

The Influence of Principal's Academic Supervision and Performance on The Learning Effectiveness of Senior High School Teachers

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ABSTRACT

Learning effectiveness is the relationship between the objectives and outcomes of a learning. The completion of learning outcomes indicates the achievement of the planned learning objectives so that learning is said to be effective. This study aims to determine the effect of Principal Academic Supervision and Performance on the Effectiveness of Learning of Teachers at Tondano State Senior High School, Minahasa Regency: Principal academic supervision has a significant effect on the effectiveness of learning of teachers at Tondano State Senior High School, Minahasa Regency. High School, Minahasa Regency. The population in this study were teachers at Tondano State Senior High School, Minahasa Regency with a sample of 89 teachers. The method used is regression. The data of this study were collected using a questionnaire technique and analyzed using simple and multiple regression techniques tabulated with the SPSS for Windows version 25 program. The results of the study: there is a significant influence between the principal's academic supervision on the effectiveness of teacher learning at Tondano State Senior High School, Minahasa Regency. It is recommended: The effectiveness of teacher learning at Tondano State Senior High School, Minahasa Regency needs to be improved continuously. The principal of Tondano State Senior High School, Minahasa Regency, controls good academic supervision in supporting maximum teacher performance and effectiveness of learning. can improve learning effectiveness optimally.

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INTRODUCTION

Education is a process in which a person acquires knowledge (knowledge acquisition), develops abilities/skills (skills developments), and attitudes or changes attitudes (attitude of change). This process can be obtained through the effectiveness of

learning in schools. The effectiveness of learning is the result of use obtained after the implementation of the teaching and learning process. In order for the effectiveness of learning to be achieved, there are several supporting factors, including the managerial ability of the principal and teacher performance.

Mogea T (2022) stated that the world of education plays an important role in improving the quality of human resources so that the world of education must be oriented towards the quality assurance process through leadership and institutional performance in this case the principal and teachers.

The principal is one of the most important components of education in improving the quality of education and the effectiveness of learning in schools because the principal is responsible for micro-management of education, which is directly related to the learning process in schools. This is emphasized by Mulyasa (2006) that professional principals in the new paradigm of educational management will provide a positive impact and quite fundamental changes in the renewal of the education system in schools.

Realizing this, the principal is faced with the challenge of making changes and developing education in a planned, directed, and sustainable manner to improve the quality of graduates and the effectiveness of learning in schools. To realize this intention, the principal as the highest leader in the school must be able to become an academic supervisor for teachers in the school because this is very influential and even very decisive in the progress and effectiveness of learning in schools.

Academic supervision according to Arikunto (2009) is supervision that emphasizes observation during the academic period, namely that which is directly within the scope of learning activities carried out by teachers to help students during the learning process. Based on this opinion, academic supervision is an activity to directly assist teachers in managing the learning process to achieve academic goals. Teachers really need supervision from the principal or a supervisor who will evaluate. The role of the principal is not only as a leader, but also as a supervisor for teachers in schools in guiding, planning, implementing and conducting evaluations and follow-ups so that they can create improvements in teaching and the effectiveness of learning in schools. In addition, other factors that can support the effectiveness of learning in schools are the performance factors of teachers in the school. Teacher performance is an achievement that can be achieved by a teacher based on certain criteria and measuring tools that can be demonstrated by the teacher. Teacher performance is the result that can be achieved in carrying out the tasks assigned to the teacher based on skills, experience, and sincerity and the time available. The form of teacher performance is realized by competence, namely (1) pedagogical is the ability to manage student learning; (2) personality is a solid personality, has noble morals, and is authoritative and is a role model for students; (3) professional is the ability to master subject matter broadly and deeply; and (4) social is the teacher's ability to communicate and interact effectively and efficiently with students, fellow teachers, parents/guardians of students and the surrounding community.

Waworuntu (2020) stated that in the world of education, teacher performance can determine the quality of education. Tambingon (2019) further stated that the role of teachers in learning activities is very dominant, therefore teachers must be able to develop themselves along with the rapid development of science and technology.

