

To cite this article: Margareta R. Tolinggi, Sitti Roskina Mas and Arifin Suling (2025). INSTRUCTIONAL LEADERSHIP INNOVATIONS IN HIGHLY DISADVANTAGED AREAS: A MULTI-SITE STUDY OF DRIVING SCHOOL PRINCIPALS, International Journal of Education and Social Science Research (IJESSR) 8 (5): 382-397 Article No. 1157, Sub Id 1796

INSTRUCTIONAL LEADERSHIP INNOVATIONS IN HIGHLY DISADVANTAGED AREAS: A MULTI-SITE STUDY OF DRIVING SCHOOL PRINCIPALS

Margareta R. Tolinggi, Sitti Roskina Mas and Arifin Suling

Gorontalo State University, Department of Educational Management,
Gorontalo, Indonesia

DOI : <https://doi.org/10.37500/IJESSR.2025.8527>

ABSTRACT

Despite significant geographical constraints, schools in disadvantaged areas of Indonesia can achieve educational quality through the innovative leadership of 'Driving School' principals. This study aimed to investigate the instructional leadership innovations of "Driving School" principals in enhancing educational quality in disadvantaged areas. Using a qualitative multi-site case study design, data were collected through interviews, observations, and document analysis from two junior high schools in disadvantaged areas. The findings reveal three key innovation domains: (1) facilitating quality instruction through stakeholder collaboration, structured technical guidance, project management offices, learning communities, and digital platform integration (Digischool/Smart School); (2) motivating teachers via quality improvement initiatives, performance coaching, career development programs, and professional recognition systems; (3) implementing collaborative classroom observations through flexible pre-observation, non-evaluative observation, and constructive post-observation feedback cycles. The study demonstrates that innovations of instructional leadership combined with a driving school program can transform geographical constraints into opportunities, offering a replicable model for educational improvement in disadvantaged areas. These innovations collectively fostered teacher development, improved instructional practices, and strengthened school-community partnerships, which highlights the transformative potential of adaptive leadership in resource-limited settings.

KEYWORDS: driving school, principal, instructional leadership, disadvantaged areas.

1. INTRODUCTION

The Driving School Program, known as Program Sekolah Penggerak, initiated by Indonesia's Ministry of Education and Culture in 2021, aims to accelerate school transformation through strong and visionary leadership. The program selects principals through a thorough process that includes document screening, teaching simulations, and interviews. In Boalemo Regency, one of disadvantaged areas in Gorontalo Province, the program began in 2023 with its third cohort, focusing on identifying school leaders who can effectively implement key initiatives such as the Emancipated Learning

curriculum, the Pancasila Student Profile Strengthening Project (P5), and comprehensive programs to improve the quality of teaching and learning. As explained by Syukur (2023), the main objective of this program is to transform schools in a holistic way, enhancing both students' academic achievements and their character development in alignment with the ideals of the Pancasila Student Profile.

Innovative instructional leadership demonstrated by the driving school Program principals plays a crucial role in improving education quality. All innovations they implement are fundamentally directed toward meeting students' needs, which serve as the central focus in designing and executing educational improvements. Educational innovation, as noted by Sutikno (2021), extends beyond developing teaching aids or media to include curriculum design, learning models, teaching materials, instructional strategies, administration, leadership, management, and even organizational practices particularly through the growing adoption of digital learning in the modern era.

Aligned with previous studies (Shulhan, 2020; Cahya et al., 2023; Syafaruddin, 2012), educational innovation is a collective process that requires collaboration among school leaders, teachers, students, and education providers, supported by adequate resources and community involvement. Therefore, the driving school principals are expected to demonstrate innovative, adaptive, and student-centered leadership that responds effectively to educational challenges and the dynamics of the times.

Other studies also highlight various dimensions of leadership innovation in Indonesian schools. Sari et al. (2025) emphasize that the driving school program focuses on holistic student development through improved human resources. Meanwhile, Saputra et al. (2021) demonstrate how principals integrate scientific and religious values in meaningful learning.

Other study reveals broader innovative approaches, namely character-based leadership utilizing project-based learning and technology (Amri & Suhardi, 2025), and leadership of Islamic educational institution (madrasah) significantly enhancing teacher motivation and performance (Nurcahyani et al., 2025). These studies collectively show that effective leadership innovation encompasses technological integration, collaborative strategies, and character development to improve educational outcomes.

The policy report of Learning Leadership and School Management by the Ministry of Education and Culture in collaboration with the INOVASI program highlights that strong school leadership, particularly in managerial and supervisory capacities, is a key factor influencing student learning outcomes, especially in literacy and numeracy (Kemdikbud, 2019). This becomes especially significant when applied to schools in disadvantaged areas, such as SMP Negeri 6 Wonosari and SMP Negeri 12 Wonosari junior high schools, located in Sari Tani Village, Wonosari District, Boalemo Regency. According to the Decree of the Minister of Villages, Development of Disadvantaged Regions, and Transmigration No. 80 of 2022, Sari Tani is classified as a "severely underdeveloped" village, facing major challenges in infrastructure, human resources, and educational access.

