

The Influence of Teacher Certification And Madrasah Principal's Transformational Leadership On Teacher Performance Through Work Motivation

Khaerul Ikhwan^{1*}, Mutoharoh², Dade Suparna³

^{1,2,3}Master of Educational Management, Universitas Bina Bangsa, Indonesia

Corresponden author:

Email: ikhwankhaerul26@gmail.com

Abstract.

This study aims to analyze the influence of teacher certification and the transformational leadership of madrasah principals on teacher performance, both directly and indirectly through work motivation as a mediating variable in Private Madrasah Ibtidaiyah in Serang Regency. The study used a quantitative approach with a causal associative design. Data were obtained through questionnaires given to 294 teachers of Private Madrasah Ibtidaiyah in Serang Regency. Data collection was carried out from March to May 2026. Data analysis used Structural Equation Modeling–Partial Least Squares (SEM-PLS) with the help of SmartPLS 4. The results of the study showed that teacher certification had a positive and significant effect on teacher performance. The transformational leadership of madrasah principals also had a positive and significant effect on teacher performance. Furthermore, teacher certification and transformational leadership of madrasah principals had a positive and significant effect on work motivation. Work motivation was proven to have a positive and significant effect on teacher performance. The results of the indirect effect test showed that work motivation was able to mediate the influence of teacher certification and transformational leadership of madrasah principals on teacher performance. Thus, improving teacher performance can be done through strengthening teacher professionalism, implementing transformational leadership, and increasing work motivation in an integrated manner.

Keywords: Teacher Certification; Transformational Leadership; Work Motivation; Teacher Performance and Private Elementary Schools.

I. INTRODUCTION

Educational management is a series of processes involving planning, organizing, implementing, and monitoring educational resources to achieve learning objectives effectively and efficiently. In this process, teachers play a strategic role as human resources because they interact directly with students during the learning process. The quality of educational management is determined not only by the availability of facilities and institutional policies, but also by the teacher's ability to optimally carry out professional duties. Therefore, improving teacher performance is a crucial aspect of managing quality education.

Teacher performance reflects their ability to plan lessons, implement them, conduct evaluations, guide students, and develop professional competencies. Good performance will support effective learning and the achievement of educational goals. Research by Puspaningtyas and Widiatmoko (2025) shows that work motivation positively influences teacher performance, thus requiring attention to teacher psychological aspects in educational management. These findings demonstrate that improving performance is not sufficient through administrative demands alone; strong internal motivation is also required.

This context is crucial for Private Elementary Madrasahs (MIS) in Serang Regency. These Madrasahs have a strategic responsibility to build the foundation of knowledge, character, and skills in students. However, based on a preliminary survey, including initial observations and information from teachers, there are still indications of performance differences among teachers, particularly in discipline in completing learning administration, use of learning media, variation in teaching methods, implementation of evaluations, and continuous competency development. This situation indicates the need to strengthen factors that can drive improved teacher performance.

One factor suspected of influencing performance is teacher certification. Certification is primarily aimed at improving teacher professionalism, competence, and well-being. However, possessing a professional certificate does not always equate to a uniform level of performance. Differences in the application of competencies, professional responsibilities, and motivation can lead to differences in the

benefits of certification on performance among teachers. Therefore, the relationship between certification and performance needs to be empirically studied in the context of private madrasahs.

The next factor is the transformational leadership of the madrasah principal. The madrasah principal acts not only as an administrator but also as a leader capable of providing vision, inspiration, intellectual stimulation, and individual attention to teachers. Utami et al. (2024) showed that the principal's transformational leadership is related to improved performance and learning quality. Research by Soelistya et al. (2024) also demonstrated the importance of transformational leadership in boosting teacher performance through specific organizational mechanisms.

Work motivation is seen as a crucial factor explaining why teachers exhibit differing performance despite having relatively similar status and work environments. Highly motivated teachers tend to be more enthusiastic, responsible, proactive, and willing to develop their professional skills. Research by Arbiyanti et al. (2025) shows that work motivation positively influences teacher performance. Therefore, work motivation also has the potential to act as a bridge between certification and transformational leadership on teacher performance.

A concerning phenomenon is the persistent gap between the professional demands of teachers and the practical implementation of their duties in madrasahs. Several identified issues include suboptimal consistency in teacher performance, uneven utilization of certification-derived competencies, variations in the ability of madrasa principals to implement transformational leadership, and differing levels of work motivation among teachers. Furthermore, certification does not necessarily automatically result in improved performance without adequate motivation and leadership support.

