

Research Article

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The Influence of Leadership: Learning Organization on Performance Through Professional Learning Communities at High School of Papua Province

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Abstract

Background. Educator performance is an important thing in efforts to improve the quality of education, so a forum is needed to build teacher competency that leads to improved teacher performance in planning, implementing, and evaluating the learning process in the classroom. Professional learning communities are one of the efforts to improved performance, so it is necessary to know what components can accelerate the information of professional learning communities. Other factors in improving performance depend on leadership style, learning organization and motivation. The purpose of this research is (1) to find out the direct influence of leadership for learning, learning organization, and motivation on performance; (2) to find out the indirect influence of leadership for learning, learning organization, and motivation on performance through professional learning communities, etc.

Material/Methods. The research method is quantitative and an ex post facto approach, or one conducted after the fact. The sample consisted of 189 teachers from fourteen high schools in Papua Province, Indonesia. The research method used is survey. The population comes from educators at the Penggerak School in Papua Province totaling 358 people. The sampling technique used is stratified proportional Random Sampling. This sampling technique is used because the population has educational qualification strata. The result of the sample calculation is 189. The instrument used is a questionnaire. The empirical model test is carried out using the Q distribution, continued to the Chi-Square or W-count, if the model is not found to be a good fit. The mediating variable is tested using the Sobel Test.

Result. The results of the study show that (1) leadership for learning, learning organization, and teacher motivation influence the formation of professional learning communities; (2) leadership for learning and learning organizations influence teacher performance. The greatest influence, both directly and indirectly, is the learning organization. Learning organization variables enable effective learning communities.

Conclusion. The conclusions that can be put forward are : (1) learning organization can build effective professional learning communities; (2) the most influential variable in improving teacher performance is building learning organization; (3) another variable in improving teacher performance is leadership for learning style; and (4) the variable that has the lowest influence on teacher performance is teacher motivation.



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1. Introduction

Efforts to provide quality education services and produce graduates are not easy because they are influenced by various interrelated factors, such as human resources (HR), facilities and infrastructure, budget, governance systems, and education administration. If analyzed carefully, HR is a very decisive, important and strategic determinant. This idea is crucial to emphasize that proper infrastructure, a sound budget, effective governance systems, and quality education administration can ensure the implementation of quality services and graduates, provided high-quality human resources support them. Therefore, educator performance is one of the key parameters that can be used to measure the quality of educational services. Thus, performance is seen as an issue that must be studied rationally and objectively. Other factors that need to be considered to improve teacher performance include the leadership style employed by the principal, the work environment, work culture, discipline, job satisfaction, and motivation of all teachers working at the school. Generally, it can be stated that teacher performance improvement is influenced by both external and internal factors (Anggraeni, 2021). Teacher performance, as a parameter for evaluating the quality of service and the quality of graduates, must be studied and analyzed carefully, both in relation to internal and external factors that can theoretically improve or enhance the performance of an individual or a performance unit. External factors include leadership style, work environment, organizational culture, income or salary, and facilities and infrastructure owned by the school (Munawir et al., 2022).

This study is based on problems related to teacher performance in Papua Province, in the Republic of Indonesia. The results of the observation indicate that only 35% of teachers are able to implement innovative and engaging learning activities. Fifty percent of teachers implement monotonous learning that fails to address student needs, while the remaining 15% do not understand the application of fun and innovative learning at all. This data illustrates that teacher performance in Papua Province still needs improvement.

In some schools, teacher performance remains relatively low, despite the Principal's efforts to create a supportive school climate or environment that fosters the learning process; however, these efforts have not yielded maximum results. One of the steps taken to improve teacher performance is to establish a professional learning community, with the hope that an effective professional learning community will strengthen leadership for learning.

The professional learning community as a forum for collaboration of all teachers in Papua Province as a place to discuss any obstacles faced when implementing learning in the classroom; in addition, as a place for teachers to develop themselves, build self-confidence, gain new knowledge and build good communication (Prenger et al., 2019). The professional learning community is considered capable of bridging the principal's role in improving teacher performance.