Despite these geographic and structural limitations, both schools continue to demonstrate a strong

commitment to innovation. Their designation as “Sekolah Penggerak” underscores their responsibility to lead educational transformation. Within this framework, the principals serve as key agents of change, expected to implement innovative instructional leadership as a strategic priority to enhance teaching and learning quality.

Thus, despite being in a severely underdeveloped area, SMP Negeri 6 and SMP Negeri 12 Wonosari junior high schools have demonstrated a strong spirit of innovation. Their designation as Driving Schools marks an important milestone in reaffirming their commitment to educational transformation. The program emphasizes not only curriculum reform but also the development of visionary, collaborative, and student-centered instructional leadership.

In both schools, the principals act as key drivers of change, inspiring teachers and staff to continuously learn and innovate. Through a democratic leadership approach, they promote a culture of sharing best practices, provide supportive academic supervision, and encourage ongoing professional development for teachers. Consequently, both schools stand as tangible examples of how schools in disadvantaged areas can become centers of innovative learning, responsive to contemporary educational demands, achieving success from local to national levels, and fostering a strong spirit of collaboration through democratic leadership.

Recent educational reforms in Indonesia, particularly through the Sekolah Penggerak program, have emphasized the critical role of instructional leadership in transforming schools and improving learning outcomes. Previous studies (Sari et al., 2025; Saputra et al., 2021; Amri & Suhardi, 2025; Nurcahyani et al., 2025) have highlighted various forms of leadership innovation, ranging from curriculum development and character-based education to digital transformation and collaborative teaching models. However, most of these studies have focused on urban or well-resourced schools, leaving limited insights into how such innovations manifest in geographically remote and underdeveloped areas.

This study addresses that gap by examining how principals of schools designated as driving schools in a severely underdeveloped region, implement innovative instructional leadership to overcome structural and contextual challenges. By exploring the principals’ strategies in fostering teacher motivation, managing digital transformation, and promoting collaborative learning cultures, this study contributes to a deeper understanding of how instructional leadership can drive sustainable educational quality in schools in disadvantaged areas. It thus provides valuable implications for educational policy and practice, particularly in advancing equity and inclusivity in Indonesia’s education system

2. METHODS

Research Respondents

This study involved 12 participants from two junior high schools in Boalemo Regency, namely SMP Negeri 6 Wonosari and SMP Negeri 12 Wonosari. The principals at each school served as the primary informants, supported by assistant principals, learning committee members, school committee

administrators, and teacher representatives. These respondents were selected to provide comprehensive perspectives on the principals' innovations in facilitating quality instruction within disadvantaged educational contexts.

Materials and Instrument

Data collection utilized several qualitative instruments to ensure triangulation and reliability. Structured interview guides were developed and used with all participants to explore their experiences and perceptions systematically. Observational checklists were employed to document the principals' leadership practices and school activities, while document analysis covered written records and visual materials related to innovation programs, instructional supervision, and school management.

Design and Procedure

This study employed a qualitative multi-site case study design to investigate principals' innovations in promoting quality instruction in remote schools. Data were analyzed using a systematic qualitative procedure consisting of three stages: (1) Data Reduction, to organize and code information; (2) Data Display, to present complex information in accessible formats; and (3) Conclusion Verification, to synthesize and validate findings. Research credibility was ensured through source and method triangulation, while transferability was achieved through detailed presentation of findings. This methodological framework enabled a thorough examination of three core indicators: (1) innovations in facilitating quality instruction, (2) motivational strategies for teachers, and (3) implementation of classroom observation in remote school settings.

3. RESULTS

Principals' innovations in facilitating teachers to deliver quality learning

The finding of this study identifies that the driving school principal's innovations facilitate teachers in delivering high-quality instruction, evidenced by several key findings. These include the adoption of novel pedagogical approaches, the effective integration of appropriate technology, and improvements in classroom management. Furthermore, under the principal's instructional leadership, the school has successfully established strong, voluntary partnerships. These self-sustaining collaborations have been instrumental in generating significant educational innovations.

The principal's innovation in facilitating high-quality instruction was implemented through a system of structured technical guidance workshops. These sessions were mandatory for all teaching staff and educational personnel. To ensure a comprehensive understanding of the driving school concepts, the school engaged external facilitators to lead these workshops. The program also incorporates a Project Management Office (PMO), a dedicated team tasked with supporting its initiatives. The PMO structure maintains consistent membership at the facilitator and supervising instructor levels, while comprising different individuals at the principal and teacher-representative levels. PMO activities were conducted through a dual-mode approach, utilizing both online and in-person platforms.

To deal with the condition commonly found in disadvantaged areas in term of communication and technology, the principal's commitment to facilitating quality instruction is demonstrated by the strategic implementation of a school digitization program. This transition to digital-based school management presented significant challenges, requiring substantial inspiration and strong willingness from the entire school community, therefore, with collaborative efforts of the principal and teachers, a key innovation of the computer-based national assessment in a semi-online format was introduced. This approach is not universally feasible in schools within remote areas, as it requires a dedicated server to support the assessment infrastructure. The adoption of the semi-online mode proved highly effective, effectively mitigating issues of weak internet connectivity and ensuring an uninterrupted assessment process.