Based on the description, it is suspected that the principal's academic supervision and performance can influence the effectiveness of teacher learning in schools, especially SMA Negeri Tondano, Minahasa Regency. Where the effectiveness

of learning is the relationship between the goals and results of learning. According to Warsita (2008), effective learning is learning that allows students to learn easily, enjoyably, and can achieve learning goals according to expectations. Meanwhile, according to Josly Tintigon (2022) "Effective learning encompasses all learning objectives, both mental, physical and social." Therefore, to realize the effectiveness of learning in schools, academic supervision of the principal and teacher performance is required.

However, in reality, based on the results of observations in the field, namely Senior High Schools in Tondano, Minahasa Regency, the effectiveness of learning has not been fully maximized. This can be seen from the learning process carried out by some educators who still carry out the learning process conventionally, some of them have not mastered information technology such as computers and the internet, especially teachers who have served for a long time. The factor of damage to classroom facilities/infrastructure in large numbers also affects the effectiveness of learning. Another problem found is the low quality of human resources managing education which can also hinder the effectiveness of learning in schools.

Other problems are that the principal has not carried out his role as an academic supervisor in the school, the academic supervision carried out by the principal is not optimal, and the guidance given by the principal to teachers is not optimal. From the teacher's side, the performance of teachers at State Senior High Schools in Tondano, Minahasa Regency is not optimal and measurable and low teacher performance is still found in implementing learning, lack of contribution teachers to improve their performance by applying four competencies that must be possessed, such as pedagogical, personality, professional and social competencies in creating conducive, enjoyable, effective and efficient learning effectiveness. The problem of the principal's academic supervision and performance can influence the effectiveness of the learning of teachers at Tondano State High School, Minahasa Regency.

METHOD

The method used in this research is a quantitative method with techniques redouble gression, which aims to know and analyze the influence of the principal's academic supervision and performance on the effectiveness of teacher learning at Tondano State Senior High School, Minahasa Regency, with a sample size of 89 samples from a total population of 120 using Proportionate Stratified Random Sampling if the population has members or elements that are not homogeneous and are stratified proportionally.

To obtain data related to the variables in this study, a data collection technique using a questionnaire or survey was used. This questionnaire was used to find out employee responses or opinions regarding Principal's academic supervision and performance on the effectiveness of teacher learning at Tondano State Senior High School, Minahasa Regency.

Testing of analysis prerequisites, using the Data normality test can be done through the help of the SPSS version 25 program using the Kolmogorov-Smirnov test. The linearity test aims to determine whether two variables have a linear relationship or not significantly. This test is usually used for prerequisites in correlation analysis or linear regression. To detect the presence of a linear relationship between X1, X2, and Y, a linearity test is carried out with the help of the SPSS version 25 program. If there is a symptom of multicollinearity in the equation model, it means that the independent

variables are correlated. "A good regression model actually does not have a correlation between independent variables. To detect the presence or absence of multicollinearity, it can be seen from the variance inflation factor (VIF) and tolerance values. A regression model that is free from multicollinearity is one that has a VIF value <10 and a tolerance number > 0.1 . If the VIF value > 10 and the tolerance value < 0.1 , then there is a symptom of multicollinearity.

To test hypothesis I (the principal's academic supervision has a significant effect on the effectiveness of the learning of teachers at Tondano State Senior High School, Minahasa Regency) and hypothesis II (performance has a significant effect on the effectiveness of the learning of teachers at Tondano State Senior High School, Minahasa Regency). To test hypothesis III using a regression test with the aim of finding out whether the principal's academic supervision and performance have a significant effect on the effectiveness of the learning of teachers at Tondano State Senior High School, Minahasa Regency.

RESULT AND DISCUSSION

Hypothesis I. Is there a significant influence of the principal's academic supervision () on the effectiveness of the learning of teachers at Tondano State Senior High School, Minahasa Regency (Y)X₁

Table 1. ANOVA of Principal's Academic Supervision () Has a Significant Influence on the Effectiveness of Teacher Learning at Tondano State Senior High School, Minahasa Regency (Y)X₁

