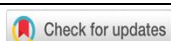


## Influence of Instructional Leadership and Academic Supervision on The Quality of Learning

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### ABSTRACT

**Objective:** This study examines the impact of instructional leadership and academic supervision on learning quality in junior high schools within the Boja District. **Method:** Employing a quantitative approach with a correlational design, the research involved a total population of 140 teachers, from which 104 were selected as the sample. Data were collected through questionnaires and analyzed using descriptive statistics and hypothesis testing via simple and multiple linear regression. **Result:** The findings indicate that instructional leadership has a correlation of 0.820 and a significant influence of 77.2%, whereas academic supervision shows a correlation of 0.741 with a substantial impact of 64.9%. When examined together, these two factors enhance learning quality, with a coefficient of determination of 77.3%. These results highlight the crucial role of instructional leadership and academic supervision in improving educational outcomes. The study provides novel insights by reinforcing that strengthening these two aspects is a strategic measure for enhancing learning quality in junior high schools. This research contributes to the growing body of knowledge in educational leadership by emphasizing the importance of effective school management in fostering academic success. **Novelty:** The findings suggest that policymakers and school administrators should prioritize professional development programs that enhance leadership and supervision capacities, ensuring sustained improvements in teaching and learning processes.

## INTRODUCTION

The school principal has an important role in improving the quality of learning by motivating teachers to develop innovative and inspiring teaching. At the forefront of the education process, teachers are responsible for creating a conducive learning environment and encouraging students to actively participate in seeking information, analyzing problems, and expressing their opinions critically methods (Ambawani et al., 2024; Yulianto et al., 2023). Effective collaboration between teachers and students is key to achieving learning objectives (Ferian & Sudrajat, 2022; Kumar et al., 2021; Qureshi et al., 2023; Szymkowiak et al., 2021). Therefore, efforts to improve the quality of education must begin with enhancing and strengthening the quality of classroom learning, supported by school leadership that focuses on developing teacher professionalism and increasing learning effectiveness (Dasor, 2024).

Teacher professionalism is one of the key factors in improving the quality of learning. This professionalism is not limited to knowledge transfer but also involves creating a conducive learning atmosphere with active student engagement through innovative teaching methods, using relevant educational technology, and the development of learning strategies that foster critical, creative, and collaborative thinking. The role of teachers is highly significant as they hold primary control in the learning process (Arsini

et al., 2023; Damayanti et al., 2024). Teachers must possess strong pedagogical competencies to ensure learning effectiveness.

Teacher quality contributes to create a conducive learning environment for students. Effective learning depends on integrating teachers, students, curriculum, teaching materials, media, facilities, and learning systems. The synergy of these elements is a crucial factor in achieving learning outcomes. Therefore, enhancing teacher competence is essential in supporting learning quality in alignment with curriculum demands. The quality of learning can be analyzed from two aspects: process and outcome. Learning is considered high-quality when most students actively engage in various physical, mental, and social dimensions while demonstrating high enthusiasm for learning, strong motivation, and self-confidence. From the outcome perspective, a learning process is deemed adequate if it results in positive behavioral changes in students, either as a whole or at least in the majority of them (Firmansyah et al., 2021; Howell, 2021; Iglesias-Pradas et al., 2021). Learning quality serves as an indicator of how effectively the teaching process achieves its predetermined goals. Learning objectives focus on achieving planned outcomes, meaning that to obtain the best results, educators must optimize every element of the learning process. Improving learning quality can be achieved by increasing student participation and academic achievements (Sudjana, 2019; Karimah et al., 2023).

Based on the evaluation results of the School Supervisors for public junior high schools in Boja District, several aspects of learning need improvement. First, more than 60% of teachers still require reinforcement in classroom management, as evidenced by the classroom atmosphere that is not yet fully organized and the need for improvement in implementing positive discipline. Second, over 70.000% of teachers have not fully provided psychological support to students and have not optimally implemented feedback in the learning process. Third, more than 70.000% of teachers still need to develop more engaging teaching methods, as learning tends to be teacher-centered and instructional. Additionally, the education report for public junior high schools in Boja District indicates that the quality of learning still requires improvement (Evaluation Results of School Supervisors for Public Junior High Schools in Boja District, 2024). Given these findings, school leadership patterns must be established and guided to enhance learning quality. One of the factors that can influence the quality of learning is instructional leadership.

