

# The Effect of Transformational Leadership and Work Engagement on Teacher Performance: Mediating Role of Innovative Work Behavior

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## Abstract

### Keywords:

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This study aims to examine the effect of transformational leadership and work engagement on teacher performance by positioning innovative work behavior as a mediating variable. The study seeks to clarify the mechanism through which leadership and engagement influence performance in the context of Islamic elementary schools. A quantitative approach was employed using a survey method. Data were collected through questionnaires distributed to all teachers and staff at SD IT Al Qudwah in Tugumulyo District, Musi Rawas Regency, South Sumatra. A total of 100 respondents participated in the study using a saturated sampling technique. The data were analyzed using path analysis with SmartPLS to test both direct and indirect relationships among variables. The results indicate that transformational leadership and work engagement do not have a direct effect on teacher performance. However, both variables significantly influence innovative work behavior. Furthermore, innovative work behavior has a significant effect on teacher performance and mediates the relationship between transformational leadership, work engagement, and teacher performance. These findings highlight the importance of innovation-oriented behavior as a key mechanism in improving teacher effectiveness. This study contributes to the educational management literature by providing empirical evidence on the mediating role of innovative work behavior in the relationship between transformational leadership, work engagement, and teacher performance in Islamic school settings. The findings offer practical implications for school leaders to foster innovation as a strategic pathway to enhance teacher performance.

### Kata kunci:

Kepemimpinan Transformasional, Keterlibatan Kerja, Kinerja Guru, Perilaku Kerja Inovatif

### Abstrak

Penelitian ini bertujuan untuk menguji pengaruh kepemimpinan transformasional dan keterlibatan kerja terhadap kinerja guru dengan menempatkan perilaku kerja inovatif sebagai variabel mediasi. Penelitian ini berupaya mengklarifikasi mekanisme di mana kepemimpinan dan keterlibatan memengaruhi kinerja dalam konteks sekolah dasar Islam. Pendekatan kuantitatif digunakan dengan metode survei. Data dikumpulkan melalui kuesioner yang dibagikan kepada seluruh guru dan staf di SD IT Al Qudwah di Kecamatan Tugumulyo, Kabupaten Musi Rawas, Sumatera Selatan. Sebanyak 100 responden berpartisipasi dalam penelitian ini menggunakan teknik pengambilan sampel jenuh. Data dianalisis menggunakan analisis jalur dengan SmartPLS untuk menguji hubungan langsung dan tidak langsung antar variabel. Hasil menunjukkan bahwa kepemimpinan transformasional dan keterlibatan kerja tidak memiliki pengaruh langsung terhadap kinerja guru. Namun, kedua variabel tersebut secara signifikan memengaruhi perilaku kerja inovatif. Lebih lanjut, perilaku kerja inovatif memiliki pengaruh signifikan terhadap kinerja guru dan memediasi hubungan antara kepemimpinan transformasional, keterlibatan kerja, dan kinerja guru. Temuan ini menyoroti pentingnya perilaku berorientasi inovasi sebagai mekanisme kunci dalam meningkatkan efektivitas guru. Studi ini berkontribusi pada literatur manajemen pendidikan dengan memberikan bukti

*empiris tentang peran mediasi perilaku kerja inovatif dalam hubungan antara kepemimpinan transformasional, keterlibatan kerja, dan kinerja guru di lingkungan sekolah Islam. Temuan ini menawarkan implikasi praktis bagi para pemimpin sekolah untuk mendorong inovasi sebagai jalur strategis untuk meningkatkan kinerja guru.*

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## INTRODUCTION

Education plays a fundamental role in developing superior human resources, particularly in the era of globalization and technological advancement. A country's educational progress significantly impacts the quality of its society and global competitiveness (Hasbi, 2022). In this context, teachers are the primary actors determining the success of learning because they are responsible for planning, implementing, and evaluating the educational process (Fathiyah et al., 2022a). Effective education can only be achieved through qualified human resources. Competent teachers are required to improve teacher quality, making improving teacher quality a priority in national education development. Integrated Islamic Schools (IT), as educational institutions that integrate Islamic values with technology, face global challenges that demand innovation and high-quality learning.

