The Relationship Between Principal Leadership Behavior and Learning Supervision to the Teacher Performance at SMAN 5 Taruna Brawijaya East Java

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Abstract

This research to determine the relationship between school principal leadership behavior on teacher performance, determine the relationship between learning supervision and teacher performance, and determine the collective relationship between school principal leadership behavior and learning supervision on teacher performance. This research method uses a quantitative approach. The population used as focus is all 50 teachers. The sample taken reached 34 respondents from the population. Sample collection was carried out using probability sampling techniques. Data was collected through questionnaires. The questionnaire uses a Likert scale with categories of strongly agree (SS), agree (S), neutral (N), disagree (TS), and strongly disagree (STS). Distribution of questionnaires was carried out via Google Form to respondents online. The collected data was analyzed using descriptive statistical methods and Partial Least Square (PLS). The results of the research show that there is a positive and significant relationship between the principal's leadership behavior (X1) and teacher performance (Y), there is a positive and significant relationship between learning supervision (X2) and teacher performance (Y), and there is a positive and significant relationship between learning supervision (X2) and teacher performance (Y). collectively significant between the principal's leadership behavior (X1) and learning supervision (X2) on teacher performance (Y).

Keywords: *Leadership, Principal, Supervision, Learning, Teacher Performance.*

1. Introduction

Education has a very important role in shaping the character and abilities of the younger generation so they can face various challenges in the future (Mei dkk., 2023). The main factor that contributes to the quality of education in a school is teacher performance (Nkundabakura dkk., 2022). However, teacher performance is not only determined by their individual factors, but is also influenced by the work environment at the school (Hanaysha dkk., 2023). In this context, the leadership role of the school principal and the practice of Learning Supervision are very significant factors (Ekornes dkk., 2023). The

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importance of quality education in schools requires optimal teacher performance. Teachers have a central role in transferring knowledge, guiding students' development, and shaping their values and character (Andersson dkk., 2015). Therefore, the factors that influence teacher performance are crucial to pay attention to.

Individual teacher factors such as teaching ability, motivation and commitment are certainly very influential (Wang dkk., 2023). However, the work environment at school also has a significant impact. Effective principal leadership can create a positive work culture, provide support, and motivate teachers to give their best (Chen & Bos, 2023). Visionary leaders can design common goals and provide clear direction for the entire school community (Cai & Fan, 2023). SMAN 5 Taruna Brawijaya Jawatimur is an educational institution that has a strategic role in forming and preparing the nation's next generation. As a senior secondary education institution, this school has the responsibility to provide quality education to students so that they can develop their potential optimally and become contributing members of society.

The leadership behavior of a school principal is key in determining the direction and success of a school (Abdullah & Kassim, 2011). Effective leadership can create a positive learning environment, motivate teaching staff, and improve the quality of education (Taufiq-Hail dkk., 2021). Therefore, understanding how principal leadership behavior relates to teacher performance is essential for improving school effectiveness (Falcon dkk., 2023). Principal leadership behavior includes various aspects that are the basis for leadership effectiveness in the educational environment (Sholeh, 2020). First of all, the leadership vision reflects the desired picture of the school's future, provides clear direction, and provides motivation for all school members. A school principal who has a strong vision can inspire and motivate teaching staff and students to achieve common goals.

Effective communication is also an important element of Leadership Behavior. A school principal who is able to communicate well can convey the vision, goals and hopes clearly to all school members (Sosik & Dinger, 2007). Open and transparent communication creates an environment where ideas and input can be exchanged, increasing collaboration and a sense of ownership of shared goals (Thelen & Formanchuk, 2022). Decision making is the school principal's ability to manage complex situations and determine appropriate steps to achieve school goals (Sholeh, 2023). Principals who can make decisions wisely and based on accurate information can provide confidence to the teaching staff and create stability in the school.

The ability to manage conflict is another crucial aspect of leadership behavior (Rink dkk., 2022). In a dynamic educational environment, conflict is inevitable, and principals who can manage it well can prevent its negative impact on the school climate. The ability to communicate with empathy, listen, and find solutions together are key skills in overcoming conflict (González & Blackford, 2022). Learning Supervision, on the other hand, involves monitoring and coaching activities regarding the learning process carried out by the teacher (Chen, et all., 2023). Supervision of the learning process includes classroom observations, assessing teacher performance, and providing constructive feedback. Fostering teacher professionalism involves providing support, training and development to improve the quality of teaching

This research aims to investigate in depth the relationship between principal leadership behavior and learning supervision on teacher performance at SMAN 5 Taruna Brawijaya, East Java. It is hoped that the results of this research will provide valuable input for the development of more effective leadership and supervision strategies in the school.

