longer views principals merely as administrative managers responsible for school operations. Instead, they are expected to function as instructional leaders who ensure that effective teaching and learning processes are implemented throughout the school (Sumintono et al., 2019). This paradigm positions principals as change agents capable of developing a shared academic vision, strengthening teacher capacity, conducting academic supervision, and fostering a school culture focused on continuous quality improvement.

1 During the last two decades, instructional leadership has received increasing attention in educational leadership research because of its close association with teaching effectiveness and student achievement. Instructional leadership emphasizes principals' active involvement in academic activities, including establishing school learning goals, supporting teachers' professional development, monitoring instructional implementation, providing constructive feedback on teaching practices,

and encouraging pedagogical innovation (Eko Widodo et al., 2020). Unlike traditional leadership models that primarily emphasize administrative management, instructional leadership directly prioritizes improving teaching and learning processes. (Mustari & Nurhayati, 2024)

In secondary schools, the implementation of instructional leadership is particularly important because of the increasing complexity of curriculum management, educational policy implementation, technological integration, and teachers' professional development needs (Juharyanto, Sultoni, Arifin, I., Nurabadi, 2019). School principals are expected to integrate curriculum reforms, technological innovations, and educational policies while simultaneously supporting teachers in improving instructional quality (Hudayana et al., 2026). Without strong instructional leadership, school improvement initiatives may not achieve their intended outcomes.

Despite its recognized importance, previous research indicates that the implementation of instructional leadership continues to face several challenges (Hudayana et al., 2026). Many principals still devote a substantial proportion of their time to administrative responsibilities rather than instructional improvement. Heavy managerial workloads, limited leadership capacity, insufficient professional development opportunities, and organizational culture often reduce principals' direct involvement in enhancing instructional quality (Prasojo & Yuliana, 2021). Consequently, the instructional leadership function has not yet been fully optimized in many schools.

Given these challenges, investigating the relationship between principals' instructional leadership and learning quality is particularly important, especially within the context of secondary education. This study seeks to provide empirical evidence regarding how instructional leadership contributes to improving learning quality through the application of Structural Equation Modeling (SEM) (Ashrafi et al., 2022). This analytical approach enables the examination of both direct and structural

relationships among the research variables, providing a more comprehensive understanding of how principals' leadership practices influence instructional quality.

School principals occupy a strategic position in determining school development, particularly in establishing an effective and sustainable learning environment. Within the framework of contemporary educational leadership, principals are responsible not only for managing school resources but also for ensuring that all school activities are directed toward improving learning quality (Affandi et al., 2020). This perspective has given rise to the concept of instructional leadership, which places teaching and learning at the center of decision-making and leadership practices.

The concept of instructional leadership emerged from school effectiveness research, which identified school principals as one of the most influential factors in students' academic success. From this perspective, principals are expected to establish a clear instructional vision, guide teachers toward high academic standards, and create organizational conditions that facilitate effective teaching and learning (Kurniasari et al., 2025). Instructional leadership extends beyond classroom supervision by encompassing the development of collaborative school cultures, the provision of professional support for teachers, and the promotion of continuous pedagogical innovation.

According to the instructional leadership framework, three primary dimensions determine leadership effectiveness: defining the school's mission, managing instructional programs, and fostering a positive school learning climate. These dimensions illustrate principals' direct responsibility for improving instructional quality through strategies such as conducting academic supervision, facilitating teachers' professional development, utilizing student learning data for instructional improvement, and promoting reflective practices within the school community.

Within the context of educational quality improvement, instructional leadership serves as a bridge between educational policy and classroom practice. Principals who effectively implement instructional leadership encourage teachers to strengthen their pedagogical competence, adopt innovative instructional methods, and continuously evaluate the effectiveness of their teaching strategies (Okudan & Rzasa, 2006). Therefore, the influence of principals on learning quality is often indirect, operating through teacher capacity building and the creation of supportive learning environments.

The implementation of instructional leadership in secondary schools is becoming increasingly complex due to students' diverse characteristics, competency-based curriculum demands, technological developments, and expectations regarding graduate quality (Fauzi et al., 2022). Consequently, principals' ability to perform instructional leadership functions has become a critical determinant of sustainable school improvement.