Leadership exercised by the school principal in the instructional domain is one of the most influential factors in the quality of education. The principal's role in implementing instructional leadership significantly enhances teachers' teaching skills and improves the quality of the learning process in schools. According to Mulyasana et al. (2020), success in education and the teaching-learning process in schools is closely related to the principal's ability to manage various existing elements. Educational success and teaching and learning activities largely depend on how much the principal can manage all involved factors, such as teachers, students, curriculum, and facilities. Through efficient management, the principal can create a positive learning atmosphere that supports the comprehensive achievement of educational goals (Imron, 2023).

The Directorate of Educational Personnel, Ministry of National Education (2022), defines instructional leadership as a leadership style focused on learning activities, encompassing curriculum aspects, the teaching and learning process, evaluation of learning outcomes, teacher development, quality services in learning experiences, and the strengthening of instructional leadership within educational institutions. Instructional leadership emphasizes creating a conducive environment for effective

learning through curriculum development, supervision of learning implementation, and teacher capacity building. It includes all actions taken by the principal or delegated to others to drive progress in the student learning process (Mestry et al., 2013; Mundiharto & Novianto, 2022).

Widiasmara (2022), in her research, found a significant relationship of 48.6% between instructional leadership and teacher performance. This finding underscores the importance of instructional leadership in improving learning quality. Instructional leadership not only facilitates teachers in developing more effective teaching methods but also encourages them to enhance their professional skills continuously. Teachers can create active learning environments tailored to students' needs with adequate support, significantly improving learning outcomes. Additionally, instructional leadership ensures that all aspects of learning align with educational goals, mainly through thorough supervision and constructive feedback from the principal (Goleman & Cherniss, 2024; Hallo et al., 2020; Mulyasana et al., 2020).

However, learning quality is influenced not only by instructional leadership but also by academic supervision. Academic supervision is a guidance mechanism that helps teachers develop and enhance their ability to manage the learning process to achieve optimal educational goals (Lalupanda, 2019). In this context, academic supervision is an effort to continuously encourage, coordinate, and stimulate teachers' professional growth, both individually and in groups, to make them more effective in their teaching duties. Therefore, a strong relationship between instructional leadership and adequate academic supervision will create a more qualified learning system focused on improving teacher competence and student learning outcomes (Ashari et al., 2023).

Academic supervision is a crucial function within the overall education program. Its approach involves the supervisor's attitude when sharing responsibilities with teachers under supervision, analyzing, and making decisions about teaching challenges faced by educators (Yosep, 2023). Academic supervision facilitates teachers in understanding their educational roles and students' needs, enabling better lesson planning. Supervision activities inspire cooperation in completing tasks more efficiently, using more practical methods, and achieving better results than working independently. From this perspective, academic supervision is a continuous effort to enhance teachers' skills in managing the learning process through guidance and collaboration, ensuring that learning objectives are achieved effectively and efficiently (Muhsin et al., 2023).

Despite its significant role, academic supervision at the school level still faces various challenges. According to the evaluation results of the Kendal District Education Office, more than 70% of school principals only schedule supervision without implementing it optimally. The principals' workload in handling various administrative tasks is one of the reasons for the lack of academic supervision. Data also indicate that academic supervision by principals was conducted at 75.000% in the first semester but dropped to 50% in the second semester. Moreover, over 60.000% of school principals do not assess the teaching process carried out by teachers, preventing them from recognizing the challenges and shortcomings teachers face. This situation indicates that academic supervision in public junior high schools in Boja District has not been effectively implemented. Principals should act as supportive partners, conduct supervision, evaluate education quality objectively, and provide recommendations for improving future learning activities. Classroom visits can effectively allow principals to observe the learning process directly.