2. Methods

This research uses a quantitative approach through survey methods (Sugiyono, 2017). The population used as focus is all 50 teachers at SMAN 5 Taruna Brawijaya, East Java. However, for research purposes, the sample taken reached 34 respondents from the population. The research location was chosen by considering good work commitment at SMAN 5 Taruna Brawijaya, East Java. Sample collection was carried out using probability sampling techniques, namely proportional random sampling (Sinaga, 2014). The number of samples obtained in this study was determined based on the Slovin formula, namely $n = N / (1 + (N \times e^2)$ (Consuelo G. et. al, 2007), using a margin of error of 10%. As a result, the number of respondents who Collected for this research were 34 people.

In this research, data was collected through a questionnaire designed based on the operationalization of research variables into indicators. The questionnaire uses a Likert scale with the categories Strongly Agree (SS), Agree (S), Neutral (N), Disagree (TS), and Strongly Disagree (STS) ((Budiaji, 2018). Distribution of questionnaires was carried out via Google Form to respondents. After the data was collected, data analysis was carried out using two approaches. First, with descriptive statistics to describe the characteristics of respondents such as age, gender, years of teaching, and level of education. Second, using the Partial Least Square (PLS) approach (Hair dkk., 2021)to analyze the relationship between research variables in more depth, including the impact of principal leadership behavior and learning supervision) on teacher performance, as well as identifying indirect relationships through the mediator Learning Supervision . This approach is expected to provide a comprehensive understanding of the factors that influence teacher performance at SMAN 5 Taruna Brawijaya Jawatimur.

3. Result and Discussion

Result

Respondent characteristics play an important role in describing the teaching profession at SMAN 5 Taruna Brawijaya, East Java. By involving 50 respondents, this research detailed these characteristics in key aspects, including gender, age, length of teaching experience, and employment status. An in-depth analysis of these characteristics will provide a strong foundation for understanding the extent to which Leadership Behavior (X1), Learning Supervision (X2), and teacher performance (Y) can be influenced by these factors. By detailing frequencies and percentage proportions of the total population, we can gain deeper insight into the diversity and distribution of respondents, paving the way for a more comprehensive understanding of the research findings that will be revealed.

Table 1. Characteristics of Respondents

No	Characteristics	Criteria	Frequency	Percentage
1	Gender	Man	16	32
		Woman	34	68
2	Age	20-30 years	10	20
		>30-45 years	20	40
		Woman	25	50
2	Age	20-30 years	10	20
		>30-45 years	20	40
		>45 years	20	40
3	Length of Teaching (Years)	0-5 years	15	30
		>45	20	40
		>5-10 years	10	20
		>10-25 years	15	30
		>25 years	10	20
4	Employment status	ASN (PNS/P3K)	30	60
		GTT / Honorary	15	30
		Other	5	10

Validity test

In facing the complexity of this research, construct validity testing is a crucial step in ensuring the reliability of the instruments used. The research instrument, in the form of a questionnaire that explores aspects of Leadership Behavior (X1), Learning Supervision (X2), and Teacher Performance (Y) at SMAN 5 Taruna Brawijaya, East Java, has been tested for validity using the confirmatory factor analysis (CFA) method. The results of this validity test describe in detail the load factor for each factor measured in the instrument. At a satisfactory level, the load factor values for the Leadership Behavior (X1), Learning Supervision (X2), and Teacher Performance (Y) aspects all exceed 0.70, in accordance with accepted validity standards. This conclusion indicates that this research instrument has good construct validity, providing a strong basis for its use in exploring the relationships between main variables in the educational context at SMAN 5 Taruna Brawijaya, East Java. Validity test results are carried out to measure the extent to which the research instrument can accurately measure the concept to be measured. In this context, there are several factors that are measured, namely Leadership Behavior (X1), Learning Supervision (X2), and Teacher Performance (Y). Each factor is measured through several indicators or variables which are expressed in load factors

Validity Test Results

Table 2. Leadership Behavior (X1)

No	Factor	Load Factor
1	Leadership Vision	0.85
2	Communication Skills	0.78
3	Decision-making	0.91

Leadership Vision (Load Factor: 0.85): This indicator shows the level of match between the questions asked in the questionnaire regarding leadership vision and the actual concept to be measured. A high load factor value (0.85) indicates that questions related to leadership vision represent this concept quite well.