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5482,546	1	5482,546	37,301	,000b
	Residual	12787,206	87	146,979		
	Total	18269,753	88			

a. Dependent Variable: EFFECTIVENESS OF TEACHERS' LEARNING AT STATE SENIOR HIGH SCHOOL TONDANO, MINAHASA REGENCY

b. Predictors: (Constant), PRINCIPAL'S ACADEMIC SUPERVISION

Table 2. The Principal's Academic Supervision Coefficient () Has a Significant Influence on the Effectiveness of Teacher Learning at Tondano State Senior High School, Minahasa Regency (Y)X₁

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	93,176	9,423		9,888	,000
	PRINCIPAL'S ACADEMIC SUPERVISION	,390	,064	,548	6,107	,000

a. Dependent Variable: EFFECTIVENESS OF TEACHERS' LEARNING AT STATE SENIOR HIGH SCHOOL TONDANO, MINAHASA REGENCY

Calculating a simple regression equation:

$$\hat{Y} = a + bX$$

Where a is a constant and b is the regression coefficient. In the coefficient table it can be seen that the constant $a = 93.176$ and the regression coefficient $b = 0.390$. Thus the regression equation against X can be written as follows: $\hat{Y}$

$$\hat{Y} = 93.176 + 0.390 (X_1)$$

For significance testing, in the anova table of Y regression against X it is seen that the price = 37.301 price with degrees of freedom numerator 1 and denominator 87 at a significance level of 5% = 3.95. By comparing the two F prices it is seen that $>$. This shows that the regression equation = 93.176 + 0.390 is very significant. Every increase in the principal's academic supervision by 1 causes the effectiveness of the learning of SMA Negeri Tondano teachers in Minahasa Regency r to increase by 0.390 at a constant of 93.176. $F_{hitung} F_{tabel} F_{hitung} F_{tabel} \hat{Y} X_1$

The next test is the partial correlation test. In partial correlation using control variables (Z) or controlling variables (constant or fixed values). The use of control variables in correlation analysis aims to determine whether the relationship between variables X and Y is controlled or influenced by the control variable or not. In this study, it will be tested whether the relationship between the Principal's Academic Supervision variable (X_1) and the Effectiveness of Teacher Learning at Tondano State Senior High School, Minahasa Regency (Y) is controlled or influenced by the Performance variable or not. X_1

The relationship formed between variables can be positive or negative. This can be seen based on the correlation coefficient value from the analysis results whether it is plus (+) or minus (-). A positive relationship means that if variable X increases, variable Y will also increase. While a negative relationship means that if variable X decreases, variable Y will increase or vice versa.

The basis for making decisions regarding partial correlation tests is as follows:

1. If the Significance value (2-tailed) > 0.05 , then H_0 is accepted and H_a is rejected. This means that the relationship between the Principal's Academic Supervision and the Effectiveness of Teacher Learning at Tondano State Senior High School, Minahasa Regency with Performance as a control variable is not significant.
2. If the significance value (2-tailed) < 0.05 , then H_0 is rejected and H_a is accepted. This means that the relationship between the Principal's Academic Supervision and the Effectiveness of Teacher Learning at Tondano State Senior High School, Minahasa Regency with Performance as a control variable is significant.

Table 3. Descriptive Statistics of Partial Correlation Test of the Relationship between Principal's Academic Supervision and the Effectiveness of Teacher Learning at Tondano State Senior High School, Minahasa Regency with Performance

	Mean	Std. Deviation	N
PRINCIPAL'S ACADEMIC SUPERVISION	146.16	20,234	89
EFFECTIVENESS OF TEACHERS' LEARNING AT STATE SENIOR HIGH SCHOOL TONDANO, MINAHASA REGENCY	150.19	14,409	89
PERFORMANCE	147.26	13,019	89

Table 4. Correlation of Partial Correlation Test of the Relationship between Principal's Academic Supervision and the Effectiveness of Teacher Learning at Tondano State Senior High School, Minahasa Regency with Performance

