

Effect of Academic Supervision and Teachers' Work Motivation on Learning Quality: A Quantitative Study in Public Elementary Schools

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Abstract: This study aims to examine the influence of academic supervision and teachers' work motivation on the quality of learning in public elementary schools. The research employed a quantitative approach with an ex post facto design. Data were collected through structured questionnaires distributed to teachers and were analyzed using multiple linear regression to determine both partial and simultaneous effects among variables. The findings indicate that academic supervision has a positive and significant effect on learning quality, contributing 48.2% to its variance. Teachers' work motivation demonstrates a stronger positive and significant effect, with a contribution of 62.3%. Simultaneously, academic supervision and work motivation account for 69.8% of the variance in learning quality, indicating a substantial combined influence. These results suggest that learning quality is shaped by the interaction between external factors, such as systematic and constructive academic supervision conducted by school principals, and internal factors, particularly teachers' professional motivation. Strengthening collaborative supervision practices alongside fostering teachers' intrinsic and extrinsic motivation can therefore enhance instructional effectiveness. The study underscores the importance of integrated strategies in improving primary education quality through leadership support and sustained teacher motivation

Keywords: academic supervision; teachers' work motivation; learning quality

Primary education constitutes a strategic foundation in developing high-quality and competitive human resources. At this level, learning is not merely a process of knowledge transfer, but also a medium for character building, internalization of values, and the holistic development of students' potential. Therefore, the quality of learning in primary schools serves as a key indicator in determining the overall quality of national education. According to (Mulyasa, 2021), learning quality is determined by effectiveness, innovation, creativity, and a joyful learning atmosphere (PAIKEM), which are reflected in the dimensions of planning, implementation, and evaluation. Thus, learning quality is not solely measured by academic achievement but also by the extent to which learning successfully develops students' character, critical thinking skills, creativity, collaboration, and independence in a sustainable manner.

Conceptually, learning quality is a primary indicator in assessing the success of educational systems at the school level. It reflects how instructional processes are designed, implemented, and evaluated to

ensure that students achieve the expected competencies optimally (König *dkk.*, 2021; Blömeke *dkk.*, 2022). In primary education, learning quality can be observed through comprehensive lesson planning, innovative and communicative instructional practices, as well as authentic and continuous assessment. This indicates that learning quality is a complex construct influenced by both internal teacher-related factors and external educational environmental factors. However, empirical conditions in public primary schools in Sumber Subdistrict, Rembang Regency, reveal dynamics that require serious attention. Data from the Education Report Card (Rapor Pendidikan) for 2023–2025 indicate fluctuations in learning quality, with a tendency toward decline in several key sub-dimensions. Classroom management decreased by 10.45% and psychological support declined by 12.80%, while teaching methods showed only a slight increase of 1.43%. The significant decline in classroom management and psychological support suggests problems in managing classroom interactions and the emotional climate. These two aspects are essential prerequisites for effective and meaningful learning. The situation reveals a gap between pedagogical innovation and the strengthening of classroom management and psychological support.

One important external factor influencing learning quality is academic supervision conducted by the school principal. Academic supervision refers to professional guidance efforts aimed at improving instructional quality through the development of teachers' competencies (Dwikurnaningsih dan Paais, 2022; Hardiyanti dan Madjid, 2024). It does not merely focus on administrative control, but rather emphasizes systematic and continuous pedagogical development. In the context of primary education, academic supervision is considered a core function of school principals in ensuring effective instructional practices aligned with learning objectives.

According to Suwondo (Suwondo, Sugiyo dan Sutarto, 2023), academic supervision plays a crucial role in improving teacher performance and optimizing instructional processes. When properly implemented, it helps teachers identify weaknesses in planning, implementation, and assessment, and provides concrete feedback for improvement. Research indicates that effective academic supervision is characterized by reflective feedback, collaboration between supervisors and teachers, and well-planned follow-up actions (Astuti *dkk.*, 2024; Bellibaş dan Karaferye, 2025). Therefore, academic supervision functions as a professional development mechanism that fosters sustainable improvement in instructional quality. Empirical studies have demonstrated that academic supervision significantly influences learning quality and teacher performance (Alsaleh, 2022; Santi *dkk.*, 2024; Aydın *dkk.*, 2025; Hsieh *dkk.*, 2025). Structured supervision has been shown to enhance teachers' motivation and competence, ultimately contributing to improved instructional quality (Astuti *dkk.*, 2024). Moreover, collaborative supervision strengthens teacher professionalism through reflective approaches and continuous mentoring (Avalos, 2019; Zheng dan Luo, 2024). Nevertheless, field realities indicate that supervision practices remain largely administrative and insufficiently systematic, thereby limiting their impact on instructional quality.