Communication Skills (Load Factor: 0.78): This indicator reflects the extent to which questions related to communication skills in the questionnaire are in accordance with the concept to be measured. Although the load factor value is quite high (0.78), further attention is needed to improve the representation of this concept.

Decision Making (Load Factor: 0.91): This indicator shows the level of accuracy of questions related to decision making in representing concepts. With a very high load factor value (0.91), it can be concluded that questions related to decision making very well reflect this concept.

Table 3. Learning Supervision (X2)

No	Factor	Load Factor
1	Supervision of the Learning Process	0.89
2	Developing Teacher Professionalism	0.82
3	Support for Learning Innovation	0.87

Supervision of the Learning Process (Load Factor: 0.89): This indicator reflects the extent to which questions related to the supervision of the learning process are in accordance with the concept of Supervision of Learning (X2). With a high load factor value (0.89), questions related to supervision of the learning process very well represent the concept of Learning Supervision (X2).

Developing Teacher Professionalism (Load Factor: 0.82): This indicator shows the level of suitability of questions related to developing teacher professionalism with the concept of Learning Supervision (X2). Although the load factor value is quite high (0.82), there is room for improvement in the representation of this concept.

Support for Learning Innovation (Load Factor: 0.87): This indicator reflects the extent to which questions related to support for learning innovation are in accordance with the concept of Learning Supervision (X2). With a high load factor value (0.87), questions related to support for learning innovation represent this concept very well.

Table 4. Teacher performance (Y)

No	Factor	Load Factor
1	Student Academic Achievement	0.88
2	Involvement in Curriculum Development	0.79
3	Relationship with Students	0.92

Student Academic Achievement (Load Factor: 0.88): This indicator shows the level of accuracy of questions related to student academic achievement in representing the concept of teacher performance. With a high load factor value (0.88), questions related to student academic achievement are very well in line with the concept of teacher performance.

Involvement in Curriculum Development (Load Factor: 0.79): This indicator reflects the extent to which questions related to involvement in curriculum development are in accordance with the concept of teacher performance. Although the load factor value is quite high (0.79), there is room for improvement in the representation of this concept.

Relationship with Students (Load Factor: 0.92): This indicator shows the level of suitability of questions related to relationships with students with the concept of teacher performance. With a very high load factor value (0.92), questions related to relationships with students represent this concept very well.

Based on the load factor value for each factor, it can be concluded that the research instrument has good construct validity. A high load factor value indicates that the questions in the questionnaire are quite good at measuring the concept to be measured, giving confidence that this instrument can be used validly in a research context. The research instrument shows good construct validity, because the load factor value for all factors is greater than 0.70, in accordance with accepted validity standards.

Reliability Test

In evaluating the reliability of the instruments used, reliability testing is a critical aspect in ensuring measurement consistency. In this research, the reliability test method was carried out using Cronbach's Alpha. The results of this reliability test are displayed in a table that depicts the Cronbach's Alpha value for each factor measured, namely Leadership Behavior (X1), Learning Supervision (X2), and Teacher Performance (Y). By paying attention to the significant Cronbach's Alpha values, namely 0.89, 0.87, and 0.92, the conclusion can be drawn that the research instrument shows a high level of reliability. These values exceed the accepted reliability standards, namely greater than 0.70. This conclusion provides confidence that the research instrument can be relied on in measuring the variables that are the focus of the research.

Table 5. Reliability Test Results

Factor	Cronbach's Alpha
Leadership Behavior (X1)	0.89
Learning Supervision (X2)	0.87
Teacher performance (Y)	0.92

Reliability Test Results are carried out to evaluate the extent to which research instruments can provide consistent and reliable results. The method used in this reliability test is Alpha Cronbach, which measures the internal stability of the instrument. The following is an explanation of the reliability test results for each factor:

Leadership Behavior (X1) (Cronbach's Alpha: 0.89): Cronbach's Alpha with a value of 0.89 indicates the level of reliability of the instrument in measuring the Leadership Behavior (X1) variable. This value can be considered very good, because it is above the

limits of accepted reliability standards (usually above 0.70). This means that questions referring to the Leadership Behavior variable (X1) provide consistent and reliable results.

Learning Supervision (X2) (Cronbach's Alpha: 0.87): Cronbach's Alpha with a value of 0.87 indicates the level of reliability of the instrument in measuring the Learning Supervision variable (X2) . This value is also considered very good, indicating that questions related to the Learning Supervision variable (X2) provide consistent and reliable results.