Teacher performance is a crucial factor in determining the success of educational goals in IT schools (Aksoni & Ratnawati, 2020). According to Law No. 14 of 2005, teachers must possess professional, pedagogical, social, and personality competencies to carry out their strategic roles. However, various reports indicate that many teachers still do not meet competency standards, resulting in the low quality of learning in Indonesia (Rahmadayanti, 2019). One of the essential factors for improving teacher performance is innovative work behavior. This behavior refers to a teacher's ability to generate, disseminate, and implement new ideas in the learning process (Yuan & Woodman, 2010). Innovative teachers are able to adapt to technological changes and student needs (Etikariena, 2019). Various studies have shown that innovative work behavior plays a mediating role in improving performance, particularly when combined with transformational leadership styles and teacher work engagement levels (Al-Omari et al., 2019; Fathiyah et al., 2022a).

Another important factor is transformational leadership, a leadership style that provides inspiration, motivation, and vision for teachers in carrying out their duties (Rosmiati & Kurniady, 2011). Transformational leaders have been shown to influence teachers' behavior and motivation, positively impacting their performance (Suwarni, 2011; Yeni & Patalatu, 2019). However, several studies, such as those by Bobo (2019), show that transformational leadership does not always have a significant impact on performance, thus opening up further research (Bobo, 2019). Work engagement also contributes to improved teacher performance. Teachers with high levels of engagement tend to be more enthusiastic, productive, and innovative (Gorgievski et al., 2014; Kroes, 2015). Most studies have found that work engagement has a positive effect on performance (Basuki, 2018; Contreras et al., 2020; Tims et al., 2011). However, some studies have shown conflicting results, such as Monje et al. (2020), who found that work engagement does not always have a significant impact on performance (Monje et al., 2020).

Previous studies on transformational leadership and work engagement have produced inconsistent findings regarding their direct effects on teacher performance. While some studies report significant positive relationships, others indicate weak or insignificant effects, suggesting that the mechanism linking these variables remains unclear. In addition, although innovative work behavior has been recognized as a potential mediating variable, empirical studies that explicitly examine its role in explaining how transformational leadership and work engagement influence

teacher performance are still limited. This limitation is particularly evident in the context of Islamic education institutions that integrate technology-based learning, where the demands for innovation, digital adaptation, and value-based education create unique organizational dynamics. Therefore, there is a need for further investigation to provide a more comprehensive understanding of the mediating role of innovative work behavior in strengthening teacher performance within technology-based Islamic school settings.

## RESEARCH METHODS

This research was conducted at Al Qudwah Islamic Elementary School, Tugumulyo District, from June 2024 to December 2024. This period covered all stages of the research, from initial observation, proposal development, instrument development, data collection, analysis, to report preparation and thesis examination. The target group was all teachers at Al Qudwah Islamic Elementary School, as they are the most important stakeholders relevant to research variables related to teacher performance. Overall, the school population is 125 people, consisting of teachers, administrative staff, operators, and support staff. However, this study used a saturated sampling technique (census), so that all 100 teachers were used as research respondents.

Data collection was conducted through the distribution of questionnaires compiled based on theoretical indicators for each research variable. The questionnaire was designed using a Likert scale to facilitate respondents' assessment of the statements submitted. The instrument development process was carried out by referring to variable indicators that have been used in previous studies, so that the instrument has a strong theoretical basis. The teacher performance variable is measured using indicators for lesson planning, lesson implementation, classroom management, and evaluation, as stated by Uno and Lamatenggo, (Uno & Lamatenggo, 2022). The transformational leadership variable refers to indicators for idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration (Antonakis et al., 2003). The work engagement variable is measured through vigor, dedication, and absorption, as referred to by Schaufeli et al. (Schaufeli et al., 2002), while innovative work behavior uses four main aspects: idea exploration, idea generation, idea championing, and idea implementation, as explained by Jong and Hartog, (Jong & Hartog, 2008).

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## RESULTS AND DISCUSSION

### Results

Table 1 illustrates the AVE values for each variable, which serve as an indicator to evaluate whether the constructs meet the required threshold for convergent validity.

**Table 1. Average Variance Extracted (AVE)**

Variables	Average Variance Extracted (AVE)
Transformational Leadership (X1)	0,737
Work Engagement (X2)	0,729
Teacher Performance (Y)	0,724
Innovative Work Behavior (Z)	0,621

Source: SmartPLS Data Processing Results

The SmartPLS output above shows that all constructs, namely Transformational Leadership (X1), Work Engagement (X2), Teacher Performance (Y), and Innovative Work Behavior (Z), have an AVE value > 0.50, so it can be concluded that the constructs have good convergent validity.