The school principal of SMP Negeri 6 Wonosari also implemented digital learning, strategically utilizing accessible tools to maximize limited resources. Teachers primarily used WhatsApp groups to communicate assignments, reading materials, and student worksheets. Furthermore, they gradually introduced students to the Canva application, fostering the creation of engaging and enjoyable learning designs. As these digital tools are online-based, reliable internet access was established as a fundamental prerequisite. Concurrently, SMP Negeri 12 Wonosari cultivated natural collaborations with stakeholders based on a shared commitment to advancing the remote school and preventing it from being left behind. While the number of contributing stake holders was limited, their support was profoundly impactful, underscoring the critical importance of engaging diverse stakeholders in achieving quality education. SMP Negeri 12 Wonosari demonstrated a strong commitment to innovation through the dedication of its principals, teachers, and students. This drive for innovation was sustained by robust support from both internal and external stakeholders. The collaborative partnerships that facilitated quality instruction at SMP Negeri 6 Wonosari and SMP Negeri 12 Wonosari are detailed in Figure 1.

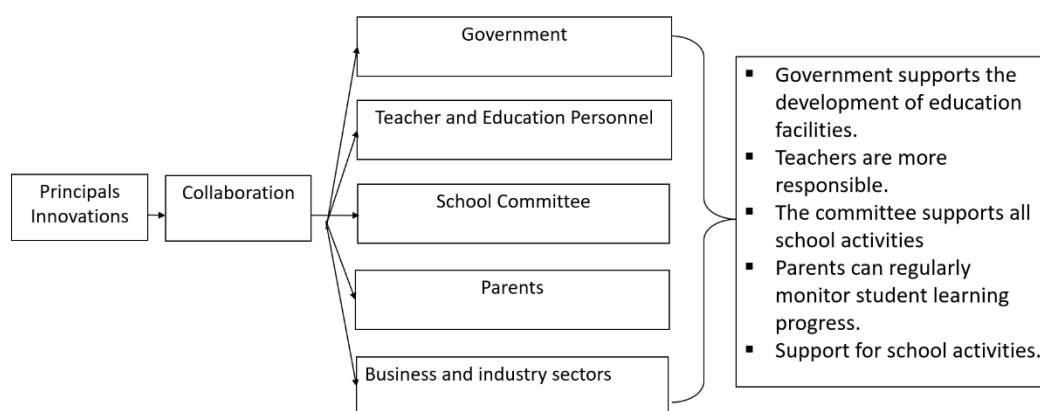


Figure 1: Principals' innovations in facilitating teachers to realize quality learning

Figure 1 illustrates the principals' innovations in facilitating teachers to realize quality learning, which are supported by a multi-stakeholder framework. This ecosystem consisted of government backing for educational facility development, teachers who exhibited heightened professional accountability, and a school committee that provided comprehensive support for all activities. Furthermore, the framework incorporated a system for parents to periodically monitor student learning progress, alongside consistent collective support for the school's various programs and initiatives.

A key innovation in digitalization at SMP Negeri 12 Wonosari was the successful implementation of the online computer-based national assessment. This was enabled by the school's robust internet infrastructure, a dedicated ICT laboratory, and digitally competent teachers. The reliable network further strengthened the teachers' capacity to deliver quality instruction. This digital transformation marked a shift from conventional to modern teaching methods. The school's "Digischool" program, developed in partnership with PT. Telkom Indonesia, became a recognized brand and model for other institutions, ultimately contributing to the principal being awarded First Place in the National Dedicated Junior High School Principal competition in 2019.

The "Digischool" program generated several leading initiatives, including: (1) Android-Based Semester Exams, (2) Android-Based Learning, (3) Android-Based Quranic Literacy Completion, and (4) Android-Based Student Council Elections. Crucially, this program enhanced instructional quality by operating on a localhost network instead of the public internet, thereby eliminating connectivity barriers to digitalization. Following infrastructure upgrades, the school expanded its digital ecosystem with a "Smart School" program utilizing the PIJAR application, developed through partnerships with corporate entities like PT. Telkom Indonesia and PT. Gomedz Network. This integrated digital management system, which handles online attendance, learning, assessment, teacher journals, and grading, has been very successful that it is subsequently adopted by the Boalemo Regency Government as a leading-initiative policies, solidifying the school's distinctive identity in educational digitalization.

Principals' innovations in motivating teachers

The principal's approach to motivating teachers at SMP Negeri 6 Wonosari was fundamentally centered on systemic educational quality improvement. This involved periodic curriculum revisions, continuous teacher competency development, and the adequate provision of learning facilities. The principal's managerial competence in comprehensively managing school assets is crucial to this process, because sustained teacher quality directly leads to improved student learning outcomes. SMP Negeri 6 Wonosari prioritized performance enhancement as its core motivational strategy for teachers. This was operationalized through continuous training and periodic professional coaching focused on classroom management, digital platform utilization, and teaching module development. This structured coaching model, integrated into the principal's instructional leadership, served as a proactive measure to maintain pedagogical standards and prevent professional stagnation.