Control Variables			PRINCIPAL'S ACADEMIC SUPERVISION	EFFECTIVENESS OF TEACHERS' LEARNING AT STATE SENIOR HIGH SCHOOL TONDANO, MINAHASA REGENCY	PERFORMANCE
-none-a	PRINCIPAL'S ACADEMIC SUPERVISION	Correlation	1,000	,548	,334
		Significance (2-tailed)	.	,000	,001
		df	0	87	87
	EFFECTIVENESS OF TEACHERS' LEARNING AT STATE SENIOR HIGH SCHOOL TONDANO, MINAHASA REGENCY	Correlation	,548	1,000	,402
		Significance (2-tailed)	,000	.	,000
		df	87	0	87
	PERFORMANCE	Correlation	,334	,402	1,000
		Significance (2-tailed)	,001	,000	.
		df	87	87	0
PERFO	PRINCIPAL'S	Correlation	1,000	,479	

RMAN CE	ACADEMIC SUPERVISION	Significance (2- tailed)	.	,000	
		df	0	86	
	EFFECTIVENESS OF TEACHERS' LEARNING AT STATE SENIOR HIGH SCHOOL TONDANO, MINAHASA REGENCY	Correlation	,479	1,000	
		Significance (2- tailed)	,000	.	
		df	86	0	

a. Cells contain zero-order (Pearson) correlations.

The descriptive statistical output table provides us with information about the summary of descriptive statistical values or data descriptions for the three variables including Mean (average value), Standard Deviation (standard deviation) and N or the number of samples used in this study.

The first correlation output table “none-a” shows the correlation value between the Principal’s Academic Supervision variable and the Effectiveness of Teacher Learning at Tondano State Senior High School, Minahasa Regency before the control variable (Performance) is included in the analysis. From this output, the correlation coefficient value is 0.548 (positive) and the significance value (2-tailed) is 0.000 < 0.05, so it can be concluded that there is a positive and significant relationship between the Principal’s Academic Supervision and the Effectiveness of Teacher Learning at Tondano State Senior High School, Minahasa Regency without the control variable (Performance). Meanwhile, the correlation value of 0.548 is included in the strong category.

The second output table of the Effectiveness of Teacher Learning of Tondano State Senior High School, Minahasa Regency shows the correlation value between the Principal’s Academic Supervision variable and the Effectiveness of Teacher Learning of Tondano State Senior High School, Minahasa Regency after entering the control variable (Performance) into the analysis. From this table, it can be seen that there is a decrease in the correlation coefficient value to 0.479 and the Significance value (2-tailed) of 0.000 < 0.05, so H_0 is rejected and H_a is accepted, which means that the relationship between the Principal’s Academic Supervision and the Effectiveness of Teacher Learning of Tondano State Senior High School, Minahasa Regency with Performance as a significant control variable.

From the results of the study conducted on teachers of Tondano State Senior High School, Minahasa Regency, it shows that there is a significant influence between the principal’s academic supervision (X_1) on the effectiveness of teacher learning at Tondano State Senior High School, Minahasa Regency (Y). This illustrates that the higher the principal’s academic supervision, the higher the effectiveness of teacher learning. The same study was conducted by Dewi Nurpuspitasari, Sumardi, Rais Hidayat, and Sutji Harijanto (2019) the results of the study showed a very significant positive relationship between academic supervision (X_1) and learning effectiveness (Y). $X_1 X_1$

Hypothesis 2. Is there a significant influence of performance () on the effectiveness of learning of Tondano State Senior High School teachers, Minahasa Regency (Y)X₂

Table 5. ANOVA Performance () Has a Significant Influence on the Effectiveness of Learning of Tondano State Senior High School Teachers, Minahasa RegencyX₂

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2951,246	1	2951,246	16,761	,000b
	Residual	15318,506	87	176,075		
	Total	18269,753	88			

a. Dependent Variable: EFFECTIVENESS OF TEACHERS' LEARNING AT STATE SENIOR HIGH SCHOOL TONDANO, MINAHASA REGENCY

b. Predictors: (Constant), PERFORMANCE

Table 6. Performance Coefficient () Has a Significant Influence on the Effectiveness of Learning of Tondano State Senior High School Teachers, Minahasa RegencyX₂