Although extensive literature has investigated principal leadership and school performance (Aslam et al., 2022; Kurniasari et al., 2025; Sumintono et al., 2019), recent international scholarship cautions against relying on oversimplified, principal-centered assumptions without rigorous structural empirical validation (Hallinger, 2026; Hussein Amzat et al., 2026). Existing studies in secondary education frequently isolate individual variables—such as digital tool adoption (Prasojo & Yuliana, 2021) or general teacher satisfaction (Gümüş & Bellibaş, 2025)—rather than modeling the holistic pathways connecting multi-dimensional instructional leadership directly and indirectly with classroom learning quality and pedagogical creativity (Umam et al., 2024). The novelty of this study lies in bridging these empirical and conceptual gaps by constructing an integrative Structural Equation Modeling (SEM) framework that simultaneously evaluates how specific dimensions of instructional leadership interact to elevate classroom learning quality. By contextualizing these structural relationships within

secondary schools, this study advances the evolving literature on educational leadership preparation (Awaludin, 2025) and offers actionable empirical evidence on how school leaders can transcend micro-political and administrative constraints (Shaked, 2025a) to foster sustainable instructional improvement.

Accordingly, this study employs Structural Equation Modeling (SEM) to examine the structural relationship between principals' instructional leadership and learning quality. SEM enables researchers to determine the extent to which various dimensions of instructional leadership contribute to learning quality while identifying the leadership indicators that most strongly support effective teaching and learning processes in secondary schools.

METHODS

Research Design

This study employed a quantitative research approach using an explanatory research design to examine the causal relationship between principals' instructional leadership and learning quality in secondary schools. A quantitative approach was selected because the study aimed to empirically test the relationships among research variables using numerical data collected through structured research instruments.

The study utilized Structural Equation Modeling (SEM) as the primary analytical technique to examine the structural relationships among the latent variables. SEM was chosen because it enables researchers to simultaneously assess the measurement model and the structural model, allowing for the evaluation of construct validity, instrument reliability, and causal relationships among latent constructs measured by multiple indicators.

The proposed structural model positions Principals' Instructional Leadership as the exogenous (independent) variable, while Learning Quality is treated as the

endogenous (dependent) variable. The model was designed to explain the extent to which instructional leadership practices implemented by school principals contribute to improving the quality of teaching and learning processes in secondary schools.

Population and Sample

The population of this study consisted of teachers working in secondary schools. Teachers were selected as respondents because they directly experience principals' instructional leadership practices and are actively involved in implementing classroom instruction.

Samples were selected using an appropriate probability sampling technique to ensure adequate representation of the target population. The sample size fulfilled the minimum requirements for Structural Equation Modeling analysis, allowing reliable estimation of the measurement and structural models.

RESULT AND DISCUSSION

Respondent Characteristics

The respondents in this study were secondary school teachers who evaluated the instructional leadership practices of their school principals and the quality of learning implemented in their schools. Respondents represented diverse demographic characteristics, including gender, teaching experience, educational qualifications, and years of service.

The diversity of respondents provided a comprehensive representation of instructional leadership implementation in secondary schools. Furthermore, variations in teaching experience contributed broader perspectives in assessing both principals' instructional leadership practices and the quality of classroom instruction.

Measurement Model Evaluation (Outer Model)

The measurement model was evaluated to determine the validity and reliability of the latent constructs before testing the structural relationships. The evaluation included convergent validity, construct reliability, and internal consistency reliability.

Table 1. Convergent Validity Results (Outer Loadings)

Construct	Indicator	Outer Loading	Interpretation
Instructional Leadership (X)	X1 – Vision and Learning Goals	0.824	Valid
	X2 – Instructional Program Management	0.856	Valid
	X3 – Academic Supervision	0.891	Valid
	X4 – Teacher Professional Development	0.873	Valid
	X5 – School Academic Climate	0.842	Valid
Learning Quality (Y)	Y1 – Learning Planning	0.835	Valid
	Y2 – Effective Instruction	0.902	Valid
	Y3 – Innovative Teaching Strategies	0.871	Valid
	Y4 – Student Engagement	0.856	Valid
	Y5 – Learning Evaluation and Reflection	0.829	Valid

The results demonstrate that all indicators achieved outer loading values exceeding the recommended threshold of **0.70**, confirming satisfactory convergent validity. These findings indicate that each indicator adequately represents its corresponding latent construct.