Previous research has shown that teacher performance is influenced by various professional and psychological factors. Amelia et al. (2022) found that teacher certification and work motivation influence teacher performance, so professionalism needs to be supported by adequate work motivation. Adrianoni et al. (2023) showed that transformational leadership and madrasah climate play a role in improving teacher performance. Furthermore, Irawan et al. (2024) showed that transformational leadership is related to performance through school environmental conditions. Puspaningtyas and Widiatmoko (2025) proved that work motivation has a positive effect on teacher performance. Arbiyanti et al. (2025) also found that work motivation contributes significantly to teacher performance. These findings reinforce the importance of examining certification, transformational leadership, and motivation in an integrated manner to explain teacher performance at Private Elementary Madrasahs in Serang Regency.

Based on previous research, there is still a gap in the study of the integrated relationship between teacher certification, transformational leadership of madrasah principals, work motivation, and teacher performance. Some studies place certification or motivation as predictors of performance, while others focus on transformational leadership. Furthermore, studies specifically examining work motivation as a mediating variable in private elementary madrasah teachers are still limited. The context of Serang Regency has also received little attention, necessitating more specific empirical testing of the characteristics of local private madrasahs.

The novelty of this study lies in the development of a model that integrates teacher certification and the transformational leadership of madrasah principals as independent variables, work motivation as a mediating variable, and teacher performance as a dependent variable. This model provides a more comprehensive perspective because it not only tests the direct effect but also explains the role of work motivation in bridging the influence of professional and leadership factors on performance. The focus on private elementary madrasahs in Serang Regency also provides a specific and relevant empirical context for the development of madrasah education management.

II. LITERATURE REVIEW

Teacher Performance

Teacher performance explains that performance is the result of work demonstrated through the ability to carry out tasks according to established standards. In the educational context, teacher performance is

reflected through lesson planning, lesson implementation, evaluation, classroom management, and professional development. Performance is influenced by competence, motivation, leadership, and the organizational environment. Adriantoni et al. (2023) showed that transformational leadership and madrasah climate are related to teacher performance. Purwanti and Zarger (2025) also found that certification and motivation have a positive influence on teacher performance.

Teacher Certification

Teacher certification views certification as a professionalization mechanism aimed at ensuring teachers possess the competence and professional eligibility to carry out educational tasks. Certification can serve as a form of recognition of competence and an instrument for improving teachers' professional quality. Its impact on performance can be manifested through increased competence, professional responsibility, and work motivation. Purwanti and Zarger (2025) demonstrated that certification positively impacts the performance and motivation of elementary school teachers. These findings align with those of Amelia et al. (2022), who demonstrated the relationship between certification and work motivation and teacher performance.

Transformational Leadership

Transformational leadership explains that leaders are able to motivate organizational members through vision, inspiration, intellectual stimulation, and individual attention. In madrasas, transformational principals not only direct administrative work but also encourage teachers to develop, innovate, and achieve higher performance. Azra'i et al. (2024) found that transformational leadership has a positive effect on teachers' intrinsic motivation. Kurniawan et al. (2024) also showed that transformational leadership is related to organizational commitment and teacher performance through certain mediating mechanisms.

Work motivation

Work motivation explains that a person's behavior and intensity in carrying out work are influenced by the drive to fulfill needs, gain recognition, achieve goals, and develop self-potential. In educational organizations, work motivation can encourage teachers to work with greater discipline, responsibility, creativity, and focus on achieving learning goals. Azra'i et al. (2024) showed that transformational leadership positively influences intrinsic motivation, while intrinsic motivation positively influences teacher performance. Purwanti and Zarger (2025) also found a significant contribution of motivation to teacher performance.

Thinking Framework

The Impact of Teacher Certification on Teacher Performance

Teacher certification is a form of professional recognition that demonstrates teachers' competency and suitability for carrying out educational tasks. Certified teachers are expected to possess optimal pedagogical, professional, social, and personality competencies, thereby improving the quality of learning. Purwanti and Zarger (2025) found that certification positively impacts teacher performance. This finding aligns with Amelia et al. (2022), who demonstrated a relationship between teacher certification and teacher performance. Based on this argument, certification is expected to improve teacher performance.

H₁: It is suspected that there is a positive influence of teacher certification on teacher performance.

The Influence of Madrasah Principal's Transformational Leadership on Teacher Performance

A madrasah principal's transformational leadership can create a work environment that encourages teachers to develop, innovate, and achieve higher performance standards. A madrasah principal who is able to provide vision, inspiration, intellectual stimulation, and individual attention will increase teacher engagement in carrying out professional duties. Adriantoni et al. (2023) demonstrated that transformational leadership influences teacher performance. Kurniawan et al. (2024) also demonstrated the relationship between transformational leadership and improved teacher performance. Therefore, the better the transformational leadership, the higher the teacher performance.

H₂: It is suspected that there is a positive influence of the transformational leadership of the Madrasah Principal on teacher performance.