Academic supervision complements school administrative functions, particularly in evaluating the achievement of educational objectives. Effective and collaborative supervision ensures the completion of educational tasks more efficiently (Amri et al., 2024). It plays a crucial role in optimizing the responsibilities of various school education programs. Supervision is done hierarchically, from school supervisors to principals and principals to teachers. Supervising teachers is essential for principals to assess whether implemented programs have achieved their goals or require improvement. Academic supervision helps identify the strengths and weaknesses of a learning program, allowing for necessary evaluations and adjustments to enhance education quality (Irawan et al., 2025).

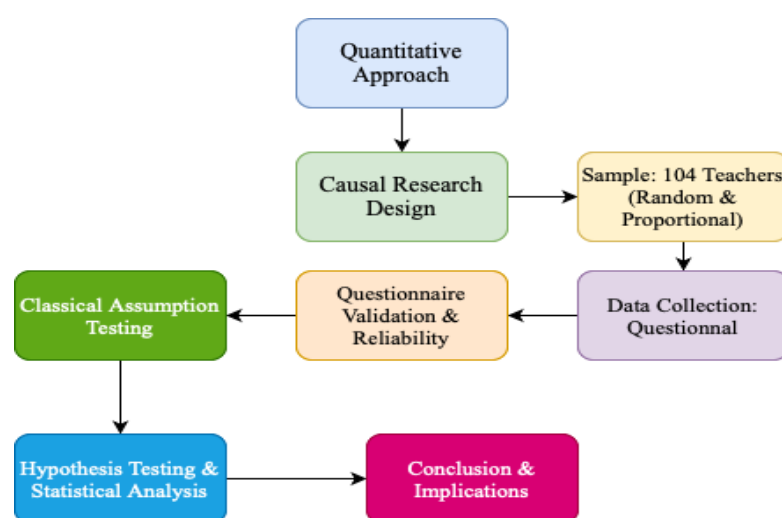
Overall, instructional leadership and academic supervision are interrelated factors in creating a conducive and effective learning environment. Understanding how these factors influence learning quality provides new insights for developing school educational strategies. This study integrates two key educational factors: instructional leadership and academic supervision. While many studies have examined these factors separately, this research explores how their combination impacts learning quality. This topic is worth investigating as it offers the potential for significant practical and theoretical contributions. By focusing on the influence of instructional leadership and academic supervision on learning quality, this research aims to generate valuable insights for improving education quality and filling gaps in existing academic literature. Specifically, this study examines how instructional leadership influences learning quality, how academic supervision contributes to learning effectiveness, and how combining both factors impacts the overall quality of learning. Addressing these aspects will provide a more nuanced understanding of the relationship between leadership, supervision, and educational outcomes. Although various studies have highlighted the importance of instructional leadership and academic supervision in learning quality, the researcher identifies a gap in understanding how their interaction simultaneously affects the effectiveness of the learning process in schools. Most previous studies have tended to examine these aspects independently. This study aims to offer a comprehensive perspective on their interrelated impact by specifying these research objectives.

## RESEARCH METHOD

This study employs a quantitative approach, which allows for a systematic and objective analysis of the relationships between instructional leadership, academic supervision, and learning quality (Creswell, 2016; Sugiyono, 2020). It is categorized as causal research, aiming to investigate the influence of instructional leadership and academic supervision on the quality of learning in public junior high schools within Boja District, Kendal Regency. A causal research design is the most suitable approach because it identifies cause-and-effect relationships between variables, providing empirical evidence on how instructional leadership and academic supervision impact learning quality. Unlike correlational or descriptive studies, causal research allows for a more rigorous examination of direct and indirect influences, ensuring that the findings contribute to theoretical understanding and practical applications in educational settings. Figure 1 is the research flowchart.

