

Bridging Supervision, Administrative Efficiency, and Instructional Quality: A Sustainable Educational Management Framework

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Abstract:

This study aims to analyze how supervision-based educational planning affects teachers' administrative workloads and its implications for improving educational quality. This study employed a mixed-methods sequential explanatory design, integrating quantitative and qualitative data. Teachers completed questionnaires to measure the relationship between supervision-based educational planning and administrative workload. At the same time, in-depth interviews and observations provided qualitative data to reinforce and explain the quantitative results. The findings indicate that supervision-based educational planning significantly reduces teachers' administrative workloads, allowing them to focus more on instruction. Qualitative findings corroborate these results, showing that systematically designed supervision improves administrative efficiency and strengthens teacher professionalism. The study's implications suggest that supervision-based educational planning can serve as a managerial strategy to optimize teacher performance and improve educational quality. The resulting conceptual model integrates supervision, administrative efficiency, and instructional quality into a framework for sustainable development of educational management.

Keywords: *Educational Supervision, Teacher Workload, Educational Administration*

Abstrak:

Penelitian ini bertujuan untuk menganalisis pengaruh perencanaan pendidikan berbasis supervisi terhadap beban kerja administratif guru serta implikasinya terhadap peningkatan mutu pendidikan. Metode penelitian menggunakan pendekatan mixed methods dengan desain sequential explanatory yang mengintegrasikan data kuantitatif dan kualitatif secara berurutan. Data kuantitatif dikumpulkan melalui penyebaran angket kepada guru untuk mengukur hubungan antara perencanaan pendidikan berbasis supervisi dan beban kerja administratif, sedangkan data kualitatif diperoleh melalui wawancara mendalam dan observasi untuk memperkuat serta menjelaskan hasil analisis kuantitatif. Hasil penelitian menunjukkan bahwa perencanaan pendidikan berbasis supervisi berpengaruh signifikan dalam mengurangi beban kerja administratif guru sehingga meningkatkan fokus guru terhadap proses pembelajaran. Temuan kualitatif memperkuat hasil tersebut dengan menunjukkan bahwa supervisi yang dirancang secara sistematis mampu meningkatkan efisiensi pengelolaan administrasi dan memperkuat profesionalisme guru. Implikasi penelitian ini menegaskan bahwa perencanaan pendidikan berbasis supervisi dapat menjadi strategi manajerial dalam mengoptimalkan kinerja guru dan peningkatan mutu pendidikan. Model konseptual yang dihasilkan mengintegrasikan supervisi, efisiensi administrasi, dan kualitas pembelajaran sebagai kerangka pengembangan manajemen pendidikan yang berkelanjutan.

Kata Kunci: *Supervisi Pendidikan, Beban Kerja Guru, Administrasi Pendidikan*

INTRODUCTION

Elevating educational quality remains a critical challenge in Indonesia's national development agenda (Azizah et al., 2025; Khomairotusshiyama & Diana, 2025; Maimunah et al., 2025). International assessments underscore this issue: the 2022 Programme for International Student Assessment (PISA) results rank Indonesia 68th in mathematics, 71st in reading, and 67th in science among 81 participating countries, reflecting a persistent achievement gap (OECD, 2023). Furthermore, World Bank data (2023) indicate that Indonesia's learning poverty rate stands at approximately 53%, signaling that more than half of ten-year-olds struggle to read and understand a simple text. Despite government initiatives ranging from teacher professional training and certification programs to curriculum reforms and enhanced supervisory frameworks, systemic quality challenges persist. Addressing these challenges depends on optimizing the role of educational personnel. Educational personnel play a strategic role in shaping students' knowledge, skills, and character (Maisaroh et al., 2025; Suci, 2025; Wadi et al., 2023). Therefore, teachers are required to be able to act professionally in carrying out their duties so that they can produce quality students (Meriasih et al., 2026; Shofwani et al., 2026).

