(RESEARCH ARTICLE)

The influence of principal leadership and academic supervision on teacher performance through work motivation

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Abstract

Teacher performance plays a crucial role in improving the quality of education. High-performing teachers are able to design effective learning, implement appropriate teaching strategies, and evaluate learning outcomes optimally. However, teacher performance is often influenced by various internal and external factors. This study aims to examine the influence of principal leadership and academic supervision on teacher performance through work motivation as a mediating variable. This research employed a quantitative approach with a correlational design. The population consisted of teachers from public junior high schools in Banyumanik District, Semarang. A total of 105 teachers were selected as samples using proportional random sampling. Data were collected through questionnaires and analyzed using path analysis. The results show that principal leadership and academic supervision have a positive and significant effect on teachers' work motivation. Furthermore, principal leadership, academic supervision, and work motivation significantly influence teacher performance. Work motivation mediates the relationship between principal leadership and teacher performance, as well as between academic supervision and teacher performance. These findings indicate that effective leadership and constructive supervision contribute to improved teacher performance by enhancing teachers' work motivation.

Keywords: Principal Leadership; Academic Supervision; Work Motivation; Teacher Performance

1. Introduction

Education plays a strategic role in developing human resources and determining the quality of a nation's future. The quality of education is strongly influenced by the effectiveness of the teaching and learning process, in which teachers act as the main agents of educational implementation (Syukri & Hamdani, 2019). Therefore, improving teacher performance has become a crucial issue in efforts to enhance educational quality, particularly at the secondary school level.

Teacher performance refers to teachers' ability to plan, implement, evaluate, and supervise learning activities in accordance with professional standards (Rohman, 2020). High teacher performance contributes to effective classroom management, meaningful learning experiences, and improved student learning outcomes. However, teacher performance does not emerge automatically; it is influenced by various internal and external factors, including leadership, supervision, and work motivation (Kristiawan et al., 2017).

One of the most influential external factors affecting teacher performance is principal leadership. Principals function not only as administrators but also as instructional leaders who shape school culture, provide direction, and create a supportive work environment (Aprilana et al., 2017). Effective leadership characterized by clear vision, effective communication, fairness, and professional support has been shown to positively influence teacher performance

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(Werang, 2014; Baihaqi, 2015). Conversely, weak leadership may result in low discipline, reduced motivation, and suboptimal teacher performance.

In addition to leadership, academic supervision is an essential mechanism for improving teacher performance. Academic supervision aims to assist teachers in developing their professional competencies through classroom observation, feedback, and continuous guidance (Musyadad et al., 2022). Previous studies have found that effective academic supervision has a positive and significant impact on teacher performance (Hardono, 2017). Supervision conducted in a supportive and humanistic manner helps teachers reflect on their teaching practices and improve instructional quality (Mujiono, 2020).

Another important factor influencing teacher performance is work motivation. Motivation serves as an internal driving force that encourages teachers to carry out their professional duties with enthusiasm, responsibility, and commitment (Hasibuan, 2018). Teachers with high work motivation tend to demonstrate stronger dedication, creativity, and persistence in performing instructional tasks (Holid, 2023). Conversely, low motivation can negatively affect teachers' productivity and performance (Anriyani et al., 2024).

Empirical evidence indicates that principal leadership and academic supervision significantly influence teachers' work motivation. Studies by Muhajirin (2017) and Prasetyono (2018) demonstrate that supportive supervision practices enhance teachers' motivation. Furthermore, leadership style has been found to indirectly affect teacher performance through motivation, suggesting the importance of motivation as a mediating variable (Ahmadun, 2021).

This study is grounded in Social Exchange Theory (SET), which explains social behavior as a process of reciprocal exchange between individuals and organizations (Blau, 2017). In the educational context, when principals provide leadership support, supervision, and professional development opportunities, teachers perceive these actions as organizational support and reciprocate by increasing their motivation and performance (Bahtiar, 2021). Thus, work motivation plays a crucial mediating role in the relationship between leadership, supervision, and teacher performance.

Despite extensive research on leadership, supervision, and teacher performance, studies that simultaneously examine the direct and indirect effects of principal leadership and academic supervision on teacher performance through work motivation, particularly in public junior high schools, remain limited. Therefore, this study aims to analyze: (1) the effect of principal leadership on teachers' work motivation, (2) the effect of academic supervision on teachers' work motivation, (3) the direct effect of principal leadership and academic supervision on teacher performance, (4) the effect of work motivation on teacher performance, and (5) the mediating role of work motivation in the relationship between leadership, supervision, and teacher performance.