From Figure 1, the study population consists of 140 teachers from these schools. A random and proportional sampling technique was applied to ensure a representative sample, resulting in 104 teachers being selected. This approach ensures that each teacher in the population has an equal probability of being chosen, reducing bias and enhancing

the generalizability of the findings. The data were collected using a structured questionnaire developed based on key indicators of the examined variables. The questionnaire development process involved identifying indicators from established theories and previous research on instructional leadership, academic supervision, and learning quality. The sources of these indicators included validated frameworks and empirical studies in educational leadership and supervision. Before data collection, the instrument underwent validity and reliability testing to confirm its accuracy and consistency. The validity test was conducted using content validity, assessed by expert judgment, and construct validity, analyzed through factor analysis to ensure each item appropriately measured its intended variable. Reliability was tested using Cronbach's alpha coefficient, where a value above 0.700 indicated acceptable internal consistency.



**Figure 1.** Research methodology.

These validation and reliability measures ensured the questionnaire provided precise and stable measurements across different respondents. The analysis process followed a structured sequence to ensure statistical rigor. Classical assumption tests, including the normality test (Kolmogorov-Smirnov or Shapiro-Wilk), were conducted to determine whether the data followed a normal distribution, a prerequisite for parametric statistical analysis. Following these assumption tests, hypothesis testing was performed using a t-test to examine the individual effects of instructional leadership and academic supervision on learning quality, an F-test to assess their combined influence, and structural analysis to explore deeper relationships between variables. This comprehensive methodological approach ensures the reliability and validity of the study's findings, providing valuable insights into the role of instructional leadership and academic supervision in enhancing learning quality. By incorporating rigorous statistical tests and a well-validated measurement instrument, this study contributes robust empirical evidence to educational research.

## RESULTS AND DISCUSSION

### Result

#### The Influence of Instructional Leadership on the Quality of Learning Among Public Junior High School Teachers in Boja District, Kendal Regency

The research results on instructional leadership variables on learning quality can be described in Table 1.

**Table 1.** The correlation between instructional leadership and learning quality.

		<b>Instructional Leadership</b>	<b>Quality of Learning</b>
<b>Instructional Leadership</b>	Pearson Correlation	1	.820**
	Sig. (2-tailed)		.000
	N	104	104
<b>Quality of Learning</b>	Pearson Correlation	.820**	
	Sig. (2-tailed)	.000	
	N	104	104

The analysis results of the relationship between instructional leadership and the quality of learning show a positive correlation, with an (r) value of 0.820. Meanwhile, the recorded Sig (1-tailed) value of 0.000 indicates a direct relationship between variables X1 and Y, with a significant level as the value is less than 5% or 0.000 is less than 0.05. Furthermore, a simple regression analysis shows the relationship model between instructional leadership and the quality of learning, expressed by the equation  $\hat{Y} = 13,193 + 0,680 X1$ . The results of the partial t-test reveal a significance probability value of 0.000, which is less than 0.10, indicating that the independent variable is a significant predictor of the dependent variable. The t-calculated value, which is greater than the t-table value (14.456 greater than 1.660), confirms that instructional leadership has a significant partial influence on the quality of learning.

**Table 2.** R square model test of instructional leadership variable on learning quality.

<b>Model</b>	<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>
<b>1</b>	.820 <sup>a</sup>	.772	.669	4.631

The R Square value is 0.772, which means that 77.2% of the variance in learning quality (Y) is influenced by instructional leadership (X1), while the remaining 22.8% is affected by other variables not examined in this study, such as teacher academic supervision. Furthermore, the calculated r-value is 0.820, indicating a powerful influence of instructional leadership (X1) on learning quality (Y). These findings are supported by a study conducted by Yuliana et al. (2021), which demonstrated the impact of instructional leadership on increasing students' learning engagement. Similarly, research by Gulo & Marsidin, (2024) found a significant relationship between instructional leadership and learning quality, with an r {hitung} value of 0.467, which is greater than the r{table} value of 0.444, and a t {hitung} value of 3.921, exceeding the t {table} value of 1.676 at a 95.000% confidence level. These results suggest that teachers can conduct high-quality learning when supported by the appropriate school leadership approach. Teachers must be able to plan and design learning targets to achieve their desired goals. Meanwhile, Nurilahi et al. (2022) define instructional leadership as the efforts made by school principals to improve teaching programs, ultimately aiming to enhance student achievement.