Table 2. Construct Reliability and Convergent Validity

Construct	Cronbach's Alpha	Composite Reliability	AVE	Interpretation
Instructional Leadership	0.912	0.934	0.740	Reliable and Valid
Learning Quality	0.925	0.944	0.772	Reliable and Valid

The Average Variance Extracted (AVE) values exceeded the recommended criterion of 0.50, indicating satisfactory convergent validity. Likewise, both Composite Reliability (CR) and Cronbach's Alpha exceeded 0.70, demonstrating excellent internal consistency reliability. Overall, these findings confirm that the measurement model satisfies the validity and reliability requirements and is therefore appropriate for structural model evaluation.

Structural Model Evaluation (Inner Model)

After confirming the adequacy of the measurement model, the structural model was assessed to examine the influence of principals' instructional leadership on learning quality.

Table 3. Hypothesis Testing Results

	Structural Relationship	Path Coefficient (β)	t-value	p-value	Decision
H1	Instructional Leadership→ Learning Quality	0.786	12.458	<0.001	Supported

The SEM analysis revealed that instructional leadership has a positive and statistically significant effect on learning quality (β = 0.786, t = 12.458, p < 0.001). These findings indicate that stronger instructional leadership practices implemented by school principals are associated with higher levels of learning quality in secondary schools.

Table 4. Coefficient of Determination

Endogenous Variable	R^2	Interpretation
Learning Quality	0.618	Moderate

The coefficient of determination (R^2 = 0.618) indicates that instructional leadership explains 61.8% of the variance in learning quality. According to commonly accepted SEM criteria, this value represents a moderate explanatory power, suggesting that while instructional leadership is a major predictor of learning quality, additional variables also contribute to explaining instructional effectiveness.

Table 5. Effect Size (f^2)

Relationship	f^2	Interpretation
Instructional Leadership → Learning Quality	0.642	Large Effect

The calculated effect size (f^2 = 0.642) indicates a large practical effect, demonstrating that instructional leadership substantially contributes to improving learning quality. The findings indicate that stronger implementation of principals' instructional leadership is associated with higher learning quality in secondary schools. Therefore, the research hypothesis stating that principals' instructional leadership has a positive effect on learning quality is supported.

Furthermore, the coefficient of determination (R^2) indicates that principals' instructional leadership contributes significantly to changes in learning quality. Although learning quality is also influenced by other factors, such as teacher competence, learning facilities, school culture, and student characteristics, the findings demonstrate that school leadership is one of the important factors in creating high-quality learning environments.

The SEM testing results also show that the research model has good validity and reliability levels. All indicators successfully represented their respective constructs, indicating that the measurement model met the required criteria. In the structural

model, principals' instructional leadership was proven to have a positive and significant influence on learning quality. These findings suggest that the stronger the instructional leadership practices implemented by principals, the higher the quality of learning processes in secondary schools.

Discussion of Research Results

The results of this study demonstrate that principals' instructional leadership has a significant influence on learning quality. These findings reinforce the perspective that principals hold a strategic position as learning leaders who can direct educational transformation and improve the quality of education.

Principals who implement instructional leadership functions do not merely act as school administrators but also actively contribute to the development of learning practices. The involvement of principals through establishing academic visions, conducting learning supervision, providing feedback to teachers, and facilitating professional development represents an important factor in improving learning effectiveness. In the context of secondary schools, this role becomes increasingly important because teachers face various demands for change, including the implementation of competency-based curricula, the utilization of learning technologies, and the need to create student-centered learning environments. Principals who can provide professional direction and support will encourage teachers to innovate in the learning process.