The Influence of Teacher Certification on Work Motivation

Teacher certification not only provides professional recognition but can also increase self-confidence, respect for the profession, and drive teachers to perform their duties more optimally. The professional status achieved through certification can encourage teachers to increase their responsibility and commitment to their work. Purwanti and Zarger (2025) found that certification influences teacher motivation. Amelia et al. (2022) also demonstrated that certification is linked to teacher work motivation. Based on this description, the better the utilization of certification, the higher the teacher's work motivation.

H₃: It is suspected that there is a positive influence of teacher certification on work motivation

The Influence of Transformational Leadership of Madrasah Principals on Work Motivation

Transformational leadership can build work motivation by providing inspiration, appreciation, support, trust, and opportunities for teacher development. A principal who is able to clearly communicate a vision and pay attention to individual needs can create intrinsic motivation in carrying out their work. Azra'i et al. (2024) found that transformational leadership positively influences teachers' intrinsic motivation. Kurniawan et al. (2024) also demonstrated the importance of transformational leadership in building organizational conditions that support teacher performance and engagement. Thus, transformational leadership is expected to increase work motivation.

*H₄: It is suspected that there is Influence **positive** Transformational Leadership of Madrasah Principals on Work Motivation*

The Influence of Work Motivation on Teacher Performance

Work motivation is the driving force that directs teachers to carry out their duties responsibly and achieve established goals. Teachers with high motivation tend to be more enthusiastic in planning lessons, developing teaching methods, completing administrative tasks, and improving competencies. Puspaningtyas and Widiatmoko (2025) demonstrated that work motivation positively influences teacher performance. Arbiyanti et al. (2025) also found a positive effect of work motivation on teacher performance. Therefore, the higher the work motivation, the more optimal teacher performance.

*H₅: It is suspected that there is Influence **positive** The Influence of Work Motivation on Teacher Performance*

The Influence of Teacher Certification on Teacher Performance through Work Motivation

Teacher certification is thought to not only have a direct impact on performance but also improve performance through work motivation. Professional recognition gained through certification can increase self-confidence, professional respect, and drive to deliver optimal performance. Purwanti and Zarger (2025) demonstrated that certification influences teacher motivation and performance. Amelia et al. (2022) also identified a link between certification, work motivation, and teacher performance. Thus, work motivation is suspected to be a mechanism that strengthens the influence of certification on teacher performance.

H₆: It is suspected that there is a positive influence of teacher certification on teacher performance through work motivation.

The Influence of Transformational Leadership of Madrasah Principals on Teacher Performance through Work Motivation

A madrasah principal's transformational leadership can indirectly influence teacher performance by increasing work motivation. A madrasah principal who provides inspiration, support, intellectual stimulation, and individual attention can create positive motivation for teachers to perform their duties optimally. Azra'i et al. (2024) showed that transformational leadership influences intrinsic motivation and is subsequently related to teacher performance. Adriantoni et al. (2023) also demonstrated the relationship between transformational leadership and teacher performance. Therefore, work motivation is suspected to mediate the influence of transformational leadership on teacher performance.

H₇: The Influence of Transformational Leadership of Madrasah Principals on Teacher Performance through Work Motivation

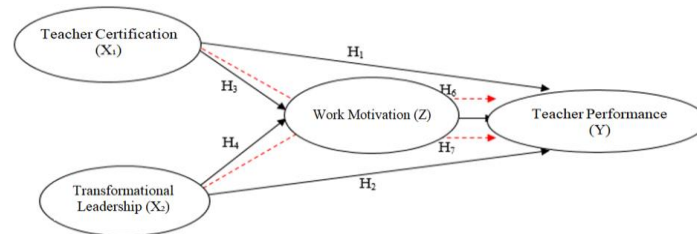


Fig. 1. Thinking Framework

III. METHOD

The research method describes the systematic procedures for obtaining and analyzing data to answer the research questions and test hypotheses. This study uses a quantitative approach because all variables are measured through indicators that can be scored and analyzed statistically. The survey approach is also relevant for empirically measuring the relationship between certification, motivation, and teacher performance (Purwanti & Zarger, 2025).

Research Design

This study used a quantitative approach with a causal associative design. This design was used to test the effect of teacher certification (X₁) and the transformational leadership of madrasah principals (X₂) on teacher performance (Y), both directly and through work motivation (Z) as a mediating variable. Data were obtained through a survey using a Likert-scale questionnaire. The quantitative approach allows for objective testing of relationships between variables through statistical analysis. Research on teacher certification, motivation, and performance also uses a quantitative approach to test the influence between variables (Susanti et al., 2025).