The principal's innovative strategy for teacher motivation also encompassed career development, which was recognized for enhancing overall teacher competence, improving instructional quality, boosting performance, and preparing educators for promotion. Consequently, SMP Negeri 6 Wonosari placed a strategic focus on professional growth, operating on the principle that increased teacher competency directly elevated learning quality. Furthermore, motivation was fostered through extrinsic factors. This included formal recognition of teacher potential by the principal, the creation of professionally challenging environments, external encouragement from peers and family, and a resulting culture where teachers are driven to proactively advance their careers.

The principal's strategy for motivating teachers at SMP Negeri 12 Wonosari was fundamentally centered on a structured and periodic process of quality improvement. This encompassed regular curriculum revisions, enhanced teacher competency, and the adequate provision of facilities, all underpinned by the principal's effective managerial skills. This approach was operationalized through two distinct professional development pathways: coaching, which focused on immediate performance improvement, and mentoring, which was dedicated to long-term career growth. Furthermore, teacher motivation was reinforced by a robust further-study program, encouraging both teaching and administrative staff to pursue higher qualifications. The principal's personal commitment to this ideal was demonstrated by their own pursuit of a doctoral degree.

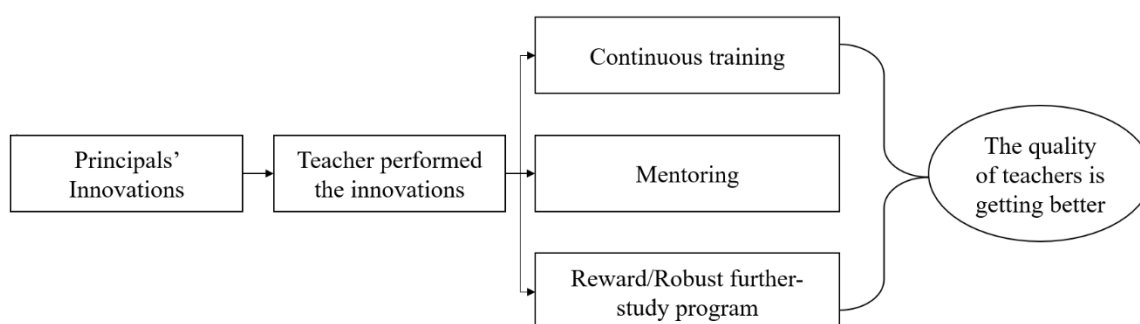


Figure 2. The principal's innovations to motivating teachers

Based on Figure 2, it shows that the key motivational innovation employed by the principal of SMP Negeri 12 Wonosari is a focus on career development, which enhances teacher competency, improves instructional quality, boosts performance, and prepares educators for promotion. The principal realized it through professional motivation, comprising both intrinsic and extrinsic drivers. Intrinsic motivation was cultivated through the principal's leadership satisfaction, a pervasive culture of continuous learning, strong character values, and the fostering of high professional idealism among the teaching staff.

Principals innovations in conducting lesson observations

The principal's innovation in implementing classroom observations at SMP Negeri 6 Wonosari followed a structured cycle of pre-observation, observation, and post-observation. The pre-observation phase was a scheduled, collaborative commitment where teachers present their lesson ideas, anticipated challenges, and instructional designs to the principal. This process was standardized, with all teachers completing each phase of the cycle within the same week, differing only in their specific scheduled times. The primary variation lies in the individual classroom designs. The schematic pattern of this observation is presented in the following figure.

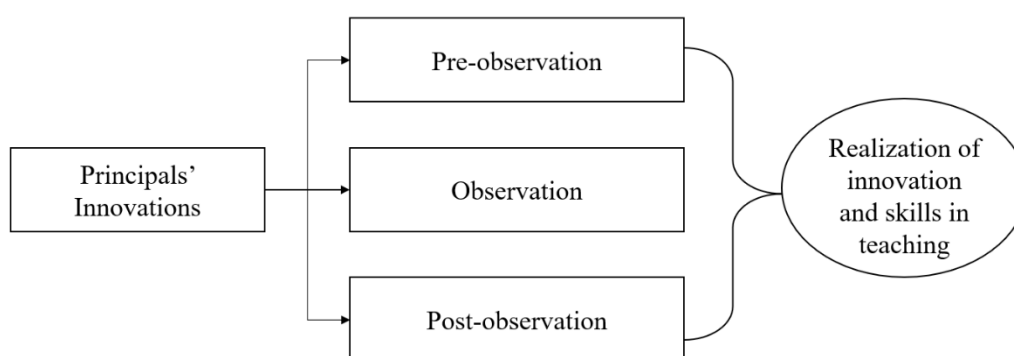


Figure 3. The principal's innovations to lesson observation

The principal's innovation in classroom observation at SMP Negeri 12 Wonosari followed a similar cycle of pre-observation, observation, and post-observation. However, unlike a fixed schedule, teachers were granted autonomy to determine the timing for their pre-observation meetings, offering greater scheduling flexibility. A key differentiator was the implementation of a "moving class" model for the observations, where sessions were conducted in specialized facilities like the science and ICT laboratories to create a novel learning atmosphere. This approach was predominantly used for subjects such as Science, Mathematics, Information Technology, Social Studies, and Vocational Arts.