This finding is consistent with extensive domestic research indicating that instructional and transformational leadership are significant predictors of teacher performance, motivation, and student achievement in Indonesian schools (Aslam et al., 2022; Hudayana et al., 2026; Kurniasari et al., 2025). These results further corroborate the work of Juharyanto et al. (2019) and Yatri et al. (2022), who demonstrated that decentralised school-based management necessitates principals to provide

collaborative leadership to address operational challenges and engage multiple stakeholders. Effective leadership within broader educational governance is contingent upon supportive district-level policies (Sumintono et al., 2019) and alignment with national curriculum strategies to promote student character development (Widodo et al., 2020). Principals increasingly utilize social media and digital platforms to sustain instructional leadership and assist teachers in meeting digital requirements (Mustari & Nurhayati, 2024; Prasojo & Yuliana, 2021). Internationally, similar patterns are observed. For instance, research in Malaysian secondary schools demonstrates that integrating instructional and distributed leadership accelerates teacher professional development (Hussein Amzat et al., 2026). Comparable findings in China (Walker & Qian, 2022) and Turkey (Gümüş & Bellibaş, 2025) suggest that principal leadership enhances teacher self-efficacy and job satisfaction.

One of the important dimensions of instructional leadership is academic supervision. The findings indicate that principals' ability to monitor and evaluate learning processes is one of the aspects contributing to the improvement of learning quality. Effective academic supervision is not merely intended to identify teachers' weaknesses but serves as a professional development process that helps teachers reflect on and improve their teaching practices (Yatri et al., 2022). Through collaborative supervision, teachers receive support to develop more innovative learning strategies that are aligned with students' needs.

These findings indicate that principals need to transform the supervision paradigm from an administrative approach into a professional development-oriented approach. Thus, supervision can become a mechanism for continuously improving teachers' professional capacity. This study also reveals that instructional leadership is closely related to teacher professional development. Principals who provide opportunities for training, encourage collaboration among educators, and establish a

culture of sharing best practices can improve teachers' competencies in designing and implementing learning activities.

This research directly aligns with and extends a robust body of domestic literature examining the influence of instructional leadership on teacher capacity, organizational climate, and school improvement. Nationally, these findings align with the research of Aslam et al. (2022), Kurniasari et al. (2025), and Hudayana et al. (2026), who collectively demonstrated that supportive instructional and transformational leadership significantly enhances teacher job performance, work motivation, and overall student achievement. Furthermore, this study reinforces the empirical evidence presented by Juharyanto et al. (2019) and Yatri et al. (2022), who highlighted how principal leadership within school-based management contexts acts as a vital mechanism for resolving quality issues and fostering collaborative stakeholder engagement in primary and secondary schools.

The pivotal role of principals in facilitating teacher growth through digital communication tools and multifaceted leadership models is also consistent with findings by Prasojo and Yuliana (2021) and Mustari and Nurhayati (2024), who emphasized the integration of social media and character-oriented supervisory practices in modern education. Moreover, as Sumintono et al. (2019) and Widodo et al. (2020) noted, when instructional leadership operates in synergy with district-level support and national curriculum strategies, it builds an institutional ecosystem highly conducive to continuous professional growth and curriculum execution.

On an international scale, the observed relationship between professional supervision, leadership behavior, and teacher growth aligns closely with studies from diverse global settings. For instance, empirical evidence from Malaysian secondary schools by Hussein Amzat et al. (2026) confirms via structural equation modeling that instructional and distributed leadership directly drive teacher professional development. Similarly, cross-cultural studies by Walker and Qian (2022) in China and

Gümüş and Bellibaş (2025) illustrate that instructional leadership builds teacher self-efficacy and job satisfaction, provided that the school culture encourages peer collaboration. This relational dimension is further supported by Shaked (2024, 2025b), who argued that relationship-based leadership and principal visibility foster reflective practice among teachers, while Shaked et al. (2018) noted subtle gender-based nuances in how principals execute instructional roles.

However, international scholarship also provides critical comparative insights regarding organizational challenges and theoretical boundaries. Shaked (2025a) cautioned that unmanaged staff dynamics can constrain instructional leadership efforts, while Hallinger (2026) warned against conceptual drift and the over-reliance on principal-centered reforms without broader structural backing. To overcome these limitations, recent global studies emphasize building leadership communities of practice (Saltmarsh, 2026), embedding socially-just leadership frameworks (DeMatthews & Bellibaş, 2026), and reflecting on the decadal evolution of leadership preparation research (Awaludin, 2025).

