INSTRUCTIONAL LEADERSHIP AND DATA-BASED PLANNING AS DETERMINANTS OF TEACHERS' PERFORMANCE IN VOCATIONAL HIGH SCHOOLS

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Abstract	This study aims to analyze the effects of instructional leadership and data-driven planning on the performance of public vocational high school (SMK) teachers in Semarang Regency. A quantitative approach was employed using an ex post facto method with a correlational research design. The population consisted of 247 productive/vocational SMK teachers in Semarang Regency. Proportional random sampling was used to ensure representation from each school, resulting in a sample of 156 teachers. Data were collected through closed-ended questionnaires that were tested for validity using Pearson's product-moment correlation and for reliability using Cronbach's Alpha to ensure their validity and reliability. The data were analyzed using simple and multiple linear regression with SPSS. The results indicate that instructional leadership partially contributes 18.3% to SMK teacher performance, while data-driven planning contributes 19.8%. Simultaneously, both variables have a combined effect of 26.7%. These findings suggest that improving SMK teacher performance requires effective instructional leadership and well-implemented data-driven planning. Collaboration between learning-centered leadership and effective data utilization and management supports teacher performance in achieving high-quality learning. Teachers are expected to improve their data literacy so that data use is not merely administrative but also analytical and strategic. This study is expected to serve as a reference for education policymakers in designing more effective and sustainable strategies to enhance teacher performance.
Keywords	Instructional Leadership, Teacher Performance, Data-Driven Planning.

INTRODUCTION

Strong, visionary, and transformative leadership at the educational unit level is needed to achieve quality and sustainable education. Therefore, school leaders, such as principals, school supervisors, and education staff, have a strategic role in ensuring a quality teaching and learning process (Anugrahmawaty, 2025). School leadership, in this case, the principal, is expected to be able to realize quality education in schools. The principal's role as a communicator, counselor, and consultant can improve the professional quality of teachers (Hamzah & Faruq, 2020). Improving the quality of teacher performance in Indonesia is crucial. Improving the quality of teacher performance is crucial because teachers interact directly with students in the classroom through the teaching and learning process (Zulianto et al., 2023).

Factors influencing teacher performance are influenced by internal and external factors. Internal factors include the teacher's abilities and skills, and work motivation. External factors are influenced by the teacher's work environment, both physically and socially. High teacher work motivation influences improved teacher performance (Ashlan, 2022). Joen's research shows that the stronger the work motivation, the higher the teacher's performance (Joen et al., 2016). Furthermore, teacher competency and training influence teacher performance, although 22.05% of teachers who have competency and have received training still have performance that is not as expected for high school subject teachers (Putra & Kumalaputra, 2021). Reflection is a tool to maintain and improve their internal motivation. Teacher training can improve teacher professionalism (Ibnu Prayoga et al., 2024). Utilization of the Merdeka Mengajar (PMM) Platform can improve the quality of education through academic supervision carried out by school principals (Farestin Mahardika & Buchori, 2025).

Teacher performance is directly influenced by instructional leadership (Syahminan & Suriansyah, 2024). Instructional leadership is also called educational leadership, school leadership, visionary leadership, teaching, learning leadership, and supervision leadership (Sukmawati & Herawan, 2016). Instructional, digital, and transformational leadership models have a significant influence on teacher self-development, collaboration, and job satisfaction in vocational high schools (Nur et al., 2025) . Based on a preliminary literature study of the education report cards of each state vocational high school in Semarang Regency, the following data were obtained:
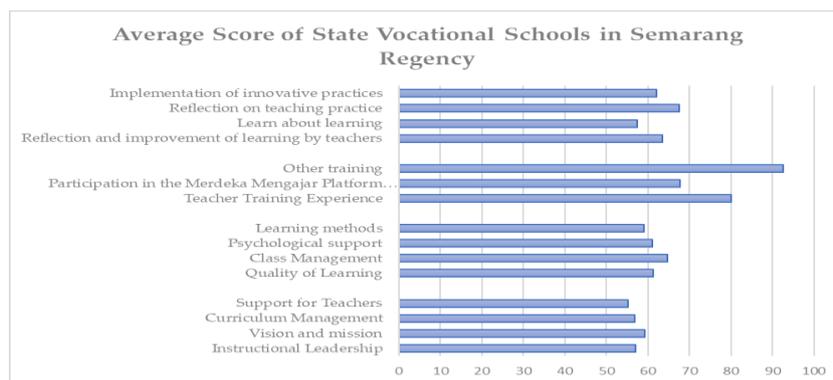
Figure 1. Average Score of Dimensions and Indicators of State Vocational High School Education Report Cards in Semarang Regency