### **The Influence of Academic Supervision on the Learning Quality of Public Junior High School Teachers in Boja District, Kendal Regency**

Table 3 describes the research results on the variable of academic supervision and learning quality.



**Table 3.** Correlation of academic supervision on learning quality.

		Teacher Academic Supervision	Learning Quality
<b>Teacher Academic Supervision</b>	Pearson Correlation	1	.741**
	Sig. (2-tailed)		.000
	N	104	104
<b>Learning Quality</b>	Pearson Correlation	.741**	
	Sig. (2-tailed)	.000	
	N	104	104

The results of the correlation analysis between the academic supervision variable and teaching quality show a positive value with a correlation coefficient of 0.741. Meanwhile, the Sig (1-tailed) value of 0.000 indicates a one-directional relationship between X2 and Y with a significant level, as the value is less than 5% or  $0.000 < 0.05$ . The results of the simple regression analysis indicate that the relationship between academic supervision and teaching quality can be expressed with the equation  $\hat{Y} = 20.464 + 0.684 X_2$ . The partial t-test results show a significant probability of  $0.000 < 0.10$ , meaning that the independent variable explains the dependent variable. Additionally, the value of  $t_{\text{calculated}} > t_{\text{table}}$  ( $11.140 > 1.660$ ) confirms that the academic supervision variable significantly partially influences the teaching quality variable.

**Table 4.** R square model test of academic supervision on teaching quality.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.741 <sup>a</sup>	.649	.544	5.431

The recorded R Square value is 0.649, indicating a significant relationship between academic supervision (X2) and learning quality (Y) at 64.900%. Meanwhile, 35.100% of learning quality (Y) is influenced by other factors not analyzed in this study. Furthermore, the correlation coefficient  $r$  reaches 0.741, signifying a strong relationship between academic supervision and learning quality. These findings align with research conducted by Nurilahi et al. (2022), which demonstrated that academic supervision by school principals contributes to improving teachers' instructional quality and students' learning outcomes. Therefore, enhancing academic supervision is crucial to fostering better school learning quality. Consequently, principals of public junior high schools in Boja District, Kendal Regency, should be able to plan and implement the supervision process effectively. Additionally, school principals must consistently provide feedback to teachers and enhance academic supervision so that teachers can improve their competencies, become more motivated, and ultimately contribute positively to student achievement and learning quality.

### **The Influence of Instructional Leadership and Academic Supervision on the Learning Quality of Public Junior High School Teachers in Boja District, Kendal Regency**

The description is in Table 5, based on the research results on the variables of instructional leadership and academic supervision and their impact on learning quality.

**Table 5.** The correlation coefficient of instructional leadership and academic supervision on learning quality.

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	Constant)	13.473	4.082		3.301	.000
	Instructional Leadership	.742	.120	.895	6.193	.000
	Academic Supervision"	.375	.133	.082	3.564	.000

The results of multiple regression analysis indicate that the model describing the relationship between instructional leadership and academic supervision on the quality of learning can be expressed as  $\hat{Y} = 13.473 + 0.742 X_1 + 0.375 X_2$ . The results of the individual t-test indicate that the t-value for  $X_1$  on  $Y$  is 6.193, while the t-table value is 1.660. In other words, the t-value is greater than the t-table value ( $6.193 > 1.660$ ), indicating that the instructional leadership variable significantly influences the quality of the learning variable individually. On the other hand, the t-value for  $X_2$  on  $Y$  is 3.564, with a t-table value of 1.660. This also shows that the t-value is greater than the t-table value ( $3.564 > 1.660$ ), indicating that the academic supervision variable also significantly influences the quality of learning separately.