Learning quality is fundamentally a reflection of teachers' professional quality. Therefore, principals play an important role in creating conditions that enable teachers to develop academically and pedagogically. These findings emphasize that strategies for improving educational quality cannot only focus on enhancing individual teacher competencies but must also be supported by school leadership capable of creating a professional learning ecosystem. The findings of this study provide several important implications for educational management development (Nugraha & Umam, 2023). First, educational institutions need to strengthen principal competency development programs by emphasizing instructional leadership aspects rather than focusing solely on administrative abilities.

Second, schools need to establish an academic culture that encourages collaboration between principals and teachers in improving learning quality. Third,

educational policies should provide greater opportunities for principals to effectively perform their roles as instructional leaders. Therefore, improving learning quality in secondary schools requires a systemic approach that integrates instructional leadership, teacher professional development, and a school culture oriented toward continuous quality improvement.

This research builds upon and extends the national literature on school-based leadership, instructional quality, and collaborative school environments. It corroborates the findings of Aslam et al. (2022), Kurniasari et al. (2025), and Hudayana et al. (2026), who identified principal instructional and transformational leadership as primary determinants of teacher work performance, internal motivation, and school-wide academic achievement. The focus on cultivating a collaborative academic culture among school administrators and teaching staff reinforces the empirical conclusions of Juharyanto et al. (2019) and Yatri et al. (2022), who found that decentralised school-based management is most effective when principals engage both internal and external stakeholders through collaborative problem-solving frameworks.

Additionally, policy-level empowerment that enables principals to function as effective instructional leaders aligns with the observations of Sumintono et al. (2019), who emphasised the necessity of district-level administrative support for sustaining school leadership reforms in developing educational systems. The adoption of modern communication channels and digital media to enhance principal-teacher interactions, as documented by Prasojo and Yuliana (2021) and Mustari and Nurhayati (2024), demonstrates how contemporary instructional leadership adapts to the digital era to strengthen professional development and student character outcomes. When integrated within national curriculum implementation strategies (Widodo et al., 2020), this systemic approach ensures that a collaborative culture produces measurable improvements in classroom instruction.

To provide a global perspective, these findings were compared with international empirical studies across diverse educational contexts. In Southeast Asia, Hussein Amzat et al. (2026) used structural equation modelling in Malaysian secondary schools to confirm that integrating instructional leadership with distributed leadership constructs accelerates teacher professional development. In East Asia, Walker and Qian (2022) found that principal instructional leadership models in China depend on collaborative teacher networks and institutional policy structures. Comparative research from Turkey by Gümüş and Bellibaş (2025) further supports this thesis, demonstrating that instructional leadership significantly enhances teacher self-efficacy and job satisfaction when the school culture fosters trust and mutual engagement.

CONCLUSION

Principal instructional leadership plays a vital and direct role in elevating classroom learning quality in secondary schools. The empirical results confirm that specific instructional leadership practices are core drivers of enhanced classroom instruction and academic performance. Setting a clear academic vision, managing curriculum programs effectively, and establishing a positive learning climate are key contributors to instructional success. These findings provide robust empirical evidence that principal behaviours directly influence the quality of educational outcomes in secondary education settings.

Structural Equation Modelling (SEM) analysis reveals the specific mechanisms underlying this positive relationship. Instructional leadership enhances learning quality by transforming traditional academic supervision and professional development into active, developmental support systems. Shifting the principal's role from routine administrative compliance to proactive pedagogical mentorship creates an empowering environment for educators. As a result, teachers are better positioned to refine instructional competencies, adopt student-centred methodologies, and implement innovative classroom learning strategies.

Although key structural pathways are established, learning quality is a multi-faceted construct influenced by diverse contextual variables. Factors such as teacher self-efficacy, digital infrastructure, school culture, and student demographic characteristics were not fully captured within the current model. Addressing these limitations will require future research to incorporate longitudinal designs and multi-level structural equation modelling. Expanding research across varied geographical, public-private, and socioeconomic school environments will yield a more comprehensive and generalizable understanding of instructional quality determinants.

This research advocates for systemic transformation in educational leadership policy and principal preparation programs. Policymakers and educational authorities should prioritise instructional capacity building and pedagogical coaching over traditional managerial compliance. Developing principals as proactive instructional leaders establishes a sustainable foundation for empowering teaching staff and modernising classroom practices. In the long term, embedding these leadership practices will foster resilient educational ecosystems capable of driving continuous and sustainable quality improvements across the secondary education system.