Source: Rapor Pendidikan Kemendikdasmen

The average scores for the dimensions and indicators on each school's education report card indicate that reflection on teaching practices is good, while learning about teaching is at a moderate level. The training experience of educators and education personnel is rated highly. The quality of learning at the vocational high school level in Semarang Regency is at a moderate level, and they have a good level of instructional leadership (Kemendikdasmen, 2025).

Principal managerial competence, teacher pedagogical competence, and school culture significantly influence educational quality (Listyaningrum et al., 2025). The application of leadership principles has a significant impact on the development of school management (Suryadi et al., 2025). Leaders must be competent in data-driven decision-making, managing teams, and having a deep understanding of digital technology. Principal leadership and managerial skills significantly influence teacher performance improvement (Rumeon et al., 2024).

Reflection in data-based education quality improvement planning is carried out through two main approaches: referring to recommendations from the Ministry of Education and Culture, as stated in the Education Report, and through self-analysis conducted by educational institutions (Wulandari et al., 2025). The use of the education report card platform in data-based planning serves as a valuable tool to identify the root causes of problems, reflect on educational achievements, and facilitate constructive dialogue with various education stakeholders with the aim of improving the quality of education. The same thing was also conveyed by the Deputy Chairperson of Commission X of the House of Representatives, Himmatul Aliyah, that the use of education report cards by regions is currently only 51.47% (Napitupulu, 2025).

Principals stated that the Education Report is actively used in preparing the Annual Work Plan (RKT) and the School Activity and Budget Plan (RKAS), providing a positive impact on teacher performance and the quality of education in schools, such as training in literacy, numeracy, learning strategies, and the use of information technology (ICT), helping to improve teacher competency (Handayani et al., 2025). Education policymakers should be encouraged to consider the effects of increasing digital transformation on teaching quality and institutional effectiveness, especially at the strategic planning level in higher education (Kayumova et al., 2025).

Based on the problems described above, the researcher sought to determine the effect of digital-based instructional leadership and data-driven planning on teacher performance. To ensure that this research can have a targeted impact and meet user needs, this research was developed using quantitative research. This is in accordance with President Prabowo-Gibran's ASTA CITA, which aims to improve the quality of educational human resources in Indonesia, one of which is by providing strengthening of school leadership and data-driven planning. The research problem formulation is: How do instructional leadership and data-driven planning influence the performance of vocational high school teachers?

Various studies support research on instructional leadership, data-based planning, and teacher performance. Principal leadership and managerial competence significantly influence teacher performance; the more effective the principal's leadership, the better the teacher performance (Rumeon et al., 2024). A study by Andria Sari (2025) states that school quality is influenced by instructional leadership, teachers' professional competence, and professional learning communities (Sari et al., 2025). Similarly, Syahminan (2024) found that school culture, instructional leadership, and work commitment have a direct effect on teacher performance.

Other research indicates that principals, as instructional leaders, must be capable of implementing strategic planning in human resource development, particularly for teachers. Such strategic planning positively contributes to improving teacher capacity and school readiness in curriculum implementation (Setyawan et al., 2025). Data-based planning enhances the quality of educational services by enabling evidence-based planning, identifying priority issues, and improving transparency in budget management. Effective data-based decision-making consequently improves instructional quality, teacher performance evaluation, and financial management (Abd.Muthalib et al., 2025). Furthermore, instructional leadership and Data-Based Planning have been found to significantly influence school quality, highlighting the importance of

integrating strong leadership with data-driven decision-making in school management (Fibrianti et l., 2025).