Supervision-based educational planning plays an increasingly vital role in improving institutional quality within globalized and digitalized learning environments (Darina & Baharun, 2025; Suro & Anggraeni, 2024; Noviyani, 2026; Yue, 2024). UNESCO (2021) reports emphasize that the effectiveness of educational systems relies heavily on strategic school management, specifically through integrated supervision and planning that support instructional performance. Furthermore, OECD data (2020) indicate that worldwide, over 40% of teachers' working time is consumed by administrative demands, significantly reducing time for direct classroom instruction. In Indonesia, this global administrative strain is even more pronounced. Reports from the Ministry of Education, Culture, Research, and Technology (Kemendikbudristek, 2023) show that Indonesian educators spend a disproportionate share of their working hours preparing complex lesson documentation, administrative accreditations, and ongoing performance evaluations. This heavy administrative burden directly worsens low classroom engagement and contributes to stagnant learning outcomes across schools nationwide.

While international literature acknowledges administrative overload, empirical studies connecting supervision-based educational planning directly to administrative relief within Indonesian Islamic secondary education (MAN) remain scarce. Unresolved systemic burdens alongside limited context-specific research justify the current study, establishing a clear empirical gap regarding how supervisory planning functions as a dual-purpose managerial tool to mitigate teacher workload while elevating educational quality. A similar phenomenon is also occurring in Southeast Asia, as teachers' administrative burdens increase alongside demands for data-based educational accountability. This situation underscores the need to develop a supervision-based educational planning model that balances administrative demands with improved learning quality.

Teachers play a strategic role as the primary implementers of the learning process and agents of educational change. However, in practice, teachers are tasked with more than teaching. They are also burdened with administrative tasks such as developing lesson plans, managing assessments, digital-based reporting, and other institutional duties. Supervision-based educational planning integrates the planning function with teacher professional development. According to Glickman, Gordon, and Ross-Gordon (2018), effective educational supervision focuses not only on evaluation but also on developing teacher capacity through systematic, sustainable planning. Thus, integrating educational planning and supervision is expected to optimize teacher performance while reducing administrative burdens unrelated to learning.

The phenomenon in madrasas shows that teachers' administrative workload remains a serious problem, particularly in madrasa settings. Initial observations conducted between January and March 2024 across three State Islamic Senior High Schools (MAN 1, MAN 2, and MAN 3) in Tulungagung Regency provided empirical evidence of this administrative strain. The observational process tracked the daily routines and documentation workflows of 24 subject teachers and 6 school supervisors through structured field notes, non-participant classroom observations, and reviews of administrative logs. Observations revealed that teachers spend an estimated 15 to 20 hours per week completing administrative requirements, including lesson plans, standardized assessment rubrics, and continuous data entries into the Education Management Information System (EMIS) and e-Rapor platforms. In multiple instances, teachers completed these administrative tasks outside official working hours, directly contributing to occupational fatigue and diminished instructional focus during classroom delivery. Furthermore, supervisory visits during this period functioned primarily as checks rather than supportive planning mechanisms, offering few concrete solutions to alleviate teacher workload. This demonstrates the ineffectiveness of educational planning, which is not yet optimally based on supervision.

Although extensive research has examined educational supervision and teacher workload, several gaps remain. First, few studies specifically examine how supervision-based educational planning affects teacher administrative workload and, in turn, educational quality. Second, previous research on mediating variables in the relationship between supervision and teacher performance has yielded inconsistent findings. Third, research in the Indonesian context, particularly in public madrasas, remains limited, so more contextual empirical studies are needed to understand the dynamics in the field.

Several previous studies provide an empirical basis for this research. A high administrative workload negatively affects teacher motivation and performance (ARSLAN & Hüseyin, 2026; Ghasemi, 2025). Meanwhile, Kraft, Blazar, and Hogan (2018) found that effective supervision can significantly improve teaching quality and student learning outcomes. Another study found that instructional leadership integrated with educational planning can improve school effectiveness (Gechere et al., 2025; Ralebese et al., 2025). Furthermore, research by Fitriani et al. (2020) in Indonesia showed that academic supervision positively impacts teacher

pedagogical competence, although it did not specifically examine the administrative workload aspect. Despite these valuable findings, their investigation treated supervision solely as a direct determinant of teaching skill, overlooking the operational constraints of administrative tasks. Consequently, none of these prior studies have examined administrative workload as a mediating mechanism linking supervision-based educational planning to overall educational quality and teaching focus. This study fills this conceptual and empirical gap by positioning reduced administrative workload as a key mediating pathway within an integrated mixed-methods framework.