Time and Place of Research

The research was conducted from March to May 2026 at a Private Elementary Madrasah (MIS) in Serang Regency, Banten Province. The location was selected based on the suitability of the madrasah's characteristics to the research focus, namely teacher performance, teacher certification, transformational leadership of the madrasah principal, and work motivation. The research implementation included instrument preparation, permit processing, questionnaire distribution, data collection, data checking, data processing, and analysis of the results. The location selection also took into account the relevance of the elementary education level to the study of teacher professionalism and performance.

Population and Sample

The population of this study was 500 teachers of Private Elementary Madrasah (MIS) in Serang Regency. The sample size was 294 teachers, determined through proportional sampling. The sampling technique used cluster sampling, by designating 8 sub-districts as sample areas: Ciruas, Kragilan, Cikande, Kramatwatu, Tunjung Teja, Pabuaran, Mancak, and Bojonegara. Furthermore, respondents in each cluster were selected using simple random sampling. The sample distribution was adjusted to the number of teachers in each region, resulting in 294 respondents from a population of 500 teachers.

Data Collection Techniques

Data collection techniques were conducted through questionnaires, observation, and documentation. The questionnaire was the main instrument administered to teachers as respondents using a five-level Likert scale, with a score of 1 to 5, ranging from strongly disagree to strongly agree. The instrument was compiled based on variable indicators of teacher certification, transformational leadership of the madrasah principal, work motivation, and teacher performance. Observations were conducted to obtain a picture of the factual conditions in the madrasah, while documentation was used to supplement data regarding the characteristics of the madrasah and respondents. The use of questionnaires is in line with quantitative research on teacher certification and performance that obtains data through distributing questionnaires to respondents (Susanti et al., 2025; Purwanti & Zarger, 2025).

Data analysis

Data analysis used Structural Equation Modeling–Partial Least Squares (SEM-PLS) with the help of SmartPLS software. The analysis was conducted through outer model testing to evaluate construct validity and reliability through outer loading values, Average Variance Extracted (AVE), Cronbach's Alpha, and Composite Reliability. Furthermore, the inner model was used to assess structural relationships through R-square, effect size, and path coefficients. Hypothesis testing was conducted using a bootstrapping procedure by paying attention to the t-statistic and p-value. The mediating effect of work motivation was tested through specific indirect effects to determine the indirect effect of X_1 and X_2 on Y through Z . The analytical approach with mediating variables is also relevant to quantitative studies that examine the influence of certain factors on performance through motivation (Agustina et al., 2025).

IV. RESEARCH RESULTS AND DISCUSSION

Research result

The results of this study were obtained from data processing of 294 teachers of Private Elementary Madrasah (MIS) in Serang Regency using Structural Equation Modeling–Partial Least Squares (SEM-PLS) with the help of SmartPLS 4. The presentation of the results includes respondent characteristics, descriptive statistics, evaluation of the outer model through validity and reliability tests, and hypothesis testing through a structural model.

Descriptive Statistics of Research Variables

Descriptive statistics were used to describe the data trends of each variable before testing the structural model. The variables analyzed included teacher certification (X_1), transformational leadership of madrasah principals (X_2), work motivation (Z), and teacher performance (Y).

Table 1. Descriptive Statistics of Research Variables

Variables	N	Min	Max	Mean	Median	Modus	Standard Deviation
Teacher Certification (X_1)	294	28	50	41,89	42	43	4,72
Transformational Leadership (X_2)	294	29	50	42,36	43	43	4,05
Work Motivation (Z)	294	30	50	42,81	43	44	3,89
Teacher Performance (Y)	294	28	50	41,82	42	43	4,18

Source: Primary data processed by researchers, 2026.

Based on the table above, all variables show relatively high average values. Work motivation has the highest mean value of 42.81, followed by transformational leadership at 42.36, teacher certification at 41.89, and teacher performance at 41.82. The standard deviation of each variable is relatively small compared to the mean value, so the distribution of the data shows a fairly homogeneous tendency. This condition illustrates that respondents generally gave a positive assessment of teacher certification, transformational leadership of madrasah principals, work motivation, and teacher performance.

Convergent Validity Test

Convergent validity testing was conducted by examining the outer loading value of each indicator. An indicator is considered to meet convergent validity if its outer loading value is greater than 0.70. The test results showed that all indicators in the four constructs met this criterion.