Studies on the influence of professional learning communities on teacher performance still found some differences, for example, in Oromia State, Ethiopia, which found that professional learning communities could not improve teachers' academic abilities. Additionally, it has not been able to enhance teachers' ability to effectively implement the curriculum in the classroom, which can also improve the quality of learning. (Geletu & Mihiretie, 2023). The challenges faced in forming a professional learning community include a school culture that is not aligned with the principles of a professional learning community, as well as a lack of support from experts and principals, and a school management that does not support the implementation of a professional learning community. The principal, as the leader of the professional learning community, must be able to facilitate all teachers' involvement in the community. The purpose of this research is to determine the direct influence of leadership for learning, learning organizations, and motivation on performance; (2) to determine the indirect influence of leadership for learning, learning organizations, and motivation on performance through professional learning communities.

2. Theoretical Framework

2.1. Performance

Educator performance is one of the important factors in creating quality education. Schools do everything they can to improve the quality of educators. The concept of performance used in the study encompasses work quality, speed and accuracy of work, initiative in work, ability, and communication, which are indicators that form performance variables (Mitchell & Larson, 1987). Some definitions of performance are that it is the extent to which individuals have carried out their roles in implementing organizational strategies, both individually and organizationally (Faizah, 2019). Performance refers to the work results that can be achieved by an individual or group within an organization, in accordance with the authority and responsibility they have, and the efforts made to achieve organizational goals legally, based on law, ethics, and morals. Performance is the result of work, in terms of both quality and quantity, that an employee achieves by carrying out their duties and functions with full responsibility (Rabiah, 2019). Educator performance is the success of educators in planning, implementing, and evaluating learning activities (Kusumaningrum et al., 2019). Educator performance is the result of work that has been completed with full responsibility (Sebayang & Rajagukguk, 2019). It can be stated that the definition of performance is the success of educators in carrying out the learning process and utilizing learning strategies with full responsibility, thereby obtaining work results that are not only of high quality but also of quantity, in accordance with ethical and moral standards.

2.2. Leadership for Learning

Theoretically, the concept of leadership for learning has not been widely put forward, several experts mention the concept of leadership for learning, among others, the concept of leadership for learning is that leadership activities are not the domain of the principal but have become the responsibility of all members of the organization, in the sense that leadership for learning is a rational activity that focuses on learning, involving everyone who has the potential to provide a positive impact on learning in schools (Scott Marsh, 2012) (Adams & Yusoff, 2019). The concept of leadership for learning focuses on two key areas: the first is curriculum, teaching, and learning, while the second encompasses finance, organization, and administration, all of which work together to improve student learning outcomes (Murphy et al., 2007). Another concept conveyed is that leadership for learning is viewed as a process in which all components and school communities actively participate in improving learning, as emphasized by Scott Marsh (2012).

The process of forming leadership for learning encompasses four types of leadership: instructional leadership, distributive leadership, situational leadership, and transformational leadership, thereby forming a comprehensive approach to leadership for learning. Dimensions leadership for learning teaching program, curricular program, assessment program, learning vision, learning community, team-oriented, various leadership sources, utilizing resources, organizational culture, and environmental context. Several dimensions on leadership can be seen in picture 1.