The State Islamic Senior High Schools (MAN) in Tulungagung Regency serve as a critical case for examining supervision-based educational planning and administrative dynamics. As prominent public Islamic secondary institutions under the Ministry of Religious Affairs (Kemenag), these schools employ over 180 professional teachers and serve a diverse student body across three major campuses (MAN 1, MAN 2, and MAN 3 Tulungagung). Institutional complexity stems primarily from the dual-curriculum structure, which requires educators to simultaneously implement the National Curriculum (Kurikulum Merdeka) alongside specialized Islamic religious curricula (Pendidikan Agama Islam and Arabic language streams). Consequently, teachers manage double administrative documentation workloads, encompassing extensive instructional planning, dual-competency assessment rubrics, and continuous data synchronization across mandatory national digital platforms, specifically the Education Management Information System (EMIS 4.0) and the digital report card application (e-Rapor/RDM).

Furthermore, as high-performing state madrasahs undergoing institutional transformation, MAN Tulungagung institutions face rigorous accreditation standards and routine compliance audits, which amplify administrative pressure on teaching staff. These unique institutional characteristics, high administrative complexity, and intensive digital reporting requirements make MAN Tulungagung a strategically appropriate critical case for empirically evaluating how supervisory planning mitigates workload while safeguarding educational quality. Furthermore, implementing educational supervision at this madrasah still faces several challenges, including time constraints, a suboptimal supervisory approach, and a lack of integration between educational planning and teachers' real needs. These conditions make MAN Tulungagung a relevant context for examining the impact of supervision-based educational planning on teachers' administrative workload.

This study aims to examine the direct effect of supervision-based educational planning on teachers' administrative workload and its subsequent impact on educational quality, while evaluating the mediating role of administrative workload within this relationship. Beyond its analytical objective, this research contributes significantly to theory, management, and policy. Theoretically, this study advances educational management literature by proposing an integrated conceptual framework that positions administrative workload reduction as an active mediator rather than merely an operational byproduct. This conceptual integration extends traditional supervisory models by

bridging instructional leadership theories with administrative efficiency dynamics in faith-based secondary institutions.

Managerially, the findings offer actionable insights for madrasah principals and school supervisors to transition from compliance-heavy administrative checks toward supportive, resource-optimizing supervisory workflows. This shift lets school leaders streamline documentation protocols and reclaim teacher time for high-impact instruction. Policy-wise, this research informs evidence-based educational decision-making for the Ministry of Religious Affairs (Kemenag) and local educational authorities. Specifically, it provides an empirical foundation for reforming digital reporting mandates such as EMIS 4.0 and e-Rapor, advocating consolidated, automated administrative systems that mitigate educator burnout while safeguarding national educational quality.

RESEARCH METHODS

This research used a mixed-methods approach with a sequential explanatory design, combining quantitative and qualitative methods sequentially. The first stage involved collecting and analysing quantitative data, followed by collecting and analysing qualitative data to strengthen and explain the quantitative results (Creswell & Plano Clark, 2018).

The research was conducted at MAN 2 Tulungagung, considering the context of state Islamic high schools in Tulungagung Regency. The research population included all teachers at three Islamic high schools: MAN 1 Tulungagung (approximately 73 teachers), MAN 2 Tulungagung (approximately 93 teachers), and MAN 3 Tulungagung (approximately 47 teachers), for a total of approximately 213 teachers. Expanding the sampling frame beyond a single institution to include all three public MANs in the regency was methodologically essential to ensure analytical consistency and cross-institutional generalizability. Although they operated under the same centralized Ministry of Religious Affairs (Kemenag) framework, these three madrasahs varied in institutional size, student body scale, and readiness for digital infrastructure. Sampling respondents across this multi-school setup captured structural variations in administrative workloads and supervisory practices, prevented institutional bias from a single school, and provided a robust empirical representation of state Islamic secondary education across Tulungagung Regency.