This study shares similarities with previous research that positions the principal as both an instructional leader and a managerial figure who plays a strategic role in improving teacher performance. Prior studies indicate that effective leadership and managerial competence of principals positively influence teacher performance (Rumeon et al., 2024), while instructional leadership, professional competence, school culture, and work commitment also contribute significantly to teacher effectiveness (Sari et al., 2025). Strategic planning and data-based decision-making have likewise been shown to enhance teacher capacity, curriculum implementation, and overall school quality (Setyati et al., 2025). Well-implemented data-based planning is able to improve the quality of educational services (Abd.Muthalib et al., 2025). Simultaneously, instructional leadership and data-based planning are also able to improve school quality through the important integration of strong leadership and data-driven decision-making in school management (Fibrianti et al., 2025).

The novelty of this research lies in integrating instructional leadership with data-based planning through the utilization of the Education Report (Rapor Pendidikan) to improve the performance of vocational (productive) teachers in SMK. Furthermore, unlike many previous studies on data-based planning that predominantly employ qualitative approaches, this study applies a quantitative design to examine the simultaneous effects of both variables, thereby providing stronger empirical evidence within the context of vocational education

METHOD

This study analyzes the impact of instructional leadership and data-driven planning on the performance of vocational high school teachers in Semarang Regency. The research employs a quantitative method with descriptive analysis and parametric statistical techniques. This approach was selected to ensure that causal relationships and the magnitude of influence among variables can be examined empirically and measured objectively, while also enabling the testing of causal relationships through inferential statistical analysis. The independent variables in this study consist of principals' instructional leadership and data-driven planning, while teacher performance serves as the dependent variable. The relationships among variables are analyzed both partially and simultaneously to obtain a comprehensive understanding of their effects.

The population of this study comprised all productive/vocational teachers of public vocational high schools in Semarang Regency. The sample was determined using **proportional** random sampling, in which each subject had an equal opportunity to be selected. The population of this study consisted of 247 teachers, with a sample size of 156 teachers. Data were collected through a survey using a Likert-scale questionnaire as the research instrument. Classical assumption tests, including normality, linearity, and multicollinearity, were conducted to ensure the robustness of the regression model (Creswell, 2018). Hypothesis testing in this study employed linear regression analysis and multiple linear regression analysis. These analyses were used to examine and determine the contribution of the effects arising from one or more independent variables on the dependent variable. The research design model is presented as follows:
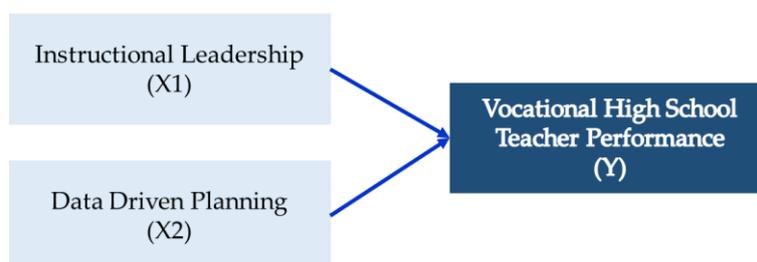

Figure 2. Conceptual Framework

The study was conducted over a two-week period involving a sample of 156 vocational high school teachers in Semarang Regency. The sample size was determined using the Slovin formula from a population of 247 teachers. Data were collected using a five-point Likert scale ranging from 1 to 5, with response options of strongly disagree, disagree, agree, and strongly agree. Validity testing was performed using the Pearson Product–Moment correlation, while reliability testing employed Cronbach's Alpha.

The vocational high school teacher performance instrument demonstrated a high level of internal consistency, with 45 items yielding a reliability coefficient of 0.977. The instructional leadership instrument also showed excellent internal consistency, with 39 items achieving a reliability coefficient of 0.979. Similarly, the data-driven planning instrument exhibited a high level of consistency, with 34 items attaining a reliability coefficient of 0.981.