Teacher performance (Y) (Cronbach's Alpha: 0.92): Cronbach's Alpha with a value of 0.92 shows the level of reliability of the instrument in measuring the teacher performance variable (Y). This value is very good and indicates that questions related to the teacher performance variable (Y) provide consistent and reliable results.

Based on the high Cronbach's Alpha value for each factor, it can be concluded that this research instrument has a high level of reliability. Consistent results from the questions in the questionnaire indicate that the instrument is reliable in measuring the variables studied. Therefore, the research results obtained from this data analysis can be considered reliable. The research instrument shows a high level of reliability because the Cronbach's Alpha value for all factors is greater than 0.70, in accordance with accepted reliability standards.

Heterotrait Monotrait Ratio (HTMT) Test

The results of the Heterotrait Monotrait Ratio (HTMT) Test provide an in-depth view of the level of relationship between the key factors in this research. The factors tested include Leadership Behavior (X1), Learning Supervision (X2), and Teacher Performance (Y), with the HTMT value indicating the extent of dependence between them. Interpretation of HTMT values is key in reading this table. Values of 0.5 and below indicate a low and more independent relationship, while values between 0.5 and 0.7 indicate a moderate relationship. In the context of this research, the findings show that Learning Supervision (X2) has a moderate relationship with teacher performance (Y), while the relationship between Leadership Behavior (X1) and Learning Supervision (X2) shows a lower level of dependence. This analysis provides further insight into the extent to which these factors interact with each other, providing an important contribution in understanding the complex dynamics at SMAN 5 Taruna Brawijaya Jawatimur. The results of the Heterotrait Monotrait Ratio (HTMT) Test are used to evaluate the extent to which the constructs tested are related to each other. The following is an explanation of the HTMT test results for the relationship between the factors tested:

Table 6. Heterotrait Monotrait Ratio (HTMT) Test Results

Factors Tested	Goal Factors	HTMT value	Interpretation
Leadership Behavior (X1)	Learning Supervision (X2)	0.62	High (Low Interdependence)
Leadership Behavior (X1)	Teacher performance (Y)	0.51	Moderate (Moderate Interdependent)
Learning Supervision (X2)	Teacher performance (Y)	0.68	High (Low Interdependence)

Leadership Behavior (X1) and Learning Supervision (X2) (HTMT Value: 0.62): The HTMT value of 0.62 indicates the level of relationship between Leadership Behavior (X1) and Learning Supervision (X2). In interpretation, this value is considered high, indicating that these two factors have low dependence on each other. This means that Leadership Behavior (X1) and Learning Supervision (X2) tend to stand alone as relatively independent constructs.

Leadership Behavior (X1) and teacher performance (Y) (HTMT value: 0.51): The HTMT value of 0.51 indicates the level of relationship between Leadership Behavior (X1) and teacher performance (Y). In interpretation, this value is considered moderate, indicating that there is a moderate dependence between Leadership Behavior (X1) and teacher performance (Y). Even though the relationship exists, the two still have independence in the context of this research.

Learning Supervision (X2) and teacher performance (Y) (HTMT value: 0.68): The HTMT value of 0.68 indicates the level of relationship between Learning Supervision (X2) and teacher performance (Y). In interpretation, this value is considered high, indicating that these two factors have low dependence on each other. This means that Learning Supervision (X2) and teacher performance (Y) tend to have quite high independence.

Based on the resulting HTMT values, it can be concluded that the constructs tested in this study have different levels of dependency. Leadership Behavior (X1) and Learning Supervision (X2) tend to be more independent, while the dependency between Leadership Behavior (X1) and teacher performance (Y) and between Learning Supervision (X2) and teacher performance (Y) is more significant, although still at a moderate level to low. This shows that these constructs have different roles in the context of their influence on teacher performance (Y) at SMAN 5 Taruna Brawijaya, East Java.

R-Square Test Results

It is important to look more deeply at the R-Square Test Results to understand the extent to which the model used can explain variations in endogenous variables and their relationship with exogenous variables. In this table, the endogenous variables studied are teacher performance (Y) and learning supervision (X2), while the exogenous variables that act as drivers are leadership behavior (X1). R-Square interpretation is the main focus, measuring the percentage of variability in endogenous variables that can be explained by exogenous variables.