**Table 2. Composite Reliability**

Variables	Cronbach's Alpha	Composite Reliability	Information
Teacher Performance (Y)	0,934	0,940	Reliabel
Innovative Work Behavior (Z)	0,925	0,919	Reliabel
Transformational Leadership (X1)	0,940	0,951	Reliabel
Work Engagement (X2)	0,946	0,955	Reliabel

Source: SmartPLS Data Processing Results

Based on the table above, the Cronbach's alpha and Composite reliability values for all variables are >0.7. Therefore, it is determined that all items in the Teacher Performance (Y), Innovative Work Behavior (Z), Transformational Leadership (X1), and Work Engagement (X2) variables are reliable. Therefore, the outer model evaluation conducted has perfected the criteria and can be considered valid and reliable.

R-Square, also known as the coefficient of determination, measures the degree to which an independent variable influences a dependent variable. The R-square value is obtained from the PLS test, which is carried out as follows:

**Table 3. R-Square Value**

Variabel	R Square	R Square Adjusted
Teacher Performance (Y)	0,455	0,438
Innovative Work Behavior (Z)	0,545	0,536

Source: SmartPLS Data Processing Results

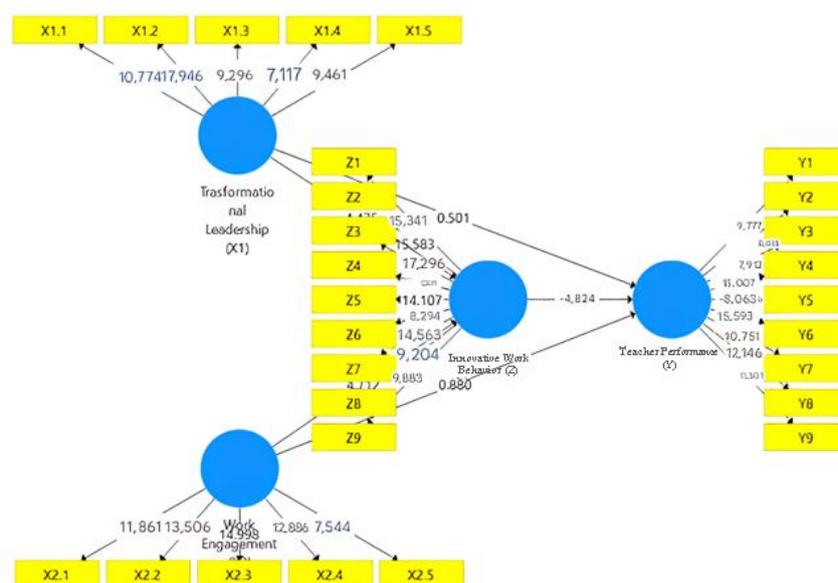
The table shows that the R-Square value for the teacher performance variable (Y) is 0.455, equivalent to 45.5%. This indicates that the teacher performance variable (Y) can be explained and caused by the transformational leadership (X1) and work engagement (X2) variables, amounting

to 45.5%. Conversely, the remaining 54.5% is caused by other factors not included in the research model.

The table above shows that the R-Square value for the innovative work behavior variable (Z) is 0.545, or 54.5%. This value indicates that the innovative work behavior variable (Z) can be caused and explained by the transformational leadership (X1) and work engagement (X2) variables, amounting to 54.5%. However, other factors not part of the research model impact the remaining 45.5%.

The results of data processing can be used to answer the research hypothesis. The T-statistic and P- value were analyzed to evaluate the hypothesis in this study. The research hypothesis is considered accepted if the t-statistic value exceeds the t-table value and the P-value is less than 0.05. In this case, the bootstrap method is applied to the data, as illustrated in Figure 1. The use of bootstrap testing aims to reduce problems associated with non-normality in research data.