A key distinction between the two schools lies in the selection of instructional materials for classroom observations. At SMP Negeri 6 Wonosari, the material was chosen collaboratively, whereas at SMP Negeri 12 Wonosari, the individual teacher selected the material, which reflects different strategic rationales. The primary objectives of these observations were to provide the principal with authentic data on the instructional process across all subjects; identified teacher strengths and weaknesses; created the potential for instructional improvement through principal feedback; enhanced the understanding of student learning styles for both teachers and the principal; and fostered professional teaching conduct.

4. DISCUSSION

The findings indicate that the principals' innovations were instrumental in cultivating an environment conducive to educational quality. The driving principals implemented strategies through development of a multi-stakeholder support system encompassing government, community, and corporate partners;

as well as tailored motivational and professional development mechanisms, including higher degree pathways, flexible coaching and mentoring models, and a structured classroom observation cycle.

Through this study, it showed that the principals' innovative leadership in facilitating quality instruction within remote schools presents distinct challenges. The primary obstacle often lies in teacher resistance to change, compounded by the geographical isolation of the schools themselves. These findings suggest that effecting meaningful change in such a context necessitates a leadership approach that directly addresses this inherent stagnation. Consequently, quality instruction in these settings is characterized by a deliberate departure from conventional methods. The principals' innovation manifests not in complex technological solutions, but in the strategic utilization of available resources, including simple technology and the local environment. This study underscores that the specific strategy for achieving quality is ultimately contingent upon the principal's managerial competence in overcoming contextual constraints and mobilizing existing assets to foster a culture of improvement.

The results of this study also demonstrates that effective school management is operationalized through systematic planning, organizing, directing, and monitoring. This managerial framework enables principals to comprehensively oversee school operations, a process significantly strengthened by the strategic involvement of the school committee, which provides crucial oversight and support. Both schools' programs are formulated based on core principles: being student-centered, contextual, essential, accountable, and inclusive of stakeholders. To ensure continuous innovation, principals actively seek new information through professional learning communities and facilitator networks. Furthermore, the establishment of a learning committee comprising the supervising instructor, principal, and teacher representatives proves critical. This committee, trained by driving school facilitators, is tasked with leading pedagogical transformation through targeted training and mentoring. These leadership innovations facilitate high-quality instruction characterized by novel findings, such as the adoption of new teaching approaches, the application of appropriate technology, and effective classroom management.

The findings demonstrate that quality learning in these schools is underpinned by stakeholder collaboration, which emerged organically from a shared commitment to advancing education in disadvantaged areas. While the number of contributing partners may be limited, their support was crucial to the schools' prestige and transformative efforts. This aligns with Jaenuddin's (2024) study on the significant implications of stakeholder involvement in school management for educational quality.

A pivotal innovation was the principals' strategic implementation of digitization. The flagship "Digischool" program, featuring Android-based learning, Semester Exams (USBA), and Quranic literacy (TBTQ), utilized a localhost network to bypass connectivity constraints. This successful foundation, combined with partnerships with PT Telkom Indonesia and PT Gomedz Network, enabled an expansion into a "Smart School" system using the PIJAR application. This integrated platform,

managing online attendance, learning, assessment, and teacher journals, has proven very effective and adopted as a flagship program by the Boalemo Regency government, which solidifies the schools' distinctive identity in educational digitalization.

Motivation is a critical determinant of teacher effectiveness, particularly in remote schools where educators face significant limitations in infrastructure, information access, and environmental support. Without strong motivation, teachers may operate mechanically, lack innovation, and fail to provide meaningful learning experiences. In this context, the role of the principal is paramount. As evidenced at SMP Negeri 6 Wonosari and SMP Negeri 12 Wonosari, the driving school principals are strategically positioned to foster motivation, sustaining teachers' enthusiasm, resilience, and commitment to educational quality despite severe geographical and facility-related challenges.

The principals' motivational approach materialized through tangible practices. A key strategy is the consistent provision of non-material appreciation, such as sincere praise and public recognition, for dedicated teachers. This aligns with the findings of Han & Yin (2016), who affirm that recognition significantly enhances the intrinsic motivation of educators. Furthermore, the principals cultivate a culture of disciplined work through persuasive, rather than coercive, means. This approach transforms compliance into conscious professional practice, making teachers feel valued while guiding them toward greater accountability. This duality of motivation, fostering both internal drive and external validation, supports Sardiman's (2005) assertion that strong intrinsic motivation cultivates perseverance and job satisfaction, while extrinsic factors create a challenging and recognition-rich environment that pushes teachers to improve their performance.

Beyond recognition, the principals prioritize continuous professional development, ensuring teachers had access to training through both internal school programs and government-facilitated online platforms. This commitment to fostering a culture of lifelong learning is consistent with the findings of Diana & Rifqi (2023), who identified teacher training, mentoring, and the use of the Emancipated Learning Platform as key strategies employed by driving school principals to enhance teacher competence.