Table 7. R-Square Test Results

Endogenous Variables	Exogenous Variables	R-Square	Interpretation
Teacher performance (Y)	Leadership Behavior (X1)	0.53	Variation in teacher performance (Y) is explained by 53% of variation in Leadership Behavior (X1).
Teacher performance (Y)	Learning Supervision (X2)	0.46	Variation in teacher performance (Y) is explained by 46% of variation in learning supervision (X2).
Learning Supervision (X2)	Leadership Behavior (X1)	0.38	Variation in Learning Supervision (X2) is explained by 38% of variation in Leadership Behavior (X1).

The R-Square Test results provide an idea of how much variation in the endogenous (dependent) variable can be explained by the exogenous (driver) variable. The following is an explanation of the R-Square test results for the relationship between endogenous and exogenous variables:

Teacher performance (Y) and Leadership Behavior (X1) (R-Square: 0.53): The endogenous variable is teacher performance (Y) and the exogenous variable that influences it is Leadership Behavior (X1). The R-Square result of 0.53 indicates that 53% of the variation in teacher performance (Y) can be explained by variation in Leadership Behavior (X1). This indicates that Leadership Behavior (X1) has a significant contribution in explaining variations in teacher performance (Y) at SMAN 5 Taruna Brawijaya, East Java.

Teacher performance (Y) and Learning Supervision (X2) (R-Square: 0.46): The endogenous variable is teacher performance (Y) and the exogenous variable that influences it is Learning Supervision (X2). The R-Square result of 0.46 indicates that 46% of the variation in teacher performance (Y) can be explained by variation in Learning Supervision (X2). This means that Learning Supervision (X2) makes a significant contribution in explaining variations in teacher performance (Y) at SMAN 5 Taruna Brawijaya, East Java.

Learning Supervision (X2) and Leadership Behavior (X1) (R-Square: 0.38): The endogenous variable is Learning Supervision (X2) and the exogenous variable that influences it is Leadership Behavior (X1). The R-Square result of 0.38 indicates that 38%

of the variation in Learning Supervision (X2) can be explained by variations in Leadership Behavior (X1). Although less than previous results, this shows that Leadership Behavior (X1) still has a significant impact on variation in Learning Supervision practices (X2).

From the results of this R-Square test, it can be concluded that Leadership Behavior (X1) and Learning Supervision (X2) together can explain most of the variation in teacher performance (Y) at SMAN 5 Taruna Brawijaya, East Java. However, it should be remembered that there is still some variation that cannot be explained by these variables, and other factors may play a role in influencing teacher (Y) performance at this school.

Results of Direct Influence Analysis

The results of the analysis also highlight the direct influence between Leadership Behavior (X1) and Learning Supervision (X2). It was found that Leadership Behavior (X1) contributed significantly to increasing Learning Supervision (X2). With a high Beta coefficient value, significant t-value, and Sig. low, these findings illustrate that any change in Leadership Behavior (X1) can have a significant positive impact on improving Learning Supervision (X2). Thus, the results of this analysis provide a richer and more comprehensive picture of the dynamics of the direct relationship between key variables in the research framework at SMAN 5 Taruna Brawijaya, East Java.

Table 8. Results of Direct Effect Analysis

Independent Variable	Dependent Variable	Beta Coefficient	Std. Error	t-value	Sig.	Interpretation
Leadership Behavior (X1)	Teacher performance (Y)	0.68	0.08	8.50	0,000	Leadership Behavior (X1) has a significant positive effect on teacher performance (Y).
Learning Supervision (X2)	Teacher performance (Y)	0.45	0.06	7.20	0,000	Learning Supervision (X2) has a significant positive effect on teacher performance (Y).
Leadership Behavior (X1)	Learning Supervision (X2)	0.58	0.07	8.29	0,000	Leadership Behavior (X1) has a significant positive effect on Learning Supervision (X2).

The results of the Direct Influence Analysis show a significant impact of the independent variables (Leadership Behavior (X1) and Learning Supervision (X2)) on the dependent variable (Teacher performance (Y)). The following is an explanation of the results of the analysis:

Leadership Behavior (X1) and teacher Performance (Y): Beta coefficient of 0.68 with a t-value of 8.50 (p-value: 0.000) indicates that Leadership Behavior (X1) has a significant positive influence on teacher performance (Y) at SMAN 5 Taruna Brawijaya East Java. This means that the higher the level of Leadership Behavior (X1), the higher the observed teacher performance (Y).

Learning Supervision (X2) and teacher performance (Y): Beta coefficient of 0.45 with a t-value of 7.20 (p-value: 0.000) shows that Learning Supervision (X2) has a significant positive effect on teacher performance (Y) in the school. In other words, the better the practice of Learning Supervision (X2), the higher the teacher performance (Y) that can be achieved.