Based on the research objectives and theoretical framework, three hypotheses were formulated:

H1 : Instructional leadership has a significant effect on vocational high school teacher performance

H2 : Data-driven planning has a significant effect on vocational high school teacher performance

H3 : instructional leadership and data-driven planning simultaneously influence vocational high school teacher performance

These hypotheses guide the statistical testing process and provide clear direction for interpreting the results in the context of leadership and teacher data and performance in vocational schools.

FINDINGS AND DISCUSSION

Findings

This study aims to investigate the influence of instructional leadership (learning leadership) and data-driven planning on the performance of public vocational high school (SMK) teachers in Semarang Regency. Data were collected using structured questionnaires administered to 156 teachers from nine public schools. The findings are summarized as follows.

The Influence of Instructional Leadership on SMK Teacher Performance The analysis indicates a significant relationship between instructional leadership and the performance of SMK teachers. The correlation coefficient is 0.428, which is categorized as moderately strong. Hypothesis testing using a t-test shows a t-value of 5.878, which exceeds the critical t-table value of 1.975. This result indicates that instructional leadership has a positive effect on the performance of SMK teachers.

Table 1. The Influence of Instructional Leadership on Teacher Performance

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	98,477	17,086		5,764	,000
Instructional leadership	,557	,095	,428	5,878	,000
a. Dependent Variable: SMK Teacher Performance					

Source: SPSS Output, 2026

The Influence of Data-Driven Planning on SMK Teacher Performance

Data-driven planning in this study has a significant effect on teacher performance. The correlation coefficient is 0.445, with a t-value of 6.163 and a significance level of 0.000, which is below the 0.005 significance threshold. This indicates that data-driven planning has a positive and statistically significant effect on the performance of SMK teachers.

Table 2. The Influence of Data-Driven Planning on SMK Teacher Performance

Coefficients[a]					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	109,402	14,529		7,530	,000
Data-Driven Planning	,584	,095	,445	6,163	,000
a. Dependent Variable: SMK Teacher Performance					

Source: SPSS Output, 2026

The Simultaneous Influence of Instructional Leadership and Data-Driven Planning on SMK Teacher Performance

Multiple linear regression analysis indicates that instructional leadership and data-driven planning simultaneously affect teacher performance. The model yields an R value of 0.517 and an R-square value of 0.258, indicating that the two independent variables jointly explain a substantial proportion of the variance in SMK teacher performance.

Table 3. The Simultaneous Influence of Instructional Leadership and Data-Driven Planning on SMK Teacher Performance

Model Summary[b]					
Model	R	R Square	Adjusted R-Square	Std. Error of theInterpretation Estimate	
1	,517[a]	,267	,258	12,655	Significant joint influence (26,7%)

Source: SPSS Output, 2026

This confirms that instructional leadership and data-driven planning are important factors influencing the performance of public SMK teachers in Semarang Regency. Instructional leadership exercised by school principals enables them to perform their role as learning leaders who foster teacher competence and engagement, thereby significantly improving planning practices and overall teacher performance in SMKs.

Discussion

Instructional Leadership and Vocational High School Teacher Performance

The findings of this study support Hypothesis 1, which states that instructional leadership (learning leadership) has a significant influence on SMK teacher performance. The data show that principals' instructional leadership contributes 18.3% to the performance of public SMK teachers in Semarang Regency. The positive regression coefficient (0.557) indicates that the more positive the instructional leadership of the principal, the better the teacher performance. This finding is consistent with the broader literature on school leadership, particularly instructional leadership models, which emphasize the principal as the key actor in directing, guiding, and supporting teachers' instructional practices. This result aligns with Hallinger's theory, which asserts that instructional leadership focuses on establishing a learning vision, managing instructional programs, and creating a conducive learning climate.

Instructional leadership is increasingly important in the SMK context due to the characteristics of vocational education, which require close integration between pedagogical competence, technical expertise, and the demands of the world of work. Data from the Rapor Pendidikan indicate that instructional leadership scores in public SMKs in Semarang Regency range from 58–65%, which falls into the "good" category. However, teacher performance has not yet reached an optimal level. This suggests that although instructional leadership practices have been implemented fairly well, further strengthening is needed, particularly in continuous academic supervision, teacher empowerment, and mentoring in instructional development.