Table 2. Results of Convergent Validity Test (Outer Loading)

Variables	Indicator	Outer Loading	Information
Teacher Certification (X_1)	X1.1	0,831	Valid
	X1.2	0,846	Valid
	X1.3	0,812	Valid
	X1.4	0,857	Valid
	X1.5	0,839	Valid
	X1.6	0,821	Valid
	X1.7	0,864	Valid
	X1.8	0,842	Valid
	X1.9	0,853	Valid

Variables	Indicator	Outer Loading	Information
Transformational Leadership (X ₂)	X1.10	0,828	Valid
	X2.1	0,845	Valid
	X2.2	0,862	Valid
	X2.3	0,831	Valid
	X2.4	0,874	Valid
	X2.5	0,853	Valid
	X2.6	0,826	Valid
	X2.7	0,867	Valid
	X2.8	0,841	Valid
	X2.9	0,858	Valid
Work Motivation (Z)	X2.10	0,834	Valid
	Z1	0,842	Valid
	Z2	0,866	Valid
	Z3	0,824	Valid
	Z4	0,851	Valid
	Z5	0,879	Valid
	Z6	0,837	Valid
	Z7	0,861	Valid
	Z8	0,846	Valid
	Z9	0,872	Valid
Teacher Performance (Y)	Z10	0,839	Valid
	Y1	0,848	Valid
	Y2	0,871	Valid
	Y3	0,829	Valid
	Y4	0,856	Valid
	Y5	0,883	Valid
	Y6	0,841	Valid
	Y7	0,864	Valid
	Y8	0,849	Valid
	Y9	0,875	Valid
	Y10	0,842	Valid

Source: SmartPLS 4 output, processed by researchers, 2026.

Based on the table above, all indicators have outer loading values above 0.70, with a value range of 0.812–0.883. The lowest value is found in indicator X1.3 at 0.812, while the highest value is found in indicator Y5 at 0.883. Thus, all indicators in teacher certification, transformational leadership, work motivation, and teacher performance are declared valid. No indicators need to be eliminated, so all indicators can be used in further model testing.

Construct Validity Test Based on AVE

Tabel 3. Nilai Average Variance Extracted (AVE)

Variables	AVE	Criteria	Information
Teacher Certification (X ₁)	0,709	> 0,50	Valid
Transformational Leadership (X ₂)	0,726	> 0,50	Valid
Work Motivation (Z)	0,734	> 0,50	Valid
Teacher Performance (Y)	0,741	> 0,50	Valid

Source: SmartPLS 4 output, processed by researchers, 2026.

The table above shows that all constructs have an AVE value greater than 0.50. The AVE value for teacher certification is 0.709, transformational leadership is 0.726, work motivation is 0.734, and teacher performance is 0.741. These results indicate that each construct is able to explain an adequate proportion of the indicator's variance. Thus, all variables have met the construct validity criteria and can be used for structural model analysis.

Construct Reliability Test

Table 4. Results of Construct Reliability Test

Variables	Cronbach's Alpha	Composite Reliability	Information
-----------	------------------	-----------------------	-------------

Teacher Certification (X_1)	0,911	0,927	Reliable
Transformational Leadership (X_2)	0,946	0,954	Reliable
Work Motivation (Z)	0,918	0,933	Reliable
Teacher Performance (Y)	0,923	0,937	Reliable

Source: SmartPLS 4 output, processed by researchers, 2026.

The results in the table above show that all variables have high Cronbach's Alpha and Composite Reliability values. Cronbach's Alpha ranges from 0.911 to 0.946, while Composite Reliability ranges from 0.927 to 0.954. These values indicate that the instrument has excellent internal consistency. Therefore, the indicators used to measure teacher certification, transformational leadership, work motivation, and teacher performance are considered reliable and capable of providing consistent measurement results.

Direct Effect Testing

Direct influence testing was carried out through the bootstrapping procedure in SmartPLS 4. The relationship was declared significant if the T Statistics value was greater than 1.96 and the P Values were less than 0.05 at a significance level of 5%.

Table 5. Results of Testing the Direct Influence Between Constructs

Hypothesis	Relationship between constructs	Path Coefficient	T Statistics	P Values	Results
H ₁	Teacher Certification (X_1) → Teacher Performance (Y)	0,263	3,845	0,000	Accepted
H ₂	Transformational Leadership (X_2) → Teacher Performance (Y)	0,321	4,962	0,000	Accepted
H ₃	Teacher Certification (X_1) → Work Motivation (Z)	0,347	5,684	0,000	Accepted
H ₄	Transformational Leadership (X_2) → Work Motivation (Z)	0,456	7,238	0,000	Accepted
H ₅	Work Motivation (Z) → Teacher Performance (Y)	0,384	6,176	0,000	Accepted

Source: SmartPLS 4 output, processed by researchers, 2026.

Based on the table above, all direct influence hypotheses are accepted because each relationship has a T Statistics greater than 1.96 and P Values of 0.000. Teacher certification has a positive effect on teacher performance with a coefficient of 0.263. Transformational leadership has a positive effect on teacher performance of 0.321. Teacher certification has an effect on work motivation of 0.347, while transformational leadership has the greatest effect on work motivation, namely 0.456. Furthermore, work motivation has a positive effect on teacher performance of 0.384.