The research subjects focused on teachers at MAN 2 Tulungagung as the primary research location. The quantitative phase used purposive sampling, with a sample size of 100–200 respondents. This determination follows Wickens's recommendation that a representative sample size for quantitative research is at least 100–200 respondents to produce stable statistical analysis. Meanwhile, the qualitative phase used snowball sampling to identify key informants who could provide in-depth data (Sugiyono, 2019). This snowballing approach was methodologically necessary to trace supervisory planning pathways down to actual classroom administrative workflows across all three madrasahs. Researchers systematically recruited participants and conducted iterative field interviews until data saturation was achieved, ensuring no new empirical themes regarding administrative burdens emerged.

Quantitative data were collected through a questionnaire based on indicators of supervision-based educational planning and teacher administrative workload. Qualitative data were obtained through in-depth interviews, observation, and documentation. Respondents were selected based on explicit inclusion criteria: active certified teachers with at least two years' experience using the EMIS 4.0 and e-Rapor systems, while excluding honorary, part-time, and newly appointed educators to ensure accurate, high-rigor empirical insights into administrative dynamics.

Quantitative data analysis used the Partial Least Squares (PLS) approach in SmartPLS software. PLS is a structural equation model (SEM) based on components (variance). In PLS analysis, two things are done: assessing the outer model (measurement model). There are three criteria for assessing the outer model: convergent validity, Discriminant Validity, and Composite Reliability (Ghozali, 2016), and assessing the Inner Model, or Structural Model. Testing the inner model, or structural model, examines relationships between constructs, significance levels, and the model's R-square. Assessing the model with PLS begins by examining the R-square for each dependent latent variable. Changes in the R-square value can be used to assess whether certain independent latent variables have a substantive influence on the dependent latent variable. Qualitative data analysis follows the stages of data reduction, data presentation, and conclusion drawing (Miles et al., 2014).

This research aims to ensure data validity by using validity and reliability tests for quantitative instruments and source and method triangulation for qualitative data. Data integration is carried out at the interpretation stage to obtain comprehensive conclusions regarding improving educational quality through supervision-based educational planning.

RESULTS AND DISCUSSION

Results

This study's quantitative analysis aims to empirically test the effect of supervision-based educational planning on teachers' administrative workload and its impact on educational quality. The study used Partial Least Squares (PLS) with SmartPLS software, chosen because it can analyze relationships between latent variables simultaneously and does not require strict data distribution.

The analysis begins by testing the measurement model (outer model) to ensure the indicators meet validity and reliability criteria through convergent validity, discriminant validity, composite reliability, and Average Variance Extracted (AVE) testing.

The convergent validity of the measurement model with reflective indicators is assessed based on the correlation between item scores/component scores estimated using PLS software. This study uses a factor-loading threshold of 0.60. The table below shows that all outer loadings are >0.60, meaning all research items meet the criteria. The outer loadings are shown in Table 1.

Table 1. Outer Loadings

Item	Education Quality (Z)
x21	0,692
x22	0,754
x23	0,763
x24	0,768
x25	0,797
x26	0,692
Supervision-Based Education Planning (X)	
X1	0,782
X2	0,790
X3	0,782
X4	0,757
X5	0,743
X6	0,734
Teacher Administrative Workload (Y)	
y1	0,626
y2	0,690
y3	0,700
y4	0,802
y5	0,731
y6	0,745

Based on the SmartPLS results shown in Table 1, the outer model (correlation between constructs and variables) meets convergent validity. The outer loading test results using PLS indicate that all items are valid. This is because all factor loadings are greater than 0.6.

Validity and reliability criteria can also be assessed using a construct's reliability value and its Average Variance Extracted (AVE). A construct is considered highly reliable if its value is 0.70 and its AVE is above 0.50 (Ghozali, 2011). Table 2 presents the Composite Reliability and AVE values for all variables as follows:

Table 2. Outer Model, AVE, Composite Reliability

Variable	AVE	Composite Reliability	Information
Education Quality (Z)	0.556	0.839	Reliable
Supervision-Based Education Planning (X)	0.586	0.859	Reliable
Teacher Administrative Workload (Y)	0.594	0.793	Reliable

Based on Table 2, all constructs meet the reliability criteria. This is indicated by composite reliability values above 0.70 and AVE values above 0.50, per established criteria.