The findings of this study are consistent with the research (Rumeon et al., 2024), which states that principal leadership has a significant effect on teacher performance. Furthermore, (Naz & Rashid, 2021) Highlight the impact of instructional leadership, particularly goal setting, resource support, and curriculum monitoring, on teacher motivation and student learning outcomes in developing country contexts. Their findings indicate that principal leadership not only contributes directly to teacher satisfaction but also enhances long-term professional resilience and motivation in challenging educational environments.

Instructional leadership involves mentoring that focuses on planning, implementing, and evaluating learning in accordance with the curriculum, as well as developing teacher professionalism to optimally improve teaching processes and student learning outcomes. Instructional leadership aims to achieve continuous improvement in the quality of instructional

processes and is teacher-centered. It is beneficial not only for improving student learning outcomes but also for enhancing teacher performance (Usman, 2015).

Teacher performance is influenced by both internal and external factors. Internal factors include teachers' abilities, skills, and work motivation, while external factors relate to the physical and social work environment. One key external factor influencing teacher performance is the instructional leadership of the principal (Abdullah & Zulfiqri, 2025). This is supported by the study, which found that principals' instructional leadership affects the quality of teacher performance through mentoring teachers in lesson planning, managing the instructional process, evaluating learning, and creating a conducive learning environment (Sukmawati & Herawan, 2016).

According to Manase (Qodiriyah, 2023) An effective instructional leader (principal) can be described based on three criteria: (1) the principal possesses a clear image or vision of what needs to be accomplished; (2) this vision serves as a guideline in managing and leading the school; and (3) the principal focuses their activities on classroom instruction and teacher performance.

Overall, these findings support the assertion that instructional leadership positions the school principal as the primary actor in directing, guiding, and supporting teachers' instructional practices. Leadership practices that define the school's vision and mission, manage the curriculum, create a positive learning climate, and empower teachers can significantly influence school culture, job satisfaction, and teachers' motivation in their instructional performance. Therefore, in efforts to improve the quality of learning, school principals must be able to act as instructional leaders who not only support teachers but also nurture and coach them to bring out their best potential.

Data-Driven Planning and Vocational High School Teacher Performance

The findings of this study provide empirical support for Hypothesis 2, which states that data-driven planning significantly influences the performance of public SMK teachers in Semarang Regency. The results indicate that Data-Driven Planning (DDP) has a positive and significant effect on teacher performance, as reflected by a correlation coefficient of 0.427 ($p < 0.001$). This suggests that stronger institutional and teacher capacities in systematically utilizing data are associated with better teacher performance in planning, implementing, and evaluating instructional activities (Setyati et al., 2025). These findings reinforce the theoretical argument that data-driven decision-making is a critical mechanism for enhancing teacher professionalism. This result is consistent with previous studies emphasizing the importance of data-based decision-making in improving educational outcomes at both the classroom and institutional levels (Ross et al., 2017). The study

emphasizes that instructional leadership becomes more effective when integrated with data-based planning, as the systematic use of data enables more accurate and targeted instructional decision-making, ultimately improving teacher performance and overall school quality (Fernandes, 2023).

Descriptively, respondents' perceptions of DDP implementation tend to fall within the "quite good" category, with more than 70% of teachers rating the practice at moderate to high levels. Nevertheless, a proportion of respondents still perceived DDP as inadequate or poor. This condition indicates that the implementation of DDP in SMKs in Semarang Regency remains at a transitional stage, where data-based practices have begun to be adopted but have not yet been consistently internalized into teachers' professional culture and school routines. This pattern aligns with previous research indicating that the application of DDP is often constrained by system readiness and users' data capacity (Schildkamp et al., 2017).