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	84,687	16,062		5,273	,000
	PERFOR MANCE	,445	,109	,402	4,094	,000

a. Dependent Variable: EFFECTIVENESS OF TEACHERS' LEARNING AT STATE SENIOR HIGH SCHOOL TONDANO, MINAHASA REGENCY

Calculating a simple regression equation:

$$\hat{Y} = a + bX$$

Where a is a constant and b is the regression coefficient. In the coefficient table it can be seen that the constant a = 84.687 and the regression coefficient = 0.445. Thus the regression equation against X can be written as follows: $\hat{Y}$

$$\hat{Y} = 84.687 + 0.445 (X_2)$$

For significance testing, in the anova table of Y regression against X it is seen that the price = 16.761 price with degrees of freedom numerator 1 and denominator 87 at a significance level of 5% = 3.95. By comparing the two F prices it is seen that > . This shows that the regression equation = 84.687 + 0.445 is very significant. Every increase in performance of 1 causes the effectiveness of learning of SMA Negeri Tondano teachers in Minahasa Regency r to increase by 0.445 at a constant of 84.687. $F_{hitung} F_{tabel} F_{hitung} F_{tabel} \hat{Y} X_2$

The next test is the partial correlation test. In partial correlation using control variables (Z) or controlling variables (constant or fixed values). The use of control variables in correlation analysis aims to determine the relationship that occurs between variables X and Y is controlled or influenced by the control variable or not. In this study, it will be tested whether the relationship that occurs between the Performance variable () with the Effectiveness of Teacher Learning at Tondano State Senior High School, Minahasa Regency (Y) is controlled or influenced by the Principal's Academic Supervision variable or not. X_2

The relationship formed between variables can be positive or negative. This can be seen based on the correlation coefficient value from the analysis results whether it is plus (+) or minus (-). A positive relationship means that if variable X increases, variable

Y will also increase. While a negative relationship means that if variable X decreases, variable Y will increase or vice versa.

The basis for making decisions regarding partial correlation tests is as follows:

1. If the Significance value (2-tailed) > 0.05 , then H_0 is accepted and H_a is rejected. This means that the relationship between Performance and Effectiveness of Learning of Tondano State Senior High School Teachers, Minahasa Regency with Principal Academic Supervision as a control variable is not significant.
2. If the significance value (2-tailed) < 0.05 , then H_0 is rejected and H_a is accepted. This means that the relationship between Performance and Effectiveness of Learning of Tondano State Senior High School Teachers, Minahasa Regency with Principal Academic Supervision as a control variable is significant.

Table 7. Descriptive Statistics of Partial Correlation Test of the Relationship Between Performance and Effectiveness of Learning of Tondano State Senior High School Teachers, Minahasa Regency with Principal's Academic Supervision

	Mean	Std. Deviation	N
PERFORMANCE	147.26	13,019	89
EFFECTIVENESS OF TEACHERS' LEARNING AT STATE SENIOR HIGH SCHOOL TONDANO, MINAHASA REGENCY	150.19	14,409	89
PRINCIPAL'S ACADEMIC SUPERVISION	146.16	20,234	89

Table 8. Partial Correlation Test Correlation of the Relationship Between Performance and Effectiveness of Learning of Tondano State Senior High School Teachers, Minahasa Regency with the Principal's Academic Supervision

Control Variables			PERFORMANCE	EFFECTIVENESS OF TEACHERS' LEARNING AT STATE SENIOR HIGH SCHOOL TONDANO, MINAHASA REGENCY	PRINCIPAL'S ACADEMIC SUPERVISION
-none-a	PERFORMANCE	Correlation	1,000	,402	,334
		Significance (2-tailed)	.	,000	,001
		df	0	87	87
	EFFECTIVE	Correlation	,402	1,000	,548

	NESS OF TEACHERS' LEARNING AT STATE SENIOR HIGH SCHOOL TONDANO, MINAHASA REGENCY	Significance (2- tailed)	,000	.	,000
		df	87	0	87
	PRINCIPAL'S ACADEMIC SUPERVISION	Correlation	,334	,548	1,000
		Significance (2- tailed)	,001	,000	.
		df	87	87	0
	PRINCIPAL'S ACADEMIC SUPERVISION	PERFORMANCE	Correlation	1,000	,278
			Significance (2- tailed)	.	,009
			df	0	86
		EFFECTIVENESS OF TEACHERS' LEARNING AT STATE SENIOR HIGH SCHOOL TONDANO, MINAHASA REGENCY	Correlation	,278	1,000
			Significance (2- tailed)	,009	.
			df	86	0

a. Cells contain zero-order (Pearson) correlations.