Next, we tested the structural model (inner model) to assess the strength of relationships between variables, as indicated by the R-square value, path coefficients, and significance tests using bootstrapping. The structural model was evaluated using the R-square for the dependent construct (t-test) and the significance of the structural path parameter coefficients. PLS model assessment

begins by examining the R-square for each dependent latent variable. Table 3 shows the R-square results from SmartPLS.

Table 3. R-Square Values

Variables	R Square	R Square Adjusted
Education Quality (Z)	0.602	0.598
Teacher Administrative Workload (Y)	0.577	0.569

Table 3 shows an R-square value of 0.602 for the education quality variable, meaning the work construct explains 60.2% of the variability in the education quality construct. In contrast, the remaining variance is explained by variables outside the studied model. A higher R-square indicates that the independent variable explains more of the dependent variable, suggesting a better model fit. Meanwhile, for the Teacher Administrative Workload variable (R-square = 0.577), this means that 57.7% of the variability in the teacher administrative workload construct can be explained by education quality. In contrast, the remaining variance is explained by variables outside the studied model. A higher R-square indicates that the independent variables explain more of the variation in the dependent variable, suggesting a better-fitting structural equation.

The significance of the estimated parameters provides important insights into the relationships between research variables. Hypothesis testing is based on the values obtained from the structural model's inner weight output, as presented in Table 4. In SmartPLS, statistical testing of relationships between variables is performed using a bootstrapping simulation technique. This method yields more stable parameter estimates while reducing bias from data abnormalities. The results of the bootstrapping test from the SmartPLS analysis are presented as follows:

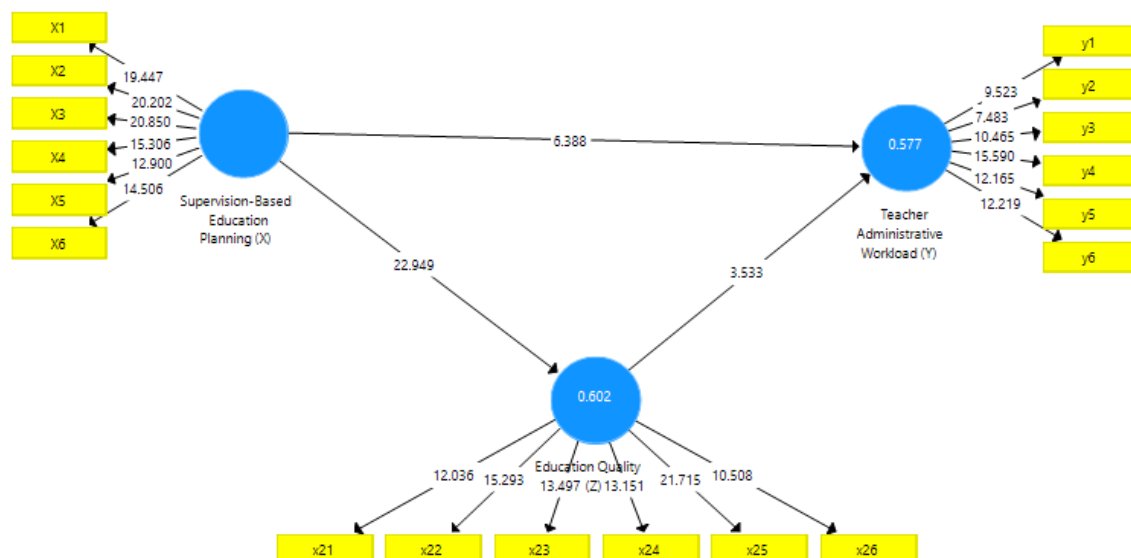


Figure 1. Bootstrapping Results

The significance level in hypothesis testing is measured using the path coefficient (Abdillah and Hartono, 2015). This test examines the estimated path coefficient and the t-statistic at a significance level of $\alpha = 5\%$. If the t-statistic is higher than the t-table value (1.984 for a one-tailed hypothesis), then the

hypothesis is accepted. The following are the path coefficient values in testing the main hypothesis of this study:

Table 4. Path Coefficient Values

	Direct influence and indirect influence	Coefficient Parameter	T-Statistics	P-Values	Results
H ₁	Education Quality (Z) -> Teacher Administrative Workload (Y)	0,298	3,533	0,000	Accepted
H ₂	Supervision-Based Education Planning (X) -> Education Quality (Z)	0,776	22,949	0,000	Accepted
H ₃	Supervision-Based Education Planning (X) -> Teacher Administrative Workload (Y)	0,505	6,388	0,000	Accepted

Based on hypothesis testing of the path coefficients, all relationships between variables in this study showed a positive, significant influence. This is indicated by T-statistics greater than 1.96 and P-values of 0.000 (<0.05), so all hypotheses are accepted. First, the Education Quality variable has a positive and significant effect on Teacher Administrative Workload, with a coefficient of 0.298, indicating that improving education quality is associated with changes in teacher administrative workload management. Second, Supervision-Based Education Planning has a very strong and significant influence on the quality of education with a coefficient value of 0.776. This indicates that the better the supervision-based education planning, the higher the quality of education produced. Third, supervision-based education planning also has a positive and significant effect on teacher administrative workload with a coefficient value of 0.505. These findings indicate that structured, integrated planning through supervision can make the management of teacher administrative tasks more effective. Thus, supervision-based educational planning plays a strategic role, both directly and indirectly, in influencing teachers' administrative workload and improving overall education quality.

Influence analysis examines the strength of the influence between variables, including direct, indirect, and total effects. The direct effect is simply than sum of the coefficients of all lines with a single-headed arrow.

Table 5. Indirect Effects

Hypothesis	Direct and Indirect Influence	Path Coefficient	T-Statistics	P-Values	Results
H ₄	Supervision-Based Education Planning (X) → Teacher Administrative Workload (Y) → Education Quality (Z)	0.231	3.483	0.001	Accepted

Data Source: Processed Primary Data (2026)

Based on the indirect effects test results in Table 5, Supervision-Based Education Planning has a positive and significant indirect effect on Education Quality through Teacher Administrative Workload. This is indicated by a coefficient of 0.231, a T-statistic of 3.483 (> 1.96), and a p-value of 0.001 (< 0.05), so the fourth hypothesis (H₄) is accepted. This finding indicates that teacher

administrative workload mediates the relationship between supervision-based education planning and education quality. Implementing effective supervision-based planning not only directly impacts education quality but also improves it indirectly through more effective and efficient management of teacher administrative workload. Thus, these results emphasize the importance of optimizing teacher administrative workload as a strategic mechanism to support supervision-based education planning and sustainably improve education quality.

This qualitative study aims to deepen and explain quantitative findings on the influence of supervision-based educational planning on teacher administrative workload at MAN Tulungagung. Data were obtained through in-depth interviews, observations, and documentation with teachers and madrasah management. The analysis used data reduction, data presentation, and conclusion drawing.

Supervision-Based Educational Planning

The findings indicate that supervision-based educational planning has been implemented systematically through the development of annual and semester supervision programs integrated with learning planning. Supervision serves not only as an evaluation tool but also as constructive coaching, providing teachers with technical guidance on developing learning materials. As one senior subject teacher highlighted: "Supervision is no longer just a surprise check; it gives us clear blueprints and technical guidance so we know exactly what standards to meet before entering the classroom" (Participant 01, Subject Teacher). Furthermore, teachers said structured planning helps them understand work standards, improves orderliness in administrative documentation, and supports achieving learning targets. This structural clarity was corroborated by an academic vice-principal who stated: "When the supervision schedule and targets are mapped out early in the semester, administrative preparation becomes more orderly, and teachers can focus on achieving target competencies rather than rushing paperwork" (Participant 01, Academic Vice-Principal).

Teacher Administrative Workload

The research results show significant changes in how teachers manage their administrative workload. Before implementing supervision-based planning, the administrative burden tended to be high and repetitive. As one language teacher noted: "We used to spend countless hours manually re-entering identical lesson plans and student data across multiple separate forms, which felt completely redundant and overwhelming" (Participant 02, Subject Teacher). However, after implementing planned supervision, the school achieved efficiencies through standardized administrative formats, integrated learning tools, and digital systems. Teachers felt that their workload was more focused, less overlapping, and easier to complete effectively. A senior school supervisor corroborated this operational shift, noting: "By streamlining paper-based reporting into integrated digital formats like EMIS and RDM during our supervisory planning, we eliminated overlapping tasks so teachers could focus back on instructional quality" (Participant 03, School Supervisor).