In addition to academic supervision as an external factor, learning quality is also influenced by internal factors, particularly teacher work motivation. Teacher work motivation refers to internal and external drives that influence the intensity, direction, and persistence of teachers in performing their

professional duties (Abdillah, 2019; Abdillah dan Sulaiman, 2019). Mulyasa (2021) asserts that teacher work motivation represents a conscious effort to enhance enthusiasm and self-awareness in achieving instructional goals and educational quality. Work motivation plays a vital role in improving teacher performance and instructional effectiveness (Nasri, Makhdalena dan Daud, 2024).

Teachers with high work motivation tend to be more creative in designing instructional strategies, employing innovative methods, and conducting authentic assessments. Work motivation is also closely related to professional satisfaction and teachers' commitment to improving instructional quality. Furthermore, teacher motivation is influenced by the work environment and organizational support, including constructive and collaborative supervision (Kalkan, 2020). Work motivation encompasses intrinsic aspects such as dedication and personal fulfillment in teaching, as well as extrinsic aspects such as recognition, professional development opportunities, and a supportive work environment (Mulyasa, 2021; Abbas, 2022). However, challenges such as administrative workload and limited professional development opportunities continue to hinder efforts to strengthen teacher motivation. Theoretically and empirically, academic supervision and teacher work motivation are interrelated and mutually reinforcing variables. Effective academic supervision provides professional support that enables teachers to improve instructional practices (Tan, Gao dan Shi, 2022) and serves as a form of external motivation that enhances teacher performance (Suwondo, Sugiyo dan Sutarto, 2023; Astuti *et al.*, 2024). Teacher work motivation also functions as a mediator between academic supervision and instructional performance (Karacabey, Bellibaş dan Adams, 2022; Er, 2024). Thus, academic supervision that is not accompanied by strong teacher motivation will not produce optimal improvements in instructional quality.

Considering the declining trend in learning quality over the past three years, with approximately 60% of schools experiencing decreased performance, this study is both relevant and urgent. This research aims to analyze simultaneously the influence of academic supervision and teacher work motivation on learning quality in public primary schools in Sumber Subdistrict, Rembang Regency. The findings are expected to provide empirical contributions and data-based strategic recommendations to sustainably improve primary education quality through the integrative strengthening of academic supervision and teacher work motivation.

METHOD

This study employed a quantitative approach with a descriptive research type and an *ex post facto* design to examine the effect of principals' academic supervision and teachers' work motivation on learning quality in public elementary schools in Sumber District, Rembang Regency. The study was conducted from April to October 2025 and involved two independent variables, namely academic supervision (X1) and teachers' work motivation (X2), and one dependent variable, namely learning quality (Y). Learning quality was measured through indicators of lesson planning, active and innovative learning implementation, continuous assessment, student engagement, and the development of critical and collaborative thinking skills. Academic supervision was measured through supervision planning, implementation, evaluation, and

follow-up activities, while teachers' work motivation was measured through intrinsic and extrinsic dimensions, including job satisfaction, commitment, responsibility, recognition, workplace relationships, and environmental support. The population consisted of all public elementary school teachers in Sumber District, Rembang Regency, and the sample was determined using the Slovin formula with a 10% margin of error, resulting in 75 respondents selected through simple random sampling. Data were collected using a closed-ended questionnaire based on a five-point Likert scale ranging from Strongly Disagree (1) to Strongly Agree (5). Prior to the main data collection, the instrument was pilot-tested on 30 respondents outside the sample to assess validity and reliability. Data analysis was conducted using descriptive statistics and inferential statistics, including prerequisite tests of normality, linearity, multicollinearity, and heteroscedasticity, followed by simple and multiple linear regression analyses to examine both partial and simultaneous effects of the independent variables on learning quality.

RESULTS AND DISCUSSION

RESULTS

The correlation analysis revealed an r-value of 0.694 with a significance level of 0.031 (< 0.05), indicating a positive and significant relationship between academic supervision and learning quality in the strong category. The coefficient of determination (R^2) of 0.482 indicates that academic supervision contributed 48.2% to learning quality. The simple regression analysis produced a t-value of 2.198 with a significance level of 0.031 (< 0.05). The regression equation obtained was: $Y = 77.893 + 0.468 X_1$. This implies that every one-unit increase in academic supervision increases learning quality by 0.468 units.