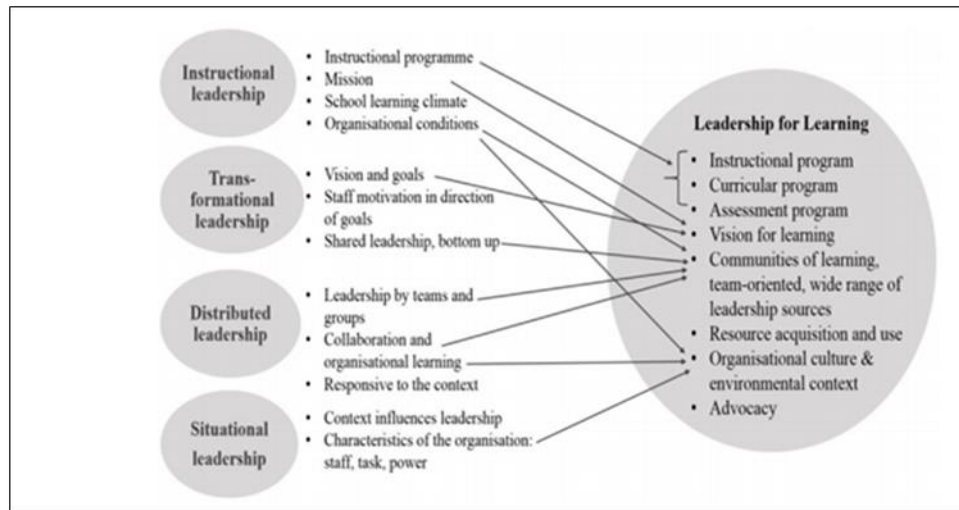


Figure 1. Relationship between Four Leadership Styles and Leadership for Learning

Note : The Relationship between Instructional, Transformational, Distributed and Conditional Leadership with Leadership for Learners (The figure is built on (Aas & Brandmo, 2016; Bas & Riggio, 2006; Gronn, 2002; Hallinger, 2003; Hallinger, 2011; Harris & De Flaminis, 2016; Murphy et al., 2007; Robinson, 2008; Spilane, 2006; Matahari & Leithwood, 2012; Thompson & Glaso, 2015), (Daniëls et al., 2019)

Leadership for learning is a leader who guides and trains to create a learning culture that fosters a learning organizational culture (Ellinger, 2020).



Figure 2. Model Synthesis of Leadership for Learning (Hallinger, 2011).

Figure 2 shows the leadership model for learning presented by Philip Hallinger (2011), namely leadership that is emphasized in the context of the organization and its environment. Leaders for learning have values of belief and experience of knowledge that then determine the vision and goals of the school, academic structures and processes, the capacity of educators who will then interact with quality students. The leadership model for learning emphasizes that leaders need to be open to the community, institutions, and social culture. Leaders are expected to be able to respond to obstacles and opportunities in schools and their environment, this is related to the formation of school culture. The personal character of the leader also influences leadership for learning. The values held by the leader also influence values such as trust and knowledge. In the part that leadership does not directly impact student learning, but its impact is mediated by the process and conditions at the school level.

So it can be stated that the definition of leadership for learning is the power that leaders have to activate the entire potential of the community in the school to improve the learning process for students.

2.3. Learning Organization

Several definitions of learning organizations put forward by several experts are as follows: the definition of a learning organization is an organization that has adaptive capacity and generativity capacity, namely the ability to produce alternative futures (Senge, 1990); (Yang et al., 2004). A learning organization is an organization that facilitates learning for all its members, enabling them to make organizational changes and achieve their strategic goals (Burgoyne & Jhon, 1992). It is also stated that a learning organization is an organization that is able to adapt to environmental changes and continues to encourage its members to continue learning (Malik & Garg, 2020). A learning organization is an organization where high-quality individuals gather to create, acquire, and implement changes or transformations in knowledge (Garvin et al., 2008).

At the individual, team, and organizational levels, seven dimensions of learning organizations have been identified, namely continuous learning, research and dialogue, team learning, empowerment, embedded systems, system connections, and strategic leadership (Marsick & Watkins, 2003; Yang et al., 2004). A learning organization is a norm, pattern, or value that an organization must adopt to engage in continuous learning, producing new knowledge that informs changes and transformations in response to environmental conditions.

2.4. Motivation

Motivation is a collection of attitudes and values that influence individuals to achieve something in accordance with their individual goals. In other words, these attitudes and values serve as a force to encourage individuals to behave in ways that achieve certain goals (Gusman, 2014). Motivation is a person's strength that enables them to provide a level of willingness to carry out an activity (Suharni, 2021). Maslow believed that individuals would only satisfy higher-level needs after they had satisfied lower-level needs (Huang, 2024). Motivation is a driving force that encourages someone to do something (Ihensekien & Joel, 2023). Therefore, it can be stated that the definition of Motivation is an internal urge that is influenced by the need to achieve certain goals.

2.5. Professional Learning Community

A professional learning community is "a group of educators, prepared and supported to work regularly and collaboratively to enhance the knowledge and skills needed for student effectiveness and learning outcomes (Roland Barth et al, 2005; Glaze-Crampes, 2020).