The findings of this study are expected to contribute to the literature on educational management and provide practical implications for improving teacher performance through effective leadership, supervision, and motivational strategies.

2. Results

This study investigated the effects of principal leadership and academic supervision on teacher performance, with work motivation as a mediating variable. Data were collected from 105 teachers from four public junior high schools in Banyumanik District and analyzed using path analysis.

2.1. Descriptive Analysis

The descriptive analysis shows that principal leadership, academic supervision, work motivation, and teacher performance are generally perceived at a high level. The average index scores for all variables fall into the high to high category, indicating that teachers perceive leadership practices, supervision, motivation, and performance positively.

- Principal leadership obtained a mean index score of 83.84, indicating that teachers perceived the principals' leadership as very effective, particularly in communication, decision-making, and professional support.
- Academic supervision recorded a mean index score of 83.12, suggesting that supervision was conducted systematically, constructively, and oriented toward professional development.
- Work motivation showed a mean index score of 83.16, reflecting strong intrinsic and extrinsic motivation among teachers.
- Teacher performance achieved a mean index score of 82.86, indicating that teachers performed well in lesson planning, implementation, evaluation, and classroom management.

These results suggest that the school environment in public junior high schools in Banyumanik District supports professional teacher performance.

2.2. Classical Assumption Test Results

Prior to hypothesis testing, classical assumption tests were conducted to ensure that the regression model met statistical requirements.

2.2.1. Normality Test

The Kolmogorov–Smirnov test results indicate that the residuals are normally distributed. The significance value for both regression equations is greater than 0.05 (Sig. = 0.183 and Sig. = 0.200), indicating that the data meet the assumption of normality. Therefore, the regression analysis can be conducted reliably.

2.2.2. Linearity Test

The linearity test results indicate that the relationships between principal leadership and work motivation (Sig. Linearity = 0.000; Deviation from Linearity = 0.864), as well as between academic supervision and work motivation (Sig. Linearity = 0.000; Deviation from Linearity = 0.164), are linear. Furthermore, the relationships between principal leadership and teacher performance (Sig. Linearity = 0.000; Deviation from Linearity = 0.812), academic supervision and teacher performance (Sig. Linearity = 0.000; Deviation from Linearity = 0.258), and work motivation and teacher performance (Sig. Linearity = 0.000; Deviation from Linearity = 0.560) are also linear. Therefore, all variables meet the linearity assumption and are eligible for further regression and path analysis.

2.2.3. Multicolonierity Test

The multicollinearity test results indicate that the regression model is free from multicollinearity problems. In the first regression model, the tolerance values for principal leadership and academic supervision are both 0.999, with VIF values of 1.001. In the second regression model, the tolerance values for principal leadership, academic supervision, and work motivation range from 0.998 to 0.999, while the VIF values range from 1.001 to 1.002. Since all tolerance values exceed 0.10 and all VIF values are below 10, it can be concluded that no multicollinearity exists among the independent variables, and the regression models are suitable for further analysis.

2.2.4. Heteroscedasticity Test

The heteroscedasticity test using the Glejser method indicates that the regression models do not suffer from heteroscedasticity. In the first regression model, the significance values for principal leadership and academic supervision are 0.226 and 0.708, respectively. In the second regression model, the significance values for principal leadership, academic supervision, and work motivation are 0.639, 0.917, and 0.124, respectively. Since all significance values exceed 0.05, it can be concluded that the residuals have constant variance, and the regression models meet the homoscedasticity assumption.

2.3. Hypothesis Testing Results

2.3.1. Effect of Principal Leadership on Work Motivation

The regression analysis indicates that principal leadership has a positive and significant effect on work motivation (β = 0.297; Sig. = 0.000 < 0.05). This result confirms that better leadership practices by principals contribute to higher teacher motivation.

2.3.2. Effect of Academic Supervision on Work Motivation

Academic supervision also has a positive and significant effect on work motivation (β = 0.347; Sig. = 0.000 < 0.05). This suggests that effective and constructive supervision enhances teachers' enthusiasm and commitment to their work.

2.3.3. Effect of Principal Leadership on Teacher Performance

The results show that principal leadership positively and significantly affects teacher performance (β = 0.306; Sig. = 0.000 < 0.05). This indicates that effective leadership directly improves teacher performance.

2.3.4. Effect of Academic Supervision on Teacher Performance

Academic supervision has a positive and significant effect on teacher performance (β = 0.321; Sig. = 0.000 < 0.05). This demonstrates that supervision activities contribute to improving instructional quality and professional performance.