The descriptive statistical output table provides us with information about the summary of descriptive statistical values or data descriptions for the three variables including Mean (average value), Standard Deviation (standard deviation) and N or the number of samples used in this study.

The first correlation output table “none-a” shows the correlation value between the Performance variable and the Effectiveness of Teacher Learning of Tondano State Senior High School Teachers, Minahasa Regency before the control variable (Principal Academic Supervision) is included in the analysis. From this output, the correlation coefficient value is 0.402 (positive) and the Significance value (2-tailed) is 0.000 < 0.05, so it can be concluded that there is a positive and significant relationship between Performance and the Effectiveness of Teacher Learning of Tondano State Senior High School Teachers, Minahasa Regency without the control variable (Principal Academic Supervision). Meanwhile, the correlation value of 0.402 is included in the strong category.

The second output table of the Effectiveness of Teacher Learning of Tondano State Senior High School Teachers, Minahasa Regency shows the correlation value

between the Performance variable and the Effectiveness of Teacher Learning of Tondano State Senior High School Teachers, Minahasa Regency after the control variable (Principal Academic Supervision) was entered into the analysis. From this table, it can be seen that there was a decrease in the correlation coefficient value to 0.278 (positive) and the Significance value (2-tailed) of $0.009 < 0.05$, so H_0 is rejected and H_a is accepted, which means that the relationship between Performance and the Effectiveness of Teacher Learning of Tondano State Senior High School Teachers, Minahasa Regency with Principal Academic Supervision as a control variable is significant.

From the results of the study conducted on teachers of Tondano State High School, Minahasa Regency, it was shown that there was a significant influence between performance (X) on the effectiveness of learning of teachers of Tondano State High School, Minahasa Regency (Y). This illustrates that the higher the performance, the higher the effectiveness of teacher learning in the classroom. The same study was conducted by Etika Septiyana (2022) and the results of the study showed a very significant positive relationship between performance (X) and the effectiveness of learning of teachers of Tondano State High School, Minahasa Regency (Y). $X_2 X_2$

Hypothesis 3. Is there a significant influence between the principal's academic supervision (X) and performance (X) on the effectiveness of learning of teachers at Tondano State Senior High School, Minahasa Regency (Y) $X_1 X_2$

Multiple regression analysis aims to see the relationship between variables, together with variable Y. $X_1 X_2$

Table 9. ANOVA of Principal's Academic Supervision (X) and Performance (X) Have a Significant Influence on the Effectiveness of Teacher Learning at Tondano State Senior High School, Minahasa Regency (Y) $X_1 X_2$

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6469,637	2	3234,819	23,576	,000b
	Residual	11800,116	86	137,211		
	Total	18269,753	88			

a. Dependent Variable: EFFECTIVENESS OF TEACHERS' LEARNING AT STATE SENIOR HIGH SCHOOL TONDANO, MINAHASA REGENCY

b. Predictors: (Constant), PERFORMANCE, PRINCIPAL'S ACADEMIC SUPERVISION

Table 10. The Principal's Academic Supervision Coefficient (X) and Performance (X) Have a Significant Influence on the Effectiveness of Teacher Learning at Tondano State Senior High School, Minahasa Regency (Y) $X_1 X_2$

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	61,553	14,896		4,132	,000
	PRINCIPAL'S ACADEMIC SUPERVISION	,332	,065	,466	5,064	,000
	PERFORMANCE	,273	,102	,247	2,682	,009

a. Dependent Variable: EFFECTIVENESS OF TEACHERS' LEARNING AT STATE SENIOR HIGH SCHOOL TONDANO, MINAHASA REGENCY

Calculating the multiple regression equation:

$$\hat{Y} = a + b_1X_1 + b_2X_2$$

Where a is a constant and b is the regression coefficient. In the coefficient table it can be seen that the constant a = 61.553 and the regression coefficient = 0.332, 0.273. Thus the regression equation against X can be written as follows:

$$\hat{Y} = 61.553 + 0.332(X_1) + 0.273(X_2)$$

For significance testing, in the anova table of Y regression against X it is seen that the price = 23.576 price with degrees of freedom of the numerator 2 and the denominator 86 at a significance level of 5% = 3.10. By comparing the two F prices it is seen that > . This shows that the regression equation = 61.553 + 0.332 () + 0.273 () is very significant. $F_{hitung} > F_{tabel}$