The definition of a professional learning community is a group of people who have the goal of realizing learning goals, so that each member has the goal of participating (Aslam & Diding Nurdin, 2023).

The process of forming a professional learning community comes from Senge's 1990 learning organization theory in (Pandian et al., 2022). Learning organization theory states that learning organizations are places 'where people will continue to develop their capacity/ability to create the results they want, where new and expansive thinking patterns are continuously fostered, where collective aspirations are liberated, and where people will continue to learn to collaborate or learn together. In his work, Senge distinguishes individual, collaborative and collective aspects of learning organization concept (Senge, 1990) (Admiraal et al., 2021)

There are seven key attributes of an effective professional learning community, namely 1) Student Learning, 2) Shared goals, 3) Teamwork Collaboration, 4) Educator Capacity, 5) Principal Capacity, 6) Professional Development, 7) Continuous Learning (Linda Massey, 2019); (Sutarsih & Saud, 2019). A professional learning community is a forum that fosters a collaborative culture to enhance the competencies and skills necessary to achieve jointly established goals.

3. Research Methods

3.1. Research Design

The research method used is a survey. Survey research is a form of activity that has become a habit in society, and many people have experience with this research in one form or another. Survey research was developed as a form of a positivist approach to the social sciences. As stated by Robert Groves, a leading survey expert, "surveys produce information which is naturally statistical in nature". Surveys are a basic form of quantitative research. Survey research asks several respondents about their beliefs, opinions, characteristics, and behaviors that have occurred or are occurring (Robert M. Groves et al, 2009).

3.2. Population/Sample

The population consists of educators from the Penggerak School in Papua Province, totaling 358 individuals. The sampling technique used is probability sampling, specifically Stratified Proportional Random Sampling (Sugiyono, 2017). Using the technique Stratified Proportional Random Sampling because the population has educational qualification strata, namely S1, S2, and S3. However, the general nature of the population is homogeneous because they have jobs as teachers.

The population consisted of teachers from the Penggerak School in Papua Province, totaling 358 people. The sampling technique used was Stratified Proportional Random Sampling. This sampling technique was used because the population has educational qualification strata, namely bachelor's and master's degrees. The result of the calculation was 189 samples.

The calculation of sample size uses the Yamane/Solven formula. The level of significance in this study is 5%. Below is the Yamane/Solven formula used in this study.

$$n = \frac{N}{1+N(e^2)} \dots\dots\dots(1)$$

Where:

n: number of samples

N: population size

e: error tolerance limit (0.05)

As described above, the population size is N = 358, resulting in 189 samples. The population is spread across 14 SMA Penggerak in Papua Province. The qualifications of teachers in the 14 SMA Penggerak vary, namely bachelor's, master's, and doctoral degrees. Thus, the most suitable sampling method is Stratified Proportional Random Sampling. Table 1 below presents the distribution of teacher samples based on their qualifications.

Table 1. Calculation Based on Educational Qualifications

No	Qualifications	Amount	Amount based on proportionality
1	Masters	298	298/358 x 189 = 157
2	Magister	59	59/358 x 189 = 31
3	Doctor	1	1/358 x 189 = 0.53 (rounded up 1)
		358	189

3.3. Data Analysis

The research procedure involves several steps. First, a Likert scale questionnaire is compiled, and then it is tested on 30 respondents. The number of samples is determined using equation (1). A validity and reliability test is then carried out to determine whether the data is valid and reliable. The next stage is a multivariate normality test, a linearity test, a multicollinearity test, and a heteroscedasticity test. Then conduct a hypothesis test based on Figure 3. Path Analysis using SPSS.25. Model suitability test using equation (4). If $Q > 1$, it is necessary to conduct a Chi-square statistical test equation (5). The last stage is to interpret the results.

The hypothetical model of this research is as presented in Figure 3 below.