**Table 6.** Summary test of instructional leadership and academic supervision on the quality of learning.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.820 <sup>a</sup>	.773	.667	4.646

The R Square value of 0,773 indicates a significant influence of instructional leadership ( $X_1$ ) and academic supervision ( $X_2$ ) on learning quality ( $Y$ ) by 77.300%. Additionally, the correlation coefficient ( $r$ ) of 0.820 highlights the strong impact of instructional leadership ( $X_1$ ) and academic supervision ( $X_2$ ) on learning quality ( $Y$ ). These findings are supported by research conducted by Yuliana et al. (2021), which confirmed that the instructional leadership model positively influences students' learning participation. Furthermore, the study by Gulo & Marsidin (2024) demonstrated a significant relationship between learning quality and instructional leadership, where the calculated r-value of 0.467 exceeded the table r-value of 0.444, and the calculated t-value of 3.921 was higher than the table t-value of 1.676 at a 95.000% confidence level. Similarly, Aslam et al. (2022), Kulsum et al. (2023), and Mediatati and Jati (2022) found that academic supervision by school principals contributes to improving both teachers' teaching quality and student learning outcomes. Based on these results, effective instructional leadership and academic supervision are crucial for enhancing learning quality. Teachers play a key role in determining education's success, as the effectiveness of the educational process largely depends on their preparedness and performance in fostering high-achieving students. A strong commitment from teachers is essential to improving learning quality and achieving optimal results. By prioritizing professionalism and being supported by effective instructional leadership and academic supervision, overall learning quality can be significantly enhanced.



## Discussion

The findings of this study indicate that instructional leadership has a strong and significant influence on the quality of learning in public junior high schools in Boja District. The correlation analysis results show a Pearson correlation coefficient of 0.820, which signifies a strong positive relationship between instructional leadership and learning quality. The significance value of 0.000 ( $<0.050$ ) confirms the reliability of this relationship. Furthermore, the simple regression analysis provides a model where instructional leadership contributes 77.200% to improving learning quality, with the remaining 22.800% influenced by other factors not examined in this study. The t-test results indicate that instructional leadership is a significant explanatory variable for learning quality, as the t-value (14.456) is greater than the critical value (1.660), reinforcing its strong impact. These findings align with prior research by Yuliana et al. (2021), who found that instructional leadership enhances student engagement in learning, and Gulo and Marsidin (2024), who demonstrated a similar significant correlation between instructional leadership and learning quality.

The significant impact of instructional leadership on learning quality highlights the essential role of school principals in fostering effective teaching environments. Principals who practice instructional leadership provide clear academic goals, continuous professional support, and structured teaching supervision, enhancing teachers' instructional strategies and student learning outcomes. This study reaffirms the assertion by Sari (2017) that instructional leadership is the ability to mobilize an organization toward active participation in improving teaching. Additionally, Nurilahi et al. (2022) emphasize that instructional leadership involves strategic efforts by school leaders to refine teaching programs and improve student achievement. Under effective instructional leadership, teachers are more likely to plan, implement, and assess their teaching strategies systematically, ultimately leading to improved learning quality.

Moreover, this study suggests that strengthening instructional leadership can be a strategic initiative to enhance the overall education system. Given that instructional leadership accounts for a substantial portion of learning quality (77.200%), school leaders should focus on professional development programs, classroom observations, and data-driven decision-making to sustain and improve instructional effectiveness. Future research could explore external factors contributing to the remaining 22.800% of learning quality variation, such as teacher motivation, student engagement, and parental involvement. These additional variables could provide a more holistic understanding of what drives learning quality improvements and help shape more comprehensive education policies for junior high schools.

## CONCLUSION

**Fundamental Finding:** This study confirms that instructional leadership and academic supervision significantly influence learning quality in public junior high schools (SMP Negeri) in Boja District, Kendal Regency. Instructional leadership has a strong positive impact, while academic supervision also plays a crucial role. Both factors contribute significantly to learning quality, reinforcing their joint importance. **Implication:** These findings emphasize the need for effective school leadership and supervision to enhance teaching quality. School principals should actively support teacher development and set clear academic goals, while academic supervision should focus on providing constructive feedback and mentoring. Strengthening leadership training programs and supervisory mechanisms is essential for improving educational outcomes. **Limitation:** However, this

study is limited to a specific region and two key factors, excluding other potential influences such as teacher motivation, student engagement, and parental involvement. **Future Research:** should expand to different locations and explore additional variables affecting learning quality, including curriculum effectiveness and long-term impacts of leadership practices.

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