Furthermore, the principals implement a dual-strategy approach of coaching and mentoring. Coaching is focused on practical skill development in areas such as classroom management and digital technology integration, while mentoring provided sustained, long-term guidance for career advancement. This differentiated support system aligns with research by Muspawi (2021) and Da Silva et al. (2025), which confirms that the combination of coaching and mentoring significantly enhances pedagogical competence, enriches teaching methods, encourages technology adoption, and fosters professional reflection among educators.

Motivational innovation is further realized through the establishment of professional learning communities (PLCs). Principals encourage teachers to share best practices, discuss challenges, and collaboratively formulate solutions. This collegial environment not only enriches their pedagogical

repertoire but also strengthens professional solidarity, sustaining their motivation. This finding is supported by Yenita & Andriani (2025), who confirm that PLCs serve as effective platforms for professional development through collaboration and peer reflection, boosting teachers' confidence and motivation by providing professional and emotional support, a dynamic clearly observed in both case study schools.

Furthermore, the implementation of the "P5" (Strengthening the Profile of Pancasila Students) project serves as a significant motivational tool. Principals frame P5 not as a mere curricular obligation, but as a creative opportunity for teachers to integrate Pancasila values into student learning. The use of locally relevant themes, such as environmentalism and local wisdom, allows teachers greater autonomy in designing creative projects, thereby increasing their teaching motivation. This aligns with Sutrisno & Rofi'ah (2023), who note that integrating local context into P5 provides meaningful learning experiences for students and grants teachers the creative space they value.

The strategic integration of ICT constituted another key motivational innovation. Despite geographical isolation and limited internet access, principals provides basic digital facilities and encouraged the use of digital platforms for both instruction and professional growth. This effort is effective in mitigating feelings of professional obsolescence, a finding consistent with Permata & Purnawarman (2022), who confirmed that institutional support and training in ICT foster positive teacher attitudes and prevent them from falling behind educational technology trends.

The impact of these motivational strategies is evident in improved teacher performance, discipline, and creativity, which in turn enhance student engagement and the overall learning environment (Mohammad et al, 2014; Pan, 2023).

These findings demonstrate that the motivational innovations implemented by principals in remote schools effectively transform constraints into opportunities for quality education. Strategies such as recognition, professional development, coaching, mentoring, professional learning communities, the P5 project, and strategic technology integration proves instrumental in boosting teacher morale and strengthening educational quality. Ultimately, inspirational leadership ignites a transformative energy, enabling schools, even in the most advantaged areas, to become centers of pedagogical innovation that are both relevant to student needs and responsive to modern demands.

Classroom observation serves as a strategic instrument for educational quality management within the academic supervision framework. It directly captures classroom dynamics and provides a foundation for reflective practice and instructional improvement, aligning with Widatin et al. (2025), who emphasize observation and collaborative reflection as core components of coaching-based supervision. Despite being in disadvantaged areas, both schools utilized observation not as a mere control mechanism, but as a collaborative space for teachers to reflect on and continuously improve their practice. This demonstrates that geographical constraints are not an absolute barrier to educational quality.

Based on the interview results, the lesson implemented by the principals are observations with a systematic cycle: pre-observation, core observation, and post-observation. The pre-observation stage, which could be scheduled or flexible, involved open discussion where teachers presented lesson plans and received strategic feedback. This flexible approach respected teacher autonomy and built mutual trust, ensuring continuity between planning, implementation, and evaluation. The core observation phase involved direct classroom monitoring, where the principal assessed key instructional aspects such as content delivery, methodological variety, and student-teacher interaction. Beyond formal evaluation, this stage provided critical insight into the authentic challenges and dynamics of daily teaching practice. Through direct observation, principals at these schools gained firsthand understanding of contextual challenges such as heterogeneous student abilities, limited ICT facilities, and low student motivation driven by socio-environmental factors. This process allowed them to not only identify difficulties but also recognize teachers' innovative strategies in addressing them, aligning with Nurhadi et al. (2023) regarding how academic supervision in disadvantaged areas enhances teacher creativity and professionalism. The post-observation stage featured constructive, evidence-based feedback focused on teacher strengths and development areas. For example, instead of merely noting low student participation, principals suggested concrete strategies like think-pair-share or open-ended questioning. This created a two-way dialogue where teachers could respond and reflect, consistent with Zilviatri & Putra's (2023) findings that post-observation reflection with constructive feedback helps teachers evaluate their practices, develop methodological creativity, and build confidence in implementing teaching innovations.

The success of classroom observations in both schools stemmed from the principal's leadership approach, which positioned themselves not as inspectors but as collaborative partners in change. By viewing teachers as lifelong learners, principals fostered a safe climate for pedagogical innovation tailored to local contexts, particularly crucial in resource-limited settings. This aligns with Yahya's (2024) findings on transformational leadership enhancing teacher motivation and performance in disadvantaged areas. Furthermore, observations cultivated a culture of reflection, where teachers documented and collectively discussed their instructional experiences. This practice transformed individual insights into organizational learning, establishing professional learning communities consistent with Hermawan & Rosfiani's (2022) research.

Critically, observation findings directly informed targeted professional development. For instance, when teachers struggled with basic technology integration, principals organized training on offline-capable digital tools, demonstrating how observational data drives capacity-building policies, as reflected in Maulana et al. (2025)'s study on needs-based training improving teachers' digital instructional design skills.