Quality of Education

Qualitative findings indicate that reduced administrative burdens positively affect educational quality. Teachers have more time to focus on the learning process, such as designing innovative learning strategies, increasing interaction with students, and conducting more effective learning evaluations. As one science teacher emphasized: "Once the administrative documentation was streamlined through supervisory guidance, I could finally spend my evenings designing interactive experiments rather than filling out repetitive forms" (Participant 03, Subject Teacher). Furthermore, coaching supervision increases teacher motivation and professionalism, ultimately improving overall learning quality. An institutional leader corroborated this transformation, noting, "When supervision shifts from administrative scrutiny to pedagogical mentorship, teachers regain their enthusiasm, which directly translates into dynamic classroom interactions and higher student engagement" (Participant 05, Madrasah Principal).

The results of this qualitative study confirm that supervision-based educational planning, implemented systematically at madrasah, can make teacher task management more structured and efficient. Supervision integrated with learning planning serves not only as control but also as coaching, standardizing and simplifying administration and reducing the previously repetitive, uncoordinated administrative workload. This condition gives teachers more space to focus on improving learning quality, increasing pedagogical creativity, and strengthening interactions with students. Thus, supervision-based educational planning has been shown to significantly reduce teachers' administrative burden while encouraging continuous improvement in educational quality.

Based on the qualitative analysis results, this study develops a conceptual model (recommended model) that describes the systematic relationship among supervision-based educational planning, teacher administrative workload, and educational quality. This model is based on field findings showing that planned, integrated supervision can manage teacher tasks more effectively and efficiently. Furthermore, this model emphasizes the supervisory function not only as control but also as a continuous development process for improving teacher professionalism. Therefore, this model is presented as a chart to clarify the relationships between variables and their implications for improving educational quality.

Figure 2 shows that supervision-based educational planning plays a key role in reducing teachers' administrative workload through standardization, integration, and the use of digital systems. This efficiency directly improves education quality, as shown by improvements in learning quality, educational interactions, and teacher professionalism. Furthermore, this model emphasizes a feedback mechanism that functions as a continuous improvement cycle through reflection, monitoring, and evaluation of the supervision program. Thus, the resulting model is not only linear but also dynamic and sustainable in supporting improvements in the quality of education in madrasah.