From the perspective of data capability, the findings reveal that data quality, integration, and governance have not yet reached optimal levels. Although educational data such as the Rapor Pendidikan are available, they have not been fully managed or utilized as primary inputs for instructional planning and teacher performance development. The literature emphasizes that the quality of data-driven decisions is highly dependent on the accuracy, integration, and reliability of data systems (Datnow & Park, 2018). Weak data governance, therefore, limits the strategic use of data in improving teacher performance.

Regarding analytic capability, this study found the lowest scores compared to other dimensions. This indicates that teachers' ability to process data descriptively, predictively, and prescriptively remains limited. In practice, data are often used primarily for reporting purposes rather than for in-depth analysis, root-cause identification, or the formulation of instructional improvement strategies. This finding is consistent with Mandinach and Gummer, who highlight limited educator data literacy as a major barrier to effective data-driven planning (Nichols & Varier, 2021).

In contrast, the insight exploitation and integration capability dimension recorded the highest scores. This finding suggests that when analytical insights are available, teachers are generally able to integrate them into instructional practices and respond adaptively to the findings. However, the imbalance between analytic capability and insight utilization indicates that data-driven planning remains largely reactive and insufficiently grounded in deep analysis. This gap reflects a broader issue in education, often described as being "data-rich but information-poor,"

where data availability is not matched by analytical sophistication (Sahriah & Arismunandar, 2025).

The human capital and data culture dimension also plays a significant role in shaping the effectiveness of data-driven planning. Previous studies indicate that the development of a data-oriented school culture and the strengthening of teachers' data competencies are essential foundations for maximizing the impact of data-driven planning (Karwita et al., 2025). In this study, the moderate level of data use and integration among teachers reflects an ongoing transition toward a data-informed culture, which still requires reinforcement through professional development and supportive school leadership.

A data-informed decision-making culture and strong human capital capacity determine the extent to which data are used consistently and meaningfully. Schools characterized by collaborative cultures and leadership that actively promote data use tend to demonstrate higher levels of teacher performance (Datnow et al., 2018). In the context of this study, the data culture has not yet fully matured, which limits the overall impact of data-driven planning on teacher performance.

Regression analysis shows an R-square value of 0.198, indicating that 19.8% of the variance in teacher performance can be explained by data-driven planning. This finding suggests that while DDP is a significant factor in enhancing teacher performance, it is not the sole determinant. A larger proportion of performance variation is influenced by other factors, including instructional leadership, teacher motivation, and school culture. This result supports multifactorial frameworks of teacher performance that conceptualize data-driven planning as one complementary factor among several determinants of effectiveness (Supovitz, 2024).

Overall, the findings confirm that data-driven planning plays a strategic role in improving SMK teacher performance. Strengthening data capability, enhancing teachers' analytic literacy, integrating insights into instructional routines, and fostering a strong data-oriented school culture are essential prerequisites for ensuring that data-driven planning has a more substantial and sustainable impact on teacher performance and instructional quality.

Combined Influence of Instructional Leadership and Data-Driven Planning on Vocational High School (SMK) Teacher Performance

The results of the third hypothesis testing indicate that instructional leadership and data-driven planning simultaneously have a significant effect on SMK teacher performance. This is evidenced by a multiple correlation coefficient of R = 0.517, which falls within the moderately strong category (interval 0.400–0.599). These findings suggest a meaningful relationship between the two

independent variables, instructional leadership and data-driven planning, and teacher performance as the dependent variable. This result is consistent with Rojas, who argues that the implementation of instructional leadership is strongly associated with the use of data in instructional decision-making (Rojas-Bravo et al., 2024). School principals who promote data utilization represent a critical dimension of instructional leadership that supports the improvement of learning quality and evidence-based decision-making.

Principals who adopt an instructional leadership approach are able to motivate teachers to achieve higher performance standards through direct supervision, technical guidance, and a strong focus on improving instructional quality. Principals who provide direct mentoring and guidance to teachers tend to enhance teachers' professional competencies, which ultimately contributes to improved student learning outcomes (Akbar & Imaniyati, 2019). Instructional leadership has been shown to exert a significant influence on teacher performance, as principals who actively engage in instructional supervision, provide instructional support, and foster professional development generally contribute to improved teaching quality, teacher competence, and the achievement of learning objectives (Jalal & Mardizal, 2025). Through guidance, feedback, and supportive supervisory practices, instructional leadership enhances teachers' technical capabilities and the overall effectiveness of the learning process.