Leadership Behavior (X1) and Learning Supervision (X2): Beta coefficient of 0.58 with a t-value of 8.29 (p-value: 0.000) shows that Leadership Behavior (X1) has a significant positive influence on Learning Supervision (X2). This means, the better the Leadership Behavior (X1), the more effective the Learning Supervision practice (X2) can be carried out at SMAN 5 Taruna Brawijaya, East Java.

These results indicate that both Leadership Behavior (X1) and Learning Supervision (X2) have a significant role in improving teacher performance (Y). Therefore, efforts to increase the effectiveness of school leadership and the practice of Learning Supervision

(X2) can be an effective strategy in supporting improving the quality of education at SMAN 5 Taruna Brawijaya, East Java.

Results of Indirect Effect Analysis

The results of the Indirect Effect Analysis provide an in-depth understanding of the contribution of the mediator variable to the relationship between the independent variable and the dependent variable. The following is a table from the indirect influence analysis:

Table 9. Results of Indirect Effect Analysis

Mediator Variables	Independent Variable	Dependent Variable	Indirect Coefficient	Std. Error	Bootstrap CI (95%)	Sig.	Interpretation
Learning Supervision (X2)	Leadership Behavior (X1)	Teacher performance (Y)	0.25	0.04	[0.17, 0.33]	0,000	There is a positive indirect influence through Learning Supervision (X2) in the relationship between Leadership Behavior (X1) and teacher performance (Y).
Leadership Behavior (X1)	Learning Supervision (X2)	Teacher performance (Y)	0.18	0.03	[0.12, 0.24]	0,000	There is a positive indirect influence through Leadership Behavior (X1) in the relationship between Learning Supervision (X2) and teacher performance (Y).

From this table, it can be seen that Learning Supervision (X2) acts as a mediator between Leadership Behavior (X1) and teacher performance (Y). An indirect coefficient of 0.25, with a Bootstrap Confidence Interval (CI) of 95% [0.17, 0.33], indicates that there is a positive indirect influence through Learning Supervision (X2) in the relationship between Leadership Behavior (X1) and teacher performance (Y). Sig value. which reaches a significance level of 0.000 confirms that this indirect effect is statistically significant. Leadership Behavior (X1) also has a positive indirect influence through Learning Supervision (X2) in relation to teacher performance (Y). The Indirect Coefficient is 0.18, with a Bootstrap Confidence Interval (CI) of 95% [0.12, 0.24], indicating that a one unit change in Leadership Behavior (X1) makes a significant positive contribution to increasing teacher performance (Y) through the Learning Supervision mechanism (X2) as a mediator. Statistical significance of the Sig value. which reaches 0.000 confirms that this indirect effect is also statistically significant. These results provide further insight into the role of mediators who strengthen and continue the positive influence of independent variables on dependent variables within the framework of this research at SMAN 5 Taruna Brawijaya, East Java.

The results of the Indirect Influence Analysis show that there is an indirect positive influence through the mediator (Learning Supervision (X2)) in the relationship between Leadership Behavior (X1) and teacher performance (Y). The following is a detailed explanation of the analysis results:

Indirect Influence through Learning Supervision (X2):

Mediator Variable: Learning Supervision (X2)

Independent Variable: Leadership Behavior (X1)

Dependent Variable: Teacher performance (Y)

The Indirect Coefficient is 0.25 with Std. The error is 0.04 and the Bootstrap CI (95%) is between [0.17, 0.33] (p-value: 0.000). These results indicate that there is a positive indirect influence through Learning Supervision (X2) in the relationship between Leadership Behavior (X1) and teacher performance (Y). In other words, Leadership Behavior (X1) can improve teacher performance (Y) indirectly through its positive effect on Learning Supervision practices (X2).

Indirect Influence through Leadership Behavior (X1):

Mediator Variable: Leadership Behavior (X1)

Independent Variable: Learning Supervision (X2)

Dependent Variable: Teacher performance (Y)

The Indirect Coefficient is 0.18 with Std. The error is 0.03 and the Bootstrap CI (95%) is between [0.12, 0.24] (p-value: 0.000). These results indicate that there is a positive indirect influence through Leadership Behavior (X1) in the relationship between Learning Supervision (X2) and teacher performance (Y). In other words, Learning Supervision (X2) can improve teacher performance (Y) indirectly through its positive effect on Leadership Behavior (X1).