Indirect Effect Testing

Indirect influence testing was conducted to determine the role of work motivation as a mediating variable in the relationship between teacher certification and transformational leadership with teacher performance.

Table 6. Results of Indirect Effect Testing

Hypothesis	Indirect Relationship	Coefficient	T Statistics	P Values	Results
H6	$X_1 \rightarrow Z \rightarrow Y$	0,133	3,584	0,000	Accepted
H7	$X_2 \rightarrow Z \rightarrow Y$	0,175	4,827	0,000	Accepted

Source: SmartPLS 4 output, processed by researchers, 2026.

Based on the table above, teacher certification has an indirect effect on teacher performance through work motivation of 0.133 with T Statistics 3.584 and P Values 0.000. Transformational leadership also has an indirect effect on teacher performance through work motivation of 0.175 with T Statistics 4.827 and P Values 0.000. Both paths are significant so that H6 and H7 are accepted. These results indicate that work motivation acts as a mechanism that bridges the influence of the two variables on teacher performance.

Hypothesis Testing Results

Table 7. Summary of Hypothesis Testing Results

Hypothesis	Statement	Results
------------	-----------	---------

H1	Teacher certification → Teacher performance	Accepted
H2	Transformational leadership → Teacher performance	Accepted
H3	Teacher certification → Work motivation	Accepted
H4	Transformational leadership → Work motivation	Accepted
H5	Work motivation → Teacher performance	Accepted
H6	Teacher certification → Work motivation → Teacher performance	Accepted
H7	Transformational leadership → Work motivation → Teacher performance	Accepted

Source: Results of data processing using SmartPLS 4, 2026.

Thus, the table above shows that all seven research hypotheses are accepted. These results indicate that teacher certification and the transformational leadership of madrasah principals have a positive influence on teacher performance, both directly and through work motivation. Transformational leadership showed the strongest influence on work motivation with a coefficient of 0.456, while work motivation had a direct influence on teacher performance of 0.384. Thus, improving teacher performance can be supported by strengthening professionalism, madrasah principal leadership, and work motivation.

Discussion

The following discussion interprets the results of testing seven hypotheses regarding the influence of teacher certification and the transformational leadership of madrasah principals on teacher performance, with work motivation as a mediating variable. Interpretation is carried out by linking the empirical results of the study with previous findings to determine the suitability and strengthening of the relationship between variables in the context of Private Madrasah Ibtidaiyah in Serang Regency.

1. The Impact of Teacher Certification on Teacher Performance

The test results show that teacher certification has a positive and significant effect on teacher performance, with a path coefficient of 0.263, a t-statistic of 3.845, and a p-value of 0.000. These findings indicate that the better the implementation and utilization of teacher certification, the higher the teacher performance. Certification can strengthen professionalism because teachers receive recognition for their competencies and are encouraged to carry out their duties according to professional standards. These results are in line with Purwanti and Zarger (2025) who found that certification affects teacher performance. Amelia et al. (2022) also showed a relationship between teacher certification and teacher performance. Thus, the results of this study strengthen the view that certification is not only a form of administrative recognition, but can be an instrument for strengthening teacher professionalism if accompanied by the application of competencies in learning.

2. The Influence of Madrasah Principal's Transformational Leadership on Teacher Performance

The test results show that the transformational leadership of the madrasah principal has a positive and significant effect on teacher performance, with a coefficient of 0.321, a t-statistic of 4.962, and a p-value of 0.000. These values indicate that the stronger the application of transformational leadership, the better the teacher performance. Madrasah principals who provide inspiration, build a shared vision, provide intellectual stimulation, and pay attention to the individual needs of teachers are able to create conditions that support the implementation of tasks. This finding is consistent with Adriantoni et al. (2023), which shows that transformational leadership influences teacher performance. Kurniawan et al. (2024) also found a positive relationship between transformational leadership and teacher performance. These results confirm that madrasah principals have a strategic position in directing, developing, and optimizing teacher potential.

3. The Influence of Teacher Certification on Work Motivation

The test results show that teacher certification has a positive and significant effect on work motivation, with a coefficient of 0.347, a t-statistic of 5.684, and a p-value of 0.000. This means that increasing professional status through certification can be followed by an increase in teacher motivation in carrying out their work. Certification provides recognition of professional competence, thereby increasing self-confidence, respect for the profession, and encouragement to maintain work quality. This finding is in line with Purwanti and Zarger (2025), who found that certification is related to teacher motivation. Amelia et al. (2022) also showed that teacher certification and work motivation are related to teacher performance. These results show that the benefits of certification are not limited to administrative aspects, but can also create

psychological conditions that encourage teachers to be more enthusiastic in carrying out professional responsibilities.