A notable feature of the observation practice was the active involvement of teachers in scheduling, granting them autonomy to choose timings based on their readiness. This approach fostered a sense of ownership, reduced the perception of one-sided surveillance, and strengthened collaborative trust

between teachers and principals, transforming observation from a technical exercise into a tool for building effective communication. Despite their remote and disadvantaged context, both schools maintained a collective commitment to uncompromising educational quality. The principal successfully reframed observation from an administrative formality into a development-oriented process. Consequently, teachers who initially viewed observation as a burden gradually recognized its value, leading to increased engagement in designing innovative strategies and greater confidence in experimenting with new methods despite resource limitations.

From a theoretical perspective, these findings reinforce that instructional leadership is a critical determinant of educational quality. Principals who implement participatory and reflective observation processes develop teachers who are not only technically competent but also adaptively resilient. This aligns with Puspitadani et al. (2022), who emphasize the impact of transformational and instructional leadership, including classroom observation and reflective practice, on teacher performance and learning quality. Thus, classroom observation in these schools' functions not as a standalone activity, but as an integral component of a broader leadership strategy for driving improvement in disadvantaged areas. This practice demonstrates that even in a remote village like Sari Tani, schools can exhibit leadership quality comparable to urban institutions. The observation outcomes serve not merely for teacher assessment, but as a foundation for strategic planning toward holistic school advancement.

This study has limitations. This multi-site case study, while providing in-depth insights into principals' innovativeness in two remote schools, was limited by its qualitative design and small sample size, limiting the generalizability of its findings. The reliance on self-reported data by the 12 participants, although triangulated through observations and documents, results are specific to SMP Negeri 6 and 12 Wonosari only. Despite these limitations, the study has significant implications. For practice, it offers a replicable model of instructional leadership for disadvantaged areas, demonstrating how participatory observation, strategic mentoring, and context-driven digitalization can enhance teacher quality and motivation. For policy, it underscores the need to empower principals in remote schools with greater autonomy and targeted resources to implement such transformative practices. For research, it highlights the necessity for future studies to explore the long-term impact of these innovations and to test their applicability in other remote educational contexts using mixed-methods approaches.

5. CONCLUSION

The findings of this study reveals that effective school leadership in disadvantaged areas extends beyond routine administration, encompassing strategic facilitation, motivation, and instructional mentoring. Even though located in disadvantaged areas, the schools' principals drive substantial educational progress through integrated innovations. The principals enhance instructional quality by creating a supportive ecosystem involving stakeholder collaboration, structured training, a Project Management Office (PMO), and the strategic use of digital platforms such as Digischool and the

PIJAR-based Smart School. To sustain teacher motivation, the principals combine continuous professional development with coaching, mentoring, study opportunities, and recognition systems that strengthens teachers' motivation. Classroom observations are redefined as collaborative learning opportunities through flexible, structured cycles of pre-observation agreements, non-judgmental observations, and constructive feedback, fostering reflective practice. Overall, the findings highlight that transformative leadership, grounded in trust, collaboration, and contextual strategies, is essential for overcoming geographic barriers and ensuring sustainable educational quality in remote schools.

REFERENCES

- Amri, A., & Suhardi, M. (2025). Moral-based principal's innovative leadership in learning development. *Secondary: Jurnal Inovasi Pendidikan Menengah*, 5(2), 1–13. [id]
- Cahya, U. D., Simarmata, J., Iwan, N., Suleman, N., Nisa, K., Nasbey, H., Muharlisiani, L. T., Karwanto, Putri, M. D., Chamidah, D., Pagiling, S. L., & Rahmadani, E. (2023). 21st century digital learning innovation. *Langsa, Indonesia: Yayasan Kita Menulis*.
- Cents-Boonstra, M., Lichtwarck-Aschoff, A., Lara, M. M., et al. (2022). Patterns of motivating teaching behaviour and student engagement: A microanalytic approach. *European Journal of Psychology of Education*, 37, 227–255. <https://doi.org/10.1007/s10212-021-00543-3>
- Da Silva, A., Hariyati, N., Karwanto, K., Khamidi, A., & Wulandari, A. (2025). Implementation of coaching and mentoring in academic supervision as an effort to improve teacher learning quality. *JIIP: Jurnal Ilmiah Ilmu Pendidikan*, 8(3), 2680–2686. [id]
- Diana, S., & Rifqi, A. (2023). The principal's efforts in improving teacher competence in the mobilizing school program study at UPT SD Negeri 337 Gresik. *Inspirasi Manajemen Pendidikan*, 11(4), 911–920. [id]
- Firdausi, L., & Sulistyorini. (2023). Building education institution teamwork in the era of Revolution 4.0. *Jurnal Manapi*, 2(2). [id]
- Han, J., & Yin, H. (2016). Teacher motivation: Definition, research development and implications for teachers. *Cogent Education*, 3(1), 1217819.
- Hermawan, C. M., Rosfiani, O., & Santoso, G. (2024). Teacher professional learning communities in Tangerang elementary schools: Cultural negotiation, layered leadership, and systemic transformation. *Jurnal Pendidikan Transformatif*, 4(3), 300–321. <https://doi.org/10.9000/jupetra.v4i3.2212> [id]
- Jaenuddin. (2024). Analyzing the role of stakeholders in school management decision making: An educational perspective. *Journal of Education Research*, 5(1), 939–944. <https://jer.or.id/index.php/jer/article/download/937/530> [id]