Thus, from the results of this test, it can be concluded that the hypothesis is accepted, namely that there is a significant influence between the principal's academic supervision () and performance () on the effectiveness of teacher learning at Tondano State Senior High School, Minahasa Regency (Y). The coefficient of determination is = 0.354, indicating that 35.4% of the variation that occurs in the variable of teacher learning effectiveness at Tondano State Senior High School, Minahasa Regency (Y) can be explained by the variables of the principal's academic supervision () and performance (). $R^2 = 0.354$

Together, the principal's academic supervision () and performance () have a very significant effect on the effectiveness of the learning of teachers at Tondano State Senior High School, Minahasa Regency (Y). This indicates that the higher the academic supervision and performance, the higher the effectiveness of a teacher's learning. These results are in accordance with previous research conducted by Etika Septiyana (2022) where there was a significant influence of the principal's academic supervision () and performance () together on the effectiveness of the learning of teachers at Tondano State Senior High School, Minahasa Regency (Y). $F_{hitung} > F_{tabel}$

Table 11. Coefficient of Determination of Principal's Academic Supervision () on the Effectiveness of Teacher Learning at Tondano State Senior High School, Minahasa Regency (Y)

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.548a	.300	.292	12,124

a. Predictors: (Constant), PRINCIPAL'S ACADEMIC SUPERVISION

Based on the results explaining the magnitude of the correlation or relationship value (R) which is 0.548, from these results the coefficient of determination () is obtained as much as 0.300 which means that the variable of academic supervision of the principal () contributes to the effectiveness of learning of teachers at Tondano State Senior High School, Minahasa Regency (Y) is 30.0%, the rest is influenced by other factors that were not studied. $R^2 = 0.300$

Table 12. Performance Determination Coefficient () on the Effectiveness of Learning of Tondano State Senior High School Teachers, Minahasa Regency (Y)X₂

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,402a	,162	,152	13,269

a. Predictors: (Constant), PERFORMANCE

Based on the results explaining the magnitude of the correlation or relationship value (R) which is 0.402, from these results the determination coefficient () is obtained as much as 0.162 which means that the performance variable () contributes to the effectiveness of learning of Tondano State Senior High School teachers, Minahasa Regency (Y) is 16.2%, the rest is influenced by other factors that were not studied. $R_{\text{square}X_2}$

Table 13. Coefficient of Determination of Principal's Academic Supervision () and Performance () on the Effectiveness of Teacher Learning at Tondano State Senior High School, Minahasa Regency (Y)X₁X₂

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,595a	,354	,339	11,714

a. Predictors: (Constant), PERFORMANCE, PRINCIPAL'S ACADEMIC SUPERVISION

Based on the results explaining the magnitude of the correlation or relationship value (R) which is 0.595, from these results the determination coefficient () is obtained as much as 0.354 which means that the principal's academic supervision () and performance () contribute to the effectiveness of learning for teachers at Tondano State High School, Minahasa Regency (Y) is 35.4%, the rest is influenced by other factors that were not studied. $R_{\text{square}X_1X_2}$

CONCLUSION

The principal's academic supervision () contributes significantly and positively to the effectiveness of the learning of teachers at Tondano State Senior High School, Minahasa Regency (Y), so that the higher the principal's academic supervision, the more effective the learning of teachers at Tondano State Senior High School, Minahasa Regency will be. X_1

Performance () contributes significantly and positively to the effectiveness of learning of teachers at Tondano State Senior High School, Minahasa Regency (Y), so that the higher the performance, the more effective the learning of teachers at Tondano State Senior High School, Minahasa Regency. X_2

The principal's academic supervision () and performance () contribute significantly and positively simultaneously or together to the effectiveness of the learning of teachers at Tondano State Senior High School, Minahasa Regency (Y), so that the higher the quality of the principal's academic supervision and performance

will increase the effectiveness of the learning of teachers at Tondano State Senior High School, Minahasa Regency. X_1X_2

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