Model significance testing using ANOVA yielded an F value of 27.882 with a significance level of 0.000 ($p < 0.05$). With degrees of freedom $df1 = 2$ and $df2 = 153$ and an F-table value of 3.06, the calculated F value exceeds the critical value, leading to the rejection of H_0 and acceptance of H_1. This result confirms that the multiple regression model incorporating instructional leadership and data-driven planning is appropriate for explaining variations in SMK teacher performance.

As instructional leaders, school principals play a crucial role in interpreting educational data and integrating it into instructional planning processes. Leadership that is attentive to data is essential for fostering instructional innovation and improving educational outcomes through systematic data-driven planning (Rose, 2025). In this context, instructional leadership serves as the driving force that ensures data are not merely available but are meaningfully translated into instructional strategies and school improvement initiatives.

The R Square value of 0.267 indicates that 26.7% of the variance in SMK teacher performance can be explained jointly by instructional leadership and data-driven planning. Meanwhile, the remaining 73.3% of variance is influenced by other factors outside the research model, such as

pedagogical and professional competence, work motivation, school culture and climate, as well as other contextual variables. This finding aligns with the perspective of Yuliani as cited in Timor et al. (2018), who emphasize that teacher performance is shaped by the interaction of multiple individual and organizational factors.

The stability of the regression model is reflected in the Adjusted R Square value of 0.258, indicating that after adjustment for the number of predictors and sample size, the contribution of the two independent variables remains relatively consistent. This suggests that instructional leadership and data-driven planning are empirically robust and relevant determinants of teacher performance in vocational secondary schools.

The regression coefficient analysis further demonstrates that both instructional leadership and data-driven planning have positive and statistically significant regression coefficients, valued at 0.379 and 0.421, respectively ($p < 0.05$). The resulting regression equation, $\hat{Y} = 66.213 + 0.379X_1 + 0.421X_2$, indicates that simultaneous increases in instructional leadership and data-driven planning are associated with corresponding improvements in SMK teacher performance. When principals exercise strong instructional leadership while simultaneously developing effective data-driven planning practices, the combination produces a complementary impact on overall school quality, including teacher performance. Previous studies have shown that the integration of these two variables can explain a substantial proportion of variance in school effectiveness (Fibrianti et al., 2025).

From a theoretical perspective, these findings reinforce the instructional leadership framework, which emphasizes the principal's role in directing instructional processes, alongside the importance of data-based decision-making for continuous improvement. The integration of these two approaches fosters a structured, reflective, and adaptive work environment that enables teachers to enhance their professional performance optimally (Hallinger, 2018; Schildkamp et al., 2019).

CONCLUSION

Based on the research findings, it can be concluded that the performance of public vocational high school (SMK) teachers in Semarang Regency is significantly influenced by two factors, namely instructional leadership and data-driven planning. Both variables have been proven to have a significant effect, both partially and simultaneously, in improving teacher performance. Data-driven

planning supports more objective, reflective, and targeted instructional decision-making, thereby encouraging the enhancement of teacher professionalism. Simultaneously, the two variables contribute 26.7% to the variance in teacher performance, with data-driven planning showing a greater influence than instructional leadership, accounting for 19.8%.

These findings emphasize the importance of planning in the learning process, the use of data in decision-making, and the improvement of teacher performance through more effective data utilization in both instructional planning and the enhancement of learning quality. Collaboration between learning-centered leadership and effective data utilization and management supports teacher performance in achieving higher learning quality. Teachers are expected to improve their data literacy so that data use is not merely administrative but also analytical and strategic. Future research is recommended to examine other factors influencing teacher performance and to employ more diverse methodological approaches to enrich the understanding of learning quality improvement in vocational schools. Therefore, the results of this study can serve as a foundation for formulating more targeted, contextual, and sustainable educational policies and strategies.

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