- Kemdikbud. (2019). Learning leadership and school management policy briefs. Inovasi. <https://www.inovasi.or.id/id/publikasi/risalah-kebijakan-kepemimpinan-dan-manajemen-sekolah-oktober-2019/> [id]
- Masaong, A. K. (2013). Learning supervision and teacher capacity building: Empowering supervisors as teachers. Bandung, Indonesia: Alfabeta. [id]
- Maulana, M., Wijaya, C., & Algifari, R. (2025). Improving teacher competence through technology-based continuing professional development program. *Jurnal Ilmu Pendidikan*, 1(2), 90–97. [id]
- Awedh, M., Mueen, A., Zafar, B., & Manzoor, U. (2014). Using Socrative and smartphones for the support of collaborative learning. arXiv preprint. <https://doi.org/10.48550/arXiv.1501.01276>
- Muspawi, M. (2021). Strategies for improving teacher performance. *Jurnal Ilmiah Universitas Batanghari Jambi*, 21(1). [id]
- Nurchayani, A., Zahwa, K., Husna, E. A., Pratama, H., Hutashut, S., & Ramadhan, M. A. A. (2025). Madrasah head leadership innovation on teacher motivation and performance in developing learning at MAN 2 Langkat. *Jurnal Yudistira*, 3(4), 71–80. <https://doi.org/10.61132/yudistira.v3i4.2360> [id]
- Nurhadi, T., Imron, A., & Triwiyanto, T. (2023). Enhancing teacher professionalism through academic supervision: An investigation in remote and peripheral regions. *Tarbawi*, 9(2), 305–316.
- Pan, H.-L. W. (2023). Advancing student learning power by operating classrooms as learning communities: Mediated effects of engagement activities and social relations. *Sustainability*, 15(3), 2461. <https://doi.org/10.3390/su15032461>
- Permata, I. W., & Purnawarman, P. (2024). Teacher's perspective on the use of ICT in the classroom: Teacher elementary school context. *Inspiring*, 49–65.
- Puspitadani, E., Yudea, F., & Loo, F. (2022). Educational leadership and learning quality: The influence of the principal's leadership style on teacher performance. *Jurnal Ilmu Pendidikan dan Humaniora*, 11(3), 206–220.
- Putra, J. A. (2025). The role of coaching and reflection-based supervision in promoting teaching innovation: A qualitative study at SMA 3 Pekanbaru. *Jurnal Penelitian Ilmu Pendidikan Indonesia*, 4(1), 318–323. [id]
- Saputra, B. R., Arifin, I., & Sobri, A. Y. (2021). Principal leadership in religious-scientific learning innovation. *Kelola*, 8(1), 94–102. [id]
- Sardiman, A. M. (2005). Interaction and motivation for teaching and learning. Jakarta, Indonesia: RajaGrafindo Persada. [id]

- Sari, H., Nor, T., Suriansyah, A., & Sulistyana, S. (2025). Principal leadership model for driving international quality education. *Educational: Jurnal Inovasi Pendidikan & Pengajaran*, 5(1), 9–16. [id]
- Shulhan, M. (2020). *Innovations in education quality development in madrasahs*. Yogyakarta, Indonesia: Penebar Media Pustaka. [id]
- Sutikno, M. S. (2021). *Education innovation*. Mataram, Indonesia: Sanabil. [id]
- Sutrisno, S., & Rofi'ah, F. Z. (2023). Integration of local wisdom values to optimize the Pancasila student strengthening project of Madrasah Ibtidaiyah in Bojonegoro. *Pionir*, 12(1), 54–76. <https://doi.org/10.22373/pjp.v12i1.17480> [id]
- Syafaruddin, et al. (2012). *Educational innovation: An analysis of new education policies*. Medan, Indonesia: Perdana Publishing. [id]
- Syukur, Y. (2023). *Flowing like water: An inspiring story of the implementation of the Junior High School Movement School Program*. Jakarta, Indonesia: Direktorat SMP Kemdikbudristek. [id]
- Widatin, T., Roemintoyo, & Sukarno. (2025). Case study on the academic supervision of school teachers utilizing coaching techniques to sustain learning quality in elementary education. *Journal of Education Research and Evaluation*, 9(3), 602–612.
- Yahya, S. (2024). Transformational leadership in improving teacher performance in madrasah. *International Journal on Advanced Science, Education, and Religion*, 7(3), 303–314.
- Yenita, G., & Andriani, D. E. (2025). Lead teachers' views on professional learning communities at junior high school level in Batam City. *Jurnal Manajemen Pendidikan dan Ilmu Sosial*, 6(4), 2817–2826. <https://doi.org/10.38035/jmpis.v6i4.4800> [id]