Figure 1. PLS Bootstrapping Results



The purpose of hypothesis testing is to determine the level of influence of the research hypothesis. The following are the bootstrapping steps used to determine the results of the hypothesis test: Direct Effect Hypothesis Test

The direct impact hypothesis was tested when assessing the impact of the independent variables (transformational leadership and work engagement) and the mediating variable (innovative work behavior) on the dependent variable (teacher performance). The findings of the direct impact hypothesis test are as follows:

Table 4. Results of the Direct Effect Hypothesis

Variabel	Original Sample	T Statistics	P Values	Note
Transformational Leadership (X1) -> Teacher Performance (Y)	0,064	3,501	0,007	Accepted
Work Engagement (X2) -> Teacher Performance (Y)	0,087	3,880	0,009	Accepted
Transformational Leadership (X1) -> Innovative Work Behavior (Z)	0,393	4,475	0,000	Accepted

Work Engagement (X2) -> Innovative Work Behavior (Z)	0,436	4,712	0,000	Accepted
Innovative Work Behavior (Z) -> Teacher Performance (Y)	0,569	4,824	0,000	Accepted

Source: SmartPLS Data Processing Results

The results of the direct effect hypothesis testing indicate that all proposed relationships are positive and statistically significant. Transformational leadership has a positive and significant effect on teacher performance, suggesting that stronger leadership practices contribute to improved teacher effectiveness. Similarly, work engagement demonstrates a positive and significant influence on teacher performance, indicating that higher levels of dedication and involvement enhance teachers' work outcomes. Furthermore, both transformational leadership and work engagement significantly affect innovative work behavior, highlighting their important role in fostering teachers' ability to generate and implement new ideas. Notably, innovative work behavior also shows the strongest positive and significant effect on teacher performance, emphasizing its critical role as a key driver of performance improvement. Overall, these findings confirm that leadership and engagement not only directly enhance performance but also play a vital role in stimulating innovation, which in turn strengthens teacher performance.

**Table 5. Results of the Indirect Effect Hypothesis**

	Original Sample	T Statistics	P Values	Information
Transformational Leadership (X1) -> Innovative Work Behavior (Z) -> Teacher Performance (Y)	0,223	2,637	0,009	Accepted
Work Engagement (X2) -> Innovative Work Behavior (Z) -> Teacher Performance (Y)	0,248	3,924	0,000	Accepted

Source: SmartPLS Data Processing Results

The results of the indirect effect hypothesis testing reveal that innovative work behavior plays a significant mediating role in the relationship between transformational leadership, work engagement, and teacher performance. Transformational leadership has a positive and statistically significant indirect effect on teacher performance through innovative work behavior, indicating that leadership practices enhance performance by fostering teachers' capacity for innovation. Similarly, work engagement also demonstrates a positive and significant indirect effect on teacher performance via innovative work behavior, suggesting that highly engaged teachers are more likely to develop and apply innovative approaches that ultimately improve their performance. These findings confirm that innovative work behavior serves as a crucial mechanism linking both transformational leadership and work engagement to enhanced teacher performance.

## DISCUSSION

The results of the study indicate that transformational leadership has a significant influence on teacher performance, as indicated by a t-statistic value of  $3.501 > 1.98$  and a p-value of  $0.007 < 0.05$ . This finding explains that the stronger the transformational leadership practices implemented by the principal, the higher the quality of teacher performance in carrying out their professional duties. Transformational leadership encourages teachers to work more

enthusiastically, responsibly, and be oriented towards innovation because of the experience of being valued, empowered, and guided towards a clear vision.

This research is consistent with several previous studies. Studies by Alangkajeng et al. (2023), Fathiyah et al. (2022), and Putra et al. (2021) showed that transformational leadership significantly influences employee performance across various sectors (Alangkajeng et al., 2023; Fathiyah et al., 2022b; Putra et al., 2021). The same finding was also found by Gözükarar & İyimşek (2015) and Lestari & Firmansyah (2020) also emphasized that transformational leadership style directly improves teacher performance by providing inspiration and improving work ethic (Gözükarar & Şimşek, 2015; Sumadi et al., 2022).

Theoretically, transformational leadership consists of four main dimensions: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration (Bass & Riggio, 2006). These four dimensions create a positive work climate, motivate teachers to develop their full potential, and encourage innovation in teaching. In the context of IT schools, this leadership style is highly relevant because Islamic and technology-based educational institutions face the challenges of curriculum modernization, digital adaptation, and the need to continuously improve the quality of learning.