4. The Influence of Transformational Leadership of Madrasah Principals on Work Motivation

The test results show that the transformational leadership of the madrasah principal has a positive and significant effect on work motivation, with a coefficient of 0.456, a t-statistic of 7.238, and a p-value of 0.000. This influence is a direct relationship with the largest coefficient in the model, which indicates the importance of the role of the madrasah principal in building teacher motivation. Transformational leaders are able to increase motivation through providing inspiration, appreciation, support, communication of vision, and opportunities for self-development. This finding is in line with Azra'i et al. (2024), who proved the influence of transformational leadership on teacher intrinsic motivation. Kurniawan et al. (2024) also showed the importance of transformational leadership in creating organizational conditions that support teachers. Thus, teacher work motivation does not only come from individual factors, but is also formed through the leadership quality of the madrasah principal.

5. The Influence of Work Motivation on Teacher Performance

The test results show that work motivation has a positive and significant effect on teacher performance, with a coefficient of 0.384, a t-statistic of 6.176, and a p-value of 0.000. This finding means that the higher the teacher's work motivation, the more optimal the performance shown in carrying out learning tasks. Teachers who have a high work drive tend to be more responsible, take initiative, strive to complete tasks well, and are encouraged to develop their competencies. This result is consistent with Puspaningtyas and Widiatmoko (2025), who found that work motivation has a positive effect on teacher performance. Arbiyanti et al. (2025) also found a positive effect of work motivation on teacher performance. The similarity of these results strengthens the argument that motivation is an important factor that drives teacher abilities and competencies into work behavior that produces optimal performance.

6. The Influence of Teacher Certification on Teacher Performance through Work Motivation

The test results show that teacher certification influences teacher performance through work motivation, with an indirect effect coefficient of 0.133, a t-statistic of 3.584, and a p-value of 0.000. These findings indicate that certification is not only related to direct performance improvements, but also through increased teacher work motivation. Professional recognition through certification can encourage teachers to increase their responsibility and the quality of their task implementation. These results support Purwanti and Zarger (2025), who found a relationship between certification and teacher motivation and performance. Amelia et al. (2022) also showed a relationship between certification and motivation with teacher performance. Thus, work motivation is an important mechanism explaining how certification can translate into improved performance in the context of Private Elementary Madrasahs in Serang Regency.

7. The Influence of Transformational Leadership of Madrasah Principals on Teacher Performance through Work Motivation

The test results show that the transformational leadership of the madrasah principal influences teacher performance through work motivation, with an indirect effect coefficient of 0.175, a t-statistic of 4.827, and a p-value of 0.000. These results indicate that the madrasah principal's ability to provide inspiration, support, individual attention, and intellectual stimulation can increase teacher motivation, which in turn encourages improved performance. This finding is in line with Azra'I et al. (2024), who showed that transformational leadership is related to intrinsic motivation and teacher performance. Adrianтони et al. (2023) also proved the relationship between transformational leadership and teacher performance. Thus, work motivation acts as a pathway that explains the mechanism of the influence of transformational leadership on teacher performance. These results emphasize the importance of madrasah principals developing inspirational leadership while motivating teachers continuously.

V. CONCLUSION

Based on the results of research on the influence of teacher certification and transformational leadership of madrasah principals on teacher performance through work motivation at Private Elementary

Madrasahs in Serang Regency, it can be concluded that all proposed hypotheses are proven to be accepted. Teacher certification has a positive and significant effect on teacher performance, which indicates that strengthening professionalism through certification can support improving the quality of teacher task implementation. Transformational leadership of madrasah principals also has a positive and significant effect on teacher performance, so that the ability of madrasah principals to provide inspiration, support, individual attention, and intellectual stimulation is an important factor in improving performance.

Furthermore, teacher certification has been shown to have a positive and significant effect on work motivation. The transformational leadership of the madrasah principal also has a positive and significant effect on work motivation, even forming a direct relationship with the strongest coefficient in the model. Work motivation itself has been shown to have a positive and significant effect on teacher performance. These findings indicate that teachers with a higher work drive tend to demonstrate more optimal performance. In addition to its direct effect, work motivation has been shown to mediate the influence of teacher certification and transformational leadership on teacher performance. Thus, improving teacher performance in MIS in Serang Regency can be achieved through strengthening certification, implementing transformational leadership, and increasing work motivation in an integrated manner.

VI. ACKNOWLEDGMENTS

The researchers would like to express their gratitude to all parties who supported this research, particularly the private elementary madrasahs in Serang Regency, the principals, and all teachers who participated as respondents. Appreciation is also expressed to all parties who provided guidance and support.