Furthermore, the correlation test for teachers' work motivation yielded an r-value of 0.789 with a significance level of 0.014 (< 0.05), indicating a positive and strong relationship with learning quality. The coefficient of determination (R^2) of 0.623 shows that teachers' work motivation contributed 62.3% to learning quality. The simple regression equation was: $Y = 53.658 + 0.434 X_2$. The calculated t-value was 2.511 with a significance level of 0.014 (< 0.05).

The F-test results showed an F-value of 6.171 with a significance level of 0.003 (< 0.05), indicating that academic supervision and teachers' work motivation simultaneously had a significant effect on learning quality. The coefficient of determination (R^2) of 0.698 demonstrates that the two independent variables jointly contributed 69.8% to learning quality, as presented in Table 1.

Table 1. Coefficient of Determination of Variables X1 and X2 on Y

Model	R	R Square	Adjusted Square	R	Std. Error of the Estimate
1	.835 ^a	.698	.690		10.451

Source: Researcher, 2026

The multiple regression equation was: $Y = 9.713 + 0.486 X_1 + 0.447 X_2$. Both regression coefficients were positive and significant, leading to the conclusion that better academic supervision and higher teachers' work motivation are associated with improved learning quality.

DISCUSSION

The Effect of Academic Supervision on Learning Quality

The findings of this study indicate that academic supervision has a positive and significant effect on learning quality in public elementary schools in Sumber District, Rembang Regency. Descriptively, respondents' perceptions of academic supervision were categorized as moderately high to high, with the supervision implementation dimension being the most dominant. This finding confirms that supervision practices that are operational in nature and directly address the instructional process contribute most significantly to the improvement of learning quality. Inferentially, the correlation coefficient of 0.694 with a significance value of 0.031 (< 0.05) demonstrates a strong and significant relationship between academic supervision and learning quality. The R Square value of 0.482 indicates that 48.2% of the variance in learning quality can be explained by academic supervision. This contribution suggests that academic supervision is an important determinant in the system of instructional quality improvement, although it is not the sole determining factor.

Conceptually, this finding reinforces the view that academic supervision functions as a mechanism for teachers' professional development rather than merely an administrative activity (Karadağ dan Sertel, 2025). Supervision practices that include classroom observation, constructive feedback, and follow-up improvement actions have been shown to enhance the effectiveness of the teaching and learning process (Kraft, Blazar dan Hogan, 2018; Liu *et al.*, 2025). The dominance of the supervision implementation dimension indicates that direct interaction between principals and teachers within the instructional context is a key factor in fostering pedagogical change (Grissom, Egalite dan Lindsay, 2021; Özdoğru, Doğuş dan Akyürek, 2025).

These results are consistent with previous findings that structured academic supervision contributes to the improvement of teachers' competence and instructional quality (Tan, Gao dan Shi, 2022). Other studies also confirm that instructional leadership significantly influences the quality of elementary education, particularly through classroom observation and reflective feedback (Robinson dan Gray, 2019; Dilekçi *dkk.*, 2025). Active principal involvement in academic supervision has been proven to significantly enhance teacher performance (Yerdelen dan Sungur, 2019; Grissom, Egalite dan Lindsay, 2021).

Thus, the 48.2% contribution identified in this study indicates that academic supervision represents a strategic component within the quality assurance system of basic education. However, strengthening supervision must be integrated with teachers' internal factors and the broader school environment in order to generate sustainable improvements in learning quality (Karadağ dan Sertel, 2025).

The Effect of Teachers' Work Motivation on Learning Quality

In this study, teachers' work motivation was categorized as moderately high, with the dimension of responsibility toward students being the most dominant. This indicates that professional drive and teachers' moral commitment to students' development constitute the primary foundation of work motivation. The analysis revealed a correlation coefficient of 0.789 with a significance value of 0.014 (< 0.05), indicating a

positive and strong relationship between teachers' work motivation and learning quality. The R Square value of 0.623 demonstrates that 62.3% of the variance in learning quality can be explained by teachers' work motivation. This contribution is greater than the partial effect of academic supervision, suggesting that internal teacher factors play a dominant role in shaping learning quality.

These findings suggest that teachers with high levels of motivation tend to be more creative in selecting instructional methods, more disciplined in lesson planning, more effective in classroom management, and more consistent in evaluating learning outcomes (Fernet *et al.*, 2019). Therefore, work motivation is not merely a psychological factor but a strategic determinant in pedagogical practice (Burić dan Moè, 2020).