A quality interpersonal relationship between the principal and teachers, based on trust, two-way communication, and emotional support, serves as a foundation that strengthens the impact of transformational leadership. When teachers feel valued and empowered, they demonstrate increased active participation in school activities and strive to achieve better work outcomes. Thus, this study confirms that, in the context of the IT School in Tugumulyo, the implementation of transformational leadership is an effective strategy for improving teacher performance and the overall quality of education.

The results of the hypothesis testing indicate that work engagement has a significant influence on teacher performance, as evidenced by a t-statistic of  $3.880 > 1.98$  and a p-value of  $0.009 < 0.05$ . Teachers with high levels of work engagement-characterized by passion, enthusiasm, dedication, and full focus on their work-tend to demonstrate better performance. Engaged teachers not only carry out their duties formally, but also make extra efforts in the learning process, classroom management, student evaluation, and communication with parents.

This finding is consistent with research by (Alangkajeng et al., 2023), which shows that work engagement affects employee performance. Furthermore, (Cesário & Chambel, 2017) and (Wingerden & Stoep, 2018) also demonstrated that work engagement significantly contributes to employee performance by increasing motivation and job satisfaction. These findings also support the research of Bakker et al. (2008) and (Khan et al., 2019), which found that work engagement is closely related to teaching effectiveness, pedagogical creativity, and good classroom management. These findings can be explained through the Job Demands-Resources (JD-R) Model, developed by (Gusmayanti et al., 2023), in which work engagement is influenced by the balance between job demands and available resources. When teachers receive social support, training, adequate teaching facilities, and recognition from school management, their level of work engagement will increase. High work engagement creates an internal drive to perform better, explore creative teaching methods, and enhance students' learning experiences.

In the context of IT schools, work engagement is becoming increasingly important as teachers are required to master technology, digital-based learning materials, and discipline methods that require rapid adaptation. Teachers with high engagement will be better prepared to face these challenges and demonstrate optimal performance. Therefore, schools need to strengthen teacher

engagement through technology-based training, appreciation, a supportive work environment, and collaborative systems among teachers.

The results of the study show that transformational leadership has a significant effect on innovative work behavior, with a t-statistic value of  $4.475 > 1.98$  and p-values of 0.000. Findings This indicates that transformational leadership encourages teachers to be innovative, explore new ideas, develop creative ideas, seek support for these ideas, and implement them in learning practices. This research aligns with the results of Nurdin et al.'s (2020) study, which found that transformational leadership significantly influences employees' innovative work behavior. This finding is supported by (Gusmayanti et al., 2023) and research by (Nisrina & Raharja, 2024) and (Hakim & Wibowo, 2023), which states that transformational leadership creates a work environment that supports creativity and innovation. In the educational context, transformational leadership not only motivates teachers to perform better on a regular basis but also encourages them to go beyond conventional pedagogical practices. Transformational leaders stimulate creative thinking processes through intellectual stimulation, encouraging teachers to question old methods and explore new, more effective approaches.

Inspirational motivation helps teachers build confidence in trying innovative teaching techniques, while individualized consideration provides space for teachers to develop their individual potential. The principal's clear and aspirational vision is also a key driver of innovative work behavior. When teachers understand the direction of school development, they are more motivated to create learning innovations that align with that vision. These findings suggest that leadership oriented toward individual empowerment and competency development can foster a culture of sustainable innovation in the school environment. The results of the hypothesis testing show that work engagement has a significant effect on innovative work behavior, as evidenced by the t-statistic value of  $4.712 > 1.98$  and p-values of  $0.000 < 0.05$ . Teachers who have a high level of work engagement tend to be more creative, proactive, and able to produce innovative solutions to improve the learning process.

This research is consistent with (Kania, 2018) findings, which state that work engagement influences innovative work behavior. Furthermore, research by (Alangkajeng et al., 2023), (Burhan et al., 2022), and (Madjan & Lanawati, 2023) also demonstrates a positive relationship between employee engagement and innovation. Engaged teachers possess high levels of psychological and physical energy, enabling them to adapt to educational challenges. They go beyond simply carrying out routine teaching tasks but are also driven to explore new ways to make learning more effective. This aligns with the findings of (Fiernaningsih et al., 2022) and (Jaya et al., 2023), which show that teachers with high levels of engagement generate more creative ideas. In the context of IT schools, innovation is essential, given the inherent nature of Islamic values-based learning and technology. Highly engaged teachers are better able to create digital learning strategies, utilize educational platforms, and adapt teaching approaches to meet current student needs.