REFERENCES

- [1]. Adriantoni, A., Komariah, A., Nurdin, D., & Herawan, E. (2023). The effect of transformational leadership and madrasah climate on elementary school teacher performance. *Journal of Innovation in Educational and Cultural Research*, 4(2), 238–247. <https://doi.org/10.46843/jiecr.v4i2.647>
- [2]. Agustina, A., Siregar, A. N., & Sugesti, T. (2025). The effect of competence and self-efficacy through motivation on teacher performance. *International Journal of Scientific Research and Management*, 13(5), 4069–4075. <https://doi.org/10.18535/ijserm/v13i05.el01>
- [3]. Amelia, V., Mujtahid, I. M., & Rosita, T. (2022). Pengaruh sertifikasi guru dan motivasi kerja terhadap kinerja guru di SDN Gugus Tarai Bangun Kabupaten Kampar. *Pendas: Jurnal Ilmiah Pendidikan Dasar*, 7(2). <https://doi.org/10.23969/jp.v7i2.5817>
- [4]. Arbiyanti, D., Abdullah, G., & Soedjono, S. (2025). The influence of work motivation and work discipline on teacher performance: A quantitative study in junior high schools in East Pekalongan District Pekalongan City. *Journal of Educational Sciences*, 9(5), 4034–4046. <https://doi.org/10.31258/jes.9.5.p.4034-4046>
- [5]. Azra'I, I., Marbawi, Yahya, A., & Yusniar. (2024). Analysis of the influence of transformational leadership on teacher performance with intrinsic motivation as an intervening variable in teachers Langsa City State 4 High School. *International Journal of Social Science, Educational, Economics, Agriculture Research and Technology*, 3(9), 1405–1415. <https://doi.org/10.54443/ijset.v3i9.524>
- [6]. Irawan, A. C., Wijaya, S., & Jaolis, F. (2024). Pengaruh transformational leadership terhadap teacher performance pada sekolah Kristen dengan school climate sebagai variabel mediasi. *JAMP: Jurnal Administrasi dan Manajemen Pendidikan*, 7(3). <https://doi.org/10.17977/um027v7i32024p>
- [7]. Kurniawan, R., Andjarwati, T., & Ardiana, D. K. R. (2024). The influence of transformational leadership, organizational culture, and achievement motivation on teacher performance at SMKN 7 Surabaya through organizational commitment as a mediating variable. *JMM17: Jurnal Ilmu Ekonomi dan Manajemen*, 11(2), 44–56. <https://doi.org/10.30996/jmm17.v11i2.11557>
- [8]. Purwanti, A., & Zarger, A. A. (2025). The influence of certification on teachers' motivation and teachers' performance. *PPSDP International Journal of Education*, 4(1), 144–149. <https://doi.org/10.59175/pijed.v4i1.400>

- [9]. Puspaningtyas, D., & Widiatmoko, J. (2025). The effect of professional competence, work motivation, and work discipline on teacher performance: The mediation role of school culture. *Journal Research of Social Science, Economics, and Management*, 5(1), 2923–2939. <https://doi.org/10.59141/jrssem.v5i1.999>
- [10]. Soelistya, D. (2024). Empowering teachers: The impact of transformational leadership and teacher competence on performance through organizational commitment. *Journal of Educational Management and Instruction*, 4(1), 159–173. <https://doi.org/10.22515/jemin.v4i1.9555>
- [11]. Soelistya, D., Santoso, R. A., Wulandari, W., & Selamet, S. (2024). The influence of transformational leadership style and teacher performance through organizational commitment as a mediation variable. *Jurnal Bisnis Strategi*, 33(1), 10–18. <https://doi.org/10.14710/jbs.33.1.10-18>
- [12]. Susanti, E., Widayatsih, T., & Mulyadi. (2025). Pengaruh sertifikasi guru dan motivasi terhadap kinerja guru di SMA Negeri sekecamatan Kayuagung. *Jurnal Riset Rumpun Ilmu Pendidikan*, 4(1), 316–328. <https://doi.org/10.55606/jurripen.v4i1.4608>
- [13]. Thahir, I., Ampy, E. S., & Firdaus, F. (2025). Implementation of transformational leadership in improving teacher performance in secondary schools. *International Journal of Educational Technology and Society*, 2(2). <https://doi.org/10.61132/ijets.v2i2.372>
- [14]. Utami, B. Y., Nelitawati, N., & Al-Kadri, H. (2024). The influence of principal transformational leadership on teacher performance and learning quality in schools. *International Journal of Educational Dynamics*, 6(2), 555–559. <https://doi.org/10.24036/ijeds.v6i2.488>
- [15]. Yudiar, Y., Putra, A. Y., & Fahmi, M. (2025). The effect of work motivation and work discipline on teachers' performance. *Journal of Social Work and Science Education*, 6(3), 1605–1616. <https://doi.org/10.52690/jswse.v6i3.1289>