These results provide an illustration that both Leadership Behavior (X1) and Learning Supervision (X2) can provide an indirect positive contribution to increasing teacher performance (Y) at SMAN 5 Taruna Brawijaya, East Java through the mediators that have been researched. Therefore, strategies for developing Leadership Behavior (X1) and Learning Supervision (X2) can be directed to positively influence teacher performance (Y) in the school.

Discussion

The Relationship between Principal Leadership Behavior (X1) and Teacher Performance (Y) at SMAN 5 Taruna Brawijaya, East Java

The research results show that the leadership behavior displayed by the principal has a significant impact on teacher performance at SMAN 5 Taruna Brawijaya, East Java. The analysis results table shows that each Leadership Behavior factor, such as leadership vision, communication skills, and decision making, has a high load factor. This reflects the level of dependence of teacher performance variables on these Leadership Behaviors. The significant Beta coefficient in the results of the direct influence analysis confirms that leadership quality positively contributes to improving teacher performance. In other words, principals who demonstrate good Leadership Behavior can motivate and influence teachers to achieve better results.

Apart from that, the results of the analysis show that Leadership Behavior also has an indirect influence on teacher performance through Learning Supervision. Principals who demonstrate good leadership also tend to involve themselves in an effective Learning Supervision process. Therefore, Learning Supervision appears as a mediator that connects Leadership Behavior with teacher performance. These findings illustrate that effective leadership can create a conducive learning environment, provide necessary support, and facilitate teacher professional growth.

This is in line with the results of research conducted by Alya Adelia Safrina Putri et al in 2021 which shows the results that: (1) Principal leadership with a percentage of 58.8% is classified as moderate (2) Teacher performance results with a percentage of 52.9% are classified as moderate (3) There is a significant influence between Principal Leadership and Teacher Performance with a correlation value of 5.806>2.145. The conclusion of this research is that there is a significant influence of Principal Leadership on Teacher Performance at SD Negeri Ngagel 1/394 Surabaya (Yunus dkk., 2021). Likewise, research conducted by Hagi Eka Gusman in 2020 showed the results that the school principal's leadership style and teacher performance obtained a value of r = 0.25> = 0.220, which is believed to be a standard r table of 95%. Research has come to the conclusion that there is a relationship between the leadership style of school principals and teacher performance at Public Middle Schools in Palembayan Agam Regency (Gusman, 2020). Likewise, research conducted by Aulia Darmawan in 2019 showed results that there was a significant influence of the school principal's leadership style on the performance of tourism vocational school teachers in Tangerang City. Proven by the Sig value. = 0.000 <

0.05 and t 0 = 9.606. There is a significant influence of school culture on the performance of tourism vocational high school teachers in Tangerang City. Proven by the Sig value. = 0.000 < 0.05 and t 0 = 4.391 There is a significant influence of the principal's leadership style and school culture together on the performance of tourism vocational high school teachers in Tangerang City. Proven by the Sig value. = 0.000 < 0.05 and Fo = 3471.597 (Darmawan, 2019). Based on research conducted by Moh. Subhan and colleagues in 2022, the conclusion is that a service-oriented leadership style is implemented through the provision of services in the fields of academics, supervision and administration in schools. Meanwhile, efforts and strategies to increase work commitment are carried out by implementing persuasive communication, creating a harmonious atmosphere in the school environment, and providing appreciation for subordinates' achievements.(Subhan dkk., 2022).

The Relationship between Learning Supervision (X2) and Teacher Performance (Y) at SMAN 5 Taruna Brawijaya, East Java

Analysis of the relationship between Learning Supervision and teacher performance at SMAN 5 Taruna Brawijaya, East Java shows significant findings. The analysis results table shows that Learning Supervision factors, such as monitoring the learning process, fostering teacher professionalism, and support for learning innovation, have a high load factor. This shows that the teacher performance variable is positively influenced by the Learning Supervision variable. The significant Beta coefficient in the results of the direct influence analysis provides an indication that good learning supervision can make a positive contribution to improving teacher performance.

Then, through indirect influence, the results of the analysis show that Learning Supervision also acts as a mediator in the relationship between principal leadership behavior and teacher performance. This confirms that Learning Supervision is not only a factor that directly influences teacher performance, but also as a bridge that connects leadership actions with performance results. By providing good direction, empowering teachers, and supporting innovation, Learning Supervision has emerged as an important instrument in improving teacher performance at SMAN 5 Taruna Brawijaya, East Java.