The results of the hypothesis test show that innovative work behavior has a significant effect on teacher performance, with a t-statistic value of  $4.824 > 1.98$  and p-values of  $0.000 < 0.05$ , which means that teachers who tend to think creatively, develop new ideas, experiment with teaching strategies, and apply innovation in the classroom are better able to improve the quality of teaching, classroom management, and student assessment.

This finding is consistent with research by (Konadi & Mulyanti, 2018) and (Anjar et al., 2020). which states that innovative work behavior has a significant influence on teacher performance. Research by (Fatonah & Helmy, 2021), (Noor & Susanty, 2023), and (Konadi &

Mulyanti, 2018) also supports these findings. Innovative teachers are able to create an interactive and conducive learning environment, increase student motivation, and deliver material in an engaging manner. Teaching innovation also helps teachers adapt methods to student characteristics and needs, resulting in more effective learning. These findings emphasize the need for schools to provide space and support for teachers to innovate, including professional training, educational technology facilities, and an organizational culture that fosters creativity.

The results of this study further state that transformational leadership influences teacher performance through innovative work behavior, and the research findings support this. The test shows a t-statistic value of  $2.637 > 1.98$  and p-values of  $0.009 < 0.05$ , so the indirect effect is declared significant. This indicates that transformational leadership not only has a direct impact on teacher performance but also indirectly through increasing innovative work behavior. By empowering teachers, providing inspiration, and creating a clear vision, transformational leaders are able to stimulate the emergence of creativity and innovation in learning.

This research is in line with the results of previous studies by (Alangkajeng et al., 2023), (Gözükara & Şimşek, 2015), (Grošelj et al., 2020), (Hermanto et al., 2024), and (Putra et al., 2021). This study shows that innovative work behavior is a mediating pathway in the relationship between transformational leadership and employee performance. Transformational principals are able to facilitate collaboration between teachers, create a culture of idea-sharing, and provide space for innovative learning experiments. All of this reinforces innovative work behavior, which in turn increases teacher effectiveness in the classroom.

This study stated that work engagement influences teacher performance through innovative work behavior, and the results of the study prove this with a t-statistic value of  $3.924 > 1.98$  and p-values of  $0.000 < 0.05$ . Teachers with high levels of engagement tend to love their work, have strong dedication, and strive to find new teaching approaches. This research is supported by the findings of Basuki (2018), Contreras et al. (2020), Slatten & Mehmetoglu (2011), and Tims et al. (2011) who stated that work engagement improves performance through innovation. Engaged teachers are more likely to develop innovative teaching methods, utilize educational technology, and evaluate new ways to improve student learning. When teachers are emotionally and cognitively engaged in their work, they are more creative and proactive in improving the learning process. Therefore, school management needs to create a work environment that supports engagement through recognition, professional development opportunities, and a strong collaborative culture.

## CONCLUSION

This study concludes that transformational leadership and work engagement play a significant role in improving teacher performance, both directly and indirectly through innovative work behavior. Transformational leadership encourages teachers to work more effectively, creatively, and in alignment with the school's vision, while work engagement enhances teachers' energy, dedication, and focus in carrying out their responsibilities. Furthermore, innovative work behavior serves as a key mediating mechanism, indicating that teachers who actively generate and implement new ideas tend to demonstrate higher levels of performance.

This study contributes to the educational management literature by providing empirical evidence on the mediating role of innovative work behavior in the relationship between transformational leadership, work engagement, and teacher performance, particularly in the

context of technology-based Islamic schools. The findings highlight the importance of integrating leadership practices, psychological engagement, and innovation to strengthen teacher effectiveness. Practically, these results imply that schools should enhance principals' transformational leadership capacity, provide continuous professional development programs, and foster a supportive organizational culture that encourages innovation. In addition, the provision of adequate technological facilities and the strengthening of effective communication between school leaders and teachers are essential to create a collaborative and innovative learning environment.

However, this study has several limitations. It was conducted in a single Islamic elementary school, which limits the generalizability of the findings to broader educational contexts. In addition, the use of a questionnaire as the primary data collection method may introduce response bias. Therefore, future research is recommended to include additional variables such as school climate, digital literacy, and organizational support, as well as to apply mixed-method approaches to gain a more comprehensive understanding of the factors influencing teacher performance in diverse educational settings..

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