2.3.5. Effect of Work Motivation on Teacher Performance

Work motivation significantly influences teacher performance (β = 0.384; Sig. = 0.000 < 0.05). Teachers with higher motivation tend to demonstrate better performance in planning, implementing, and evaluating learning activities.

2.4. Path Analysis Results

Path analysis reveals that work motivation mediates the relationship between principal leadership and teacher performance, as well as between academic supervision and teacher performance. The indirect effect of principal leadership on teacher performance through work motivation is calculated as 0.114. Similarly, the indirect effect of academic supervision on teacher performance through work motivation is 0.133. Sobel test results indicate that both indirect effects are statistically significant ($Z > 1.960$), confirming the mediating role of work motivation.

3. Discussion

The findings of this study confirm that principal leadership plays a crucial role in enhancing teachers' work motivation and performance. Effective leadership characterized by clear communication, fairness, professional support, and decision-making encourages teachers to feel valued and supported, which in turn increases their motivation to perform better. This result is consistent with previous studies that highlight the importance of instructional and transformational leadership in improving teacher outcomes.

The positive effect of academic supervision on work motivation and teacher performance indicates that supervision conducted as a form of professional guidance rather than mere control fosters a supportive learning environment for teachers. Constructive feedback, classroom observation, and follow-up discussions help teachers improve their instructional practices and increase their confidence and motivation. This supports the view that supervision should be developmental and collaborative. Furthermore, work motivation was found to be a strong predictor of teacher performance, confirming that motivated teachers are more committed, responsible, and proactive in planning and implementing learning activities. Teachers with high motivation tend to invest more effort in lesson preparation, classroom management, and student evaluation.

The mediating role of work motivation provides empirical support for Social Exchange Theory, which explains that teachers reciprocate positive treatment from school leaders through increased motivation and improved performance. When principals provide leadership support and meaningful supervision, teachers perceive these actions as organizational support, leading them to respond with higher motivation and better performance.

These findings imply that efforts to improve teacher performance should not focus solely on technical supervision or administrative control but should also emphasize leadership practices and motivational strategies. Strengthening principal leadership competencies and implementing effective academic supervision can create a positive cycle that enhances teacher motivation and performance simultaneously.

4. Conclusion

Based on the results of this study, it can be concluded that principal leadership and academic supervision have a significant influence on teacher performance, both directly and indirectly through work motivation. Effective principal leadership contributes to the creation of a positive working environment that encourages teachers to be more motivated and professional in carrying out their duties. Likewise, academic supervision conducted in a constructive and developmental manner is able to enhance teachers' motivation and instructional competence.

Work motivation plays a mediating role in strengthening the influence of principal leadership and academic supervision on teacher performance. Teachers who receive leadership support and professional guidance tend to demonstrate higher motivation, which subsequently improves their performance in planning, implementing, and evaluating learning activities.

These findings imply that efforts to improve teacher performance should focus on strengthening leadership practices and implementing effective academic supervision while simultaneously fostering teachers' work motivation. Future

studies are recommended to include additional variables or different educational contexts to further explore factors influencing teacher performance.

Compliance with ethical standards

Disclosure of conflict of interest

The authors declare that they have no conflicts of interest.

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Author's short biography

Umi Nada Halim: Umi Nada Halim was born on September 19, 2000. She is a graduate student in the Master's Program in Educational Management at Universitas Negeri Semarang. She has a strong interest in educational management and development, particularly in improving the quality of educational institutions through effective and sustainable management practices. She is known for her discipline, responsibility, and strong motivation for continuous learning. Umi Nada Halim upholds the values of integrity, professionalism, and collaboration in her academic and professional endeavors. She also aspires to pursue a Doctoral (PhD) degree in the future, with the aim of contributing more deeply to educational research, policy, and practice, and to support the advancement of education and society.	
Suwito Eko Pramono: Suwito Eko Pramono, is a faculty member at Universitas Negeri Semarang (UNNES), teaching at the undergraduate (Bachelor's), graduate (Master's), and doctoral (PhD) levels. He is an academic with a strong commitment to the development of higher education through teaching, research, and community service. As a professor, Prof. Suwito Eko Pramono is known for upholding professionalism, integrity, and academic excellence. He actively contributes to the advancement of knowledge and the improvement of educational quality, particularly in developing highly competent and competitive human resources. Through his dedication and service at UNNES, Prof. Suwito Eko Pramono continues to play an important role in supporting the progress of education and the development of science in Indonesia.	