The results align with previous studies indicating that work motivation significantly contributes to the enhancement of teaching competence and performance (Han dan Yin, 2019; Arabai dan Alamer, 2024). Other research confirms that work motivation strongly influences teacher professionalism and instructional quality (Aldrup *dkk.*, 2018; Erdem dan Koçyiğit, 2025). Teaching motivation also serves as an important mediator in improving learning quality (Han *et al.*, 2020; Lazarides, Watt dan Richardson, 2020). With a contribution of 62.3%, this study provides empirical evidence that strategies for improving the quality of basic education should give serious attention to strengthening both intrinsic and extrinsic teacher motivation as part of the school quality assurance system.

The Simultaneous Effect of Academic Supervision and Teachers' Work Motivation on Learning Quality

Simultaneously, academic supervision and teachers' work motivation significantly influence learning quality. The correlation coefficient (R) of 0.835 indicates a very strong relationship, while the R Square value of 0.698 shows that 69.8% of the variance in learning quality can be explained jointly by these two variables. The regression coefficients for academic supervision (0.486) and teachers' work motivation (0.447), both statistically significant, indicate that the two variables make positive and complementary contributions. Academic supervision functions as a system of professional development and quality control, while teachers' work motivation serves as the driving energy in instructional implementation. Their synergy produces a more optimal improvement in learning quality compared to when each variable operates independently (Leithwood, Harris dan Hopkins, 2020; Admiraal *et al.*, 2021; Klassen dan Kim, 2021).

These findings are consistent with research emphasizing the importance of synergy between instructional leadership and teacher commitment in enhancing school effectiveness (Day, Gu dan Sammons, 2020; Lomos, Hofman dan Bosker, 2021). The combination of supervision and teacher motivation has been shown to strengthen the implementation of innovative instructional practices. Leadership support and teacher efficacy collectively enhance learning quality and student achievement.

With a contribution of 69.8%, this study clarifies that learning quality is the result of a multidimensional interaction between external and internal factors. Therefore, efforts to improve the quality of basic education should be conducted integratively by strengthening the academic supervision system

while simultaneously fostering teachers' work motivation on a sustainable basis as part of the school quality assurance system.

CONCLUSSION AND SUGGESTION

CONCLUSSION

Based on the research findings and discussion, it can be concluded that academic supervision and teachers' work motivation have a significant effect on learning quality in public elementary schools in Sumber District, Rembang Regency, both partially and simultaneously. First, academic supervision was found to have a positive and significant effect on learning quality, contributing 48.2%. This finding indicates that systematic supervision practices through classroom observation, constructive feedback, and follow-up improvement actions serve as strategic mechanisms for enhancing the effectiveness of the teaching and learning process. The supervision implementation dimension emerged as the most dominant aspect, underscoring the importance of direct interaction between principals and teachers within the context of pedagogical development. Second, teachers' work motivation demonstrated a positive and significant effect on learning quality, contributing 62.3%. This figure suggests that internal teacher factors play a more dominant role than academic supervision when considered partially. Work motivation, particularly when grounded in a strong sense of professional responsibility toward students, encourages teachers to be more creative, disciplined, reflective, and consistent in implementing instructional practices. Third, academic supervision and teachers' work motivation jointly contributed 69.8% to learning quality. This result indicates that learning quality is shaped by the interaction between external factors, namely the system of professional guidance and quality control through academic supervision, and internal factors, namely teachers' motivational drive. The synergy between these two variables produces a more optimal improvement in learning quality compared to the influence of each variable independently.

SUGGESTION

Based on the findings that academic supervision and teachers' work motivation significantly influence learning quality, efforts to improve the quality of basic education should be carried out systematically and sustainably. School principals are encouraged to strengthen academic supervision as a structured professional development process through meaningful classroom observation, constructive feedback, and reflective follow-up. A collaborative and dialogical supervision approach should be promoted to ensure continuous improvement in instructional practices. At the same time, teachers need to enhance both intrinsic and extrinsic motivation by reinforcing professional responsibility, remaining open to feedback, and actively participating in continuous professional development in order to sustain high-quality teaching. For education authorities, it is important to develop policies that support effective supervision and strengthen teachers' professional motivation, including instructional leadership training for principals, practice-based supervision programs, and professional incentive systems. Reducing administrative burdens and providing sustainable professional development opportunities can further

support instructional improvement. Future research is recommended to examine additional variables such as school culture, organizational climate, instructional leadership, and pedagogical competence, and to employ mixed-methods or longitudinal designs to gain a more comprehensive understanding of the dynamics influencing learning quality in basic education.

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