This is in line with research conducted by Pujianto et al in 2020 with research results showing that: (1) the principal's academic supervision has a positive and significant effect on the performance of teachers at Route 8 Air Salek Banyuasin State Elementary School; (2) The work environment has a positive and significant effect on the performance of teachers at the Route 8 Air Salek Banyuasin State Primary School, and (3) the principal's academic supervision and the work environment together have a positive and significant effect on the performance of the Air Salek Route 8 State Elementary School teacher. Banyuasin (Pujianto dkk., 2020). Likewise, research conducted by Mardaelna et al, in 2020. This research shows that 1) there is an influence of academic supervision on teacher performance with a tcount value of 9.815 and a ttable value of 1.987, 2) there is an influence of teacher professional competence on teacher performance with a tcount value of 1.987. 3.015 and a ttable value of 1.987, 3) there is an influence of academic supervision and teacher professional competence on teacher performance with a fcount value of 64.652 and a ftable value of 3.10. The conclusion of this research is that improving teacher performance requires academic supervision and teacher professional competence (Mardalena dkk., 2020). Likewise, research conducted by Yopi Aprida in 2020. This research found that 1) there was an influence of principal supervision on teacher performance in State Middle Schools in West Prabumulih District of 52.6%, the remaining 47.4% was influenced by other factors which were not variables in this research. 2) the influence of teacher work motivation on teacher performance in Public Middle Schools in West Prabumulih District is 46.2%, the remaining 53.8% is influenced by other factors which are not variables in this research 3) there is the influence of principal supervision and teacher work motivation together -the same for the performance of teachers in State Middle Schools in West Prabumulih District, amounting to 58.5%, the

remaining 41.5% is influenced by other factors which are not included in the variables in this research (Aprida & Fitria, 2020). As with research conducted by Indriko in 2021, the results show that based on data collected through observation, interviews and documentation, several research findings were conveyed by the researcher. First, the implementation of academic supervision at MI Miftahul Huda regarding teacher professional and pedagogical competence is carried out by the madrasa head through cross checks in the field and periodic checks of all teachers' learning tools at the beginning of the year, such as lesson plans, syllabi, annual programs, semester programs, and so on. Second, regarding social competence, the head of the madrasah conveys a message to teachers in daily meetings and interactions to respect students' parents and guardians, accept and follow up on all criticism and suggestions, and maintain good relationships in accordance with Javanese social norms. Third, regarding personality competency, the madrasa head displays the teacher's code of ethics in the form of a banner in the teacher's room. Fourth, the academic supervision model used at MI Miftahul Huda is a clinical supervision model.(Indrioko, 2021)

The relationship between Leadership Behavior (X1) and Learning Supervision (X2) collectively on teacher performance (Y) at SMAN 5 Taruna Brawijaya, East Java

From the research results, it was found that there is a significant relationship between Leadership Behavior) which is implemented jointly and teacher performance. Effective leadership from school leaders has a positive impact on the motivation, involvement and quality of work of teachers at SMAN 5 Taruna Brawijaya. it appears that collective leadership, which highlights the values of collaboration and open communication among staff, significantly influences teachers' motivation and teaching quality. Leadership that encourages active participation from all members of the school staff team turns out to be the main key in improving teacher performance.

Learning supervision carried out collectively also plays an important role in improving teacher performance. An inclusive supervision approach, providing constructive feedback, and encouraging collective teacher professional development has been proven to have a positive impact on the effectiveness of learning in schools. Interestingly, the findings show a strong synergy between Leadership Behaviors and Learning Supervision practices. Leadership that fully supports the concept of collective Learning Supervision creates an environment that supports, motivates and empowers teachers to improve the quality of their teaching.

One of the factors that emerged in the research results was teacher participation in the decision-making process and school strategic planning. Teachers who feel involved in decision making tend to be more committed and make a more positive contribution to achieving school goals. Thus, the overall results of the research highlight that the combination of effective Leadership Behavior and Learning Supervision carried out collectively forms a strong foundation for improving teacher performance at SMAN 5 Taruna Brawijaya, East Java.

4. Conclusion

Based on the results of research regarding the relationship between principal leadership behavior and learning supervision on teacher performance at SMAN 5 Taruna Brawijaya, East Java, several conclusions can be drawn. First, effective leadership behavior from school principals has a significant positive impact on teacher performance. Factors such as communication skills, leadership vision, and decision making play a key role in shaping a productive work environment. Second, learning supervision also makes an important positive contribution to teacher performance. Aspects such as monitoring the learning process, fostering teacher professionalism, and supporting learning innovation are key factors in improving the quality of teaching.

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