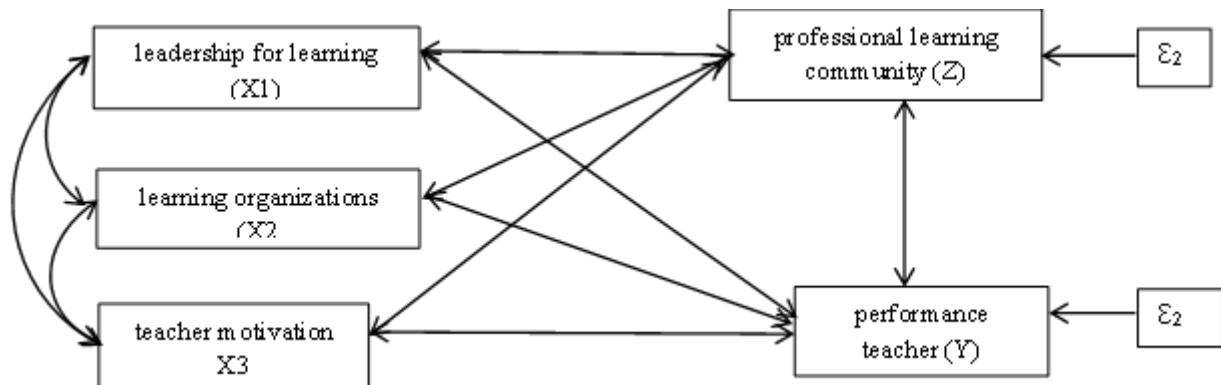


Figure 3. Hypothetical research model

3.3.1. First Structural Multiple Regression Analysis of X1 (Leadership for Learning), X2 (Learning Organization), and X3. (Professional Learning Community) against Z (Professional Learning Community).

The first structural multiple regression analysis uses the equation $Z = a + b_1 X_1 + b_2 X_2 + b_3 X_3 + \varepsilon_1$

Where:

Z : dependent variable

a : constant

b1, b2, b3 : regression coefficient

X1, X2, X3 : independent variables

ε_1 : error

First substructure path analysis equation

$$= p_{zx1}X_1 + p_{zx2}X_2 + p_{zx3}X_3 + \varepsilon_1 \dots \dots \dots (2)$$

Where

p_{zx1} : path coefficient X1 against Z

p_{zx2} : path coefficient X2 against Z

p_{zx3} : koefisien jalur X3 terhadap Z

ε_1 : residue of the 1st path equation

3.3.2. Multiple Regression Analysis of the second structure X1 (Leadership for learning), X2 (Learning Organization), X3 (Teacher Motivation) and Z (Professional Learning Community) against Y (Teacher Performance).

Second structural multiple regression analysis using the equation

$$Y = a + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 Z + \varepsilon_2$$

Where:

Y : dependent variable

A : constant

b₁, b₂, b₃ : regression coefficient

X₁, X₂, X₃ : variabel bebas.

The second substructure path analysis equation

$$= p_{YX_1}X_1 + p_{YX_2}X_2 + p_{YX_3}X_3 + p_{YZ}Z + \varepsilon_2 \dots \dots \dots (3)$$

Description

p_{ZX1} : path coefficient X1 against Z

p_{ZX2} : path coefficient X2 against Z

p_{ZX3} : koefisien jalur X3 terhadap Z

ε₁ : residue of the 1st path equation

3.3.4. Use the Model

Empirical model testing is carried out with the Q distribution followed by Kai Square or W calculation if it is not yet fit; the Q coefficient is found using the equation

$$Q = \frac{1-R_M^2}{1-M} \dots \dots \dots (4)$$

Where:

Q : test of the suitability of the Q coefficient model

R_M² : multiple determination coefficient for the proposed model with the formula

$$R_M^2 = 1 - (1 - R_1^2)(1 - R_2^2) \dots \dots R_p^2$$

M : R_M² after trimming

When Q = 1 indicates a perfect model fit. If Q < 1, to determine *fit* no model, then the Q coefficient needs to be tested using the chi-square statistic proposed by Bedhazur (1982), namely

$$W_{\text{count}} = - (N-d) \ln Q \dots \dots \dots (5)$$

Where:

W_{count} : chi-square statistical test

N : sample size

d : number of insignificant path coefficients

Q : Q coefficient model suitability test

The basis of decision-making is whether $W_{count} \geq \chi^2_{df\alpha}$, indicating a suitable model fit. Model suitability testing utilizes the Q coefficient model suitability test, as outlined in the Ridwan Kuncoro 2011 formula.