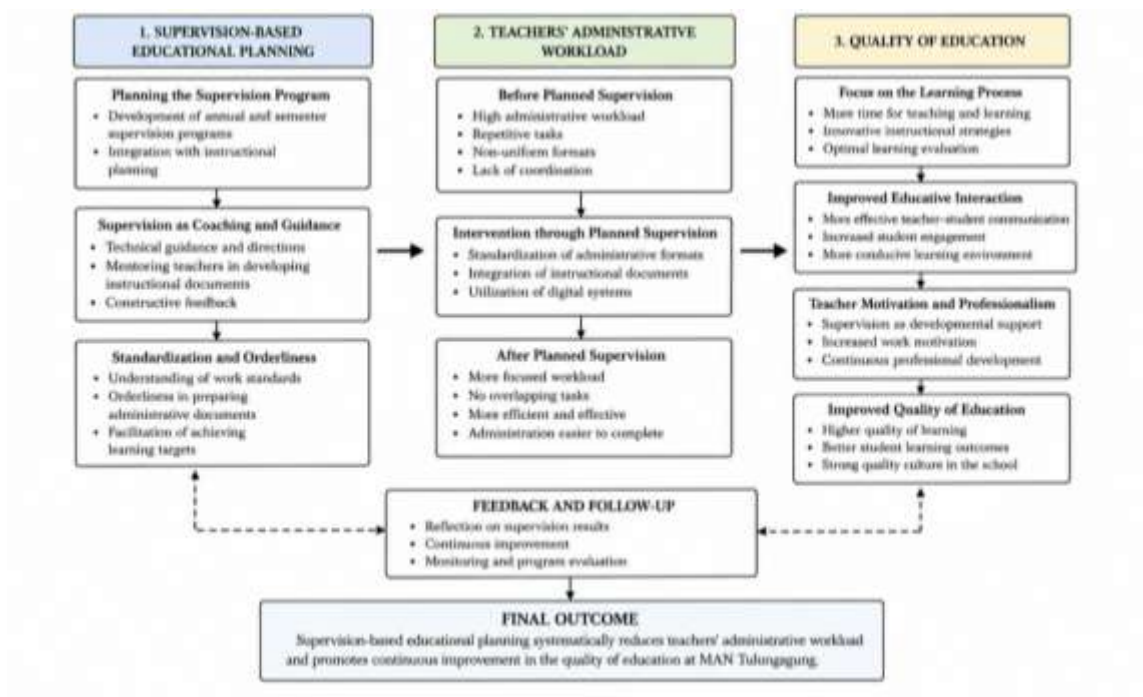


Figure 2. Supervision based Educational Planning

Discussion

The results confirm that supervision-based educational planning plays a strategic role in improving educational quality by managing teachers' administrative workload. The quantitative findings, which show a significant relationship between supervision-based planning and educational quality, align with recent research emphasizing that structured supervision practices can improve school organizational effectiveness and learning quality (Hallinger & Wang, 2021; Islamiyah, 2025). This shows that supervision functions not only as administrative control but also as a systematic tool for strengthening educational quality.

Furthermore, the finding that supervision-based planning impacts teachers' administrative workload reinforces the argument that good managerial design can reduce unproductive workload. A study by Toropova et al. (2021) showed that high administrative burdens are a major factor hampering teacher performance and well-being. Therefore, integrating supervision with systematic educational planning can simplify administrative processes through standardization and digitization, thereby increasing teacher work efficiency.

The study's treatment of administrative workload as a mediating variable also offers important theoretical contributions. These results indicate that improvements in educational quality are influenced not only by supervision-based planning but also through indirect mechanisms such as teacher workload efficiency (Imamah et al., 2025). This finding aligns with studies that state that reducing the administrative burden allows teachers to focus more on pedagogical activities that directly impact student learning outcomes.

Planned, coaching-oriented supervision can transform teachers' work practices. This transformation is evident in more collaborative work patterns, increased professionalism, and the use of technology in administrative

management. These findings are supported by Kraft et al. (2020), who confirm that coaching and developmental supervision significantly improve teaching quality and teachers' reflective practices.

The results indicate that supervision-based planning helps build an adaptive, collaborative organizational culture. This aligns with Leithwood et al. (2020), who stated that effective instructional leadership through supervision can create a work environment that supports innovation and continuous improvement in educational quality. Thus, supervision impacts not only individual teachers but also the overall school system and organizational culture (Arifin et al. 2023; Hasibuan, 2024; Imamah et al. 2025; Mok & Staub 2021; Yao et al., 2023).

This research strengthens the causal model linking supervision-based educational planning, administrative workload efficiency, and improved educational quality. This model shows that an integrated supervision-planning approach can holistically improve educational quality. These findings imply the need to strengthen educational policies that make supervision an integral part of school strategic planning. Furthermore, the use of technology in educational administration needs continuous development to support teacher efficiency. Thus, this study's results not only contribute to the theoretical development of educational management studies but also offer practical relevance for formulating policies to sustain improvements in education quality.

CONCLUSION

This study demonstrates that supervision-based educational planning serves as a strategic catalyst for elevating educational quality, offering a key insight: transforming supervision from a rigid compliance check into a development-oriented coaching framework significantly optimizes administrative workflows while restoring teachers' core instructional focus. Scientifically, this paper advances the educational management literature by offering a validated empirical framework that establishes administrative workload reduction as a crucial mediating mechanism bridging instructional leadership and educational excellence within faith-based secondary institutions. Despite these robust findings, the study is naturally constrained by its cross-sectional design and geographic scope restricted to public madrasahs within a single regency, which may limit the direct transferability of the results to non-formal or private educational contexts. Consequently, future research should adopt longitudinal methodologies and expand empirical inquiry across multi-regional datasets to further validate the dynamic, long-term sustainability of supervision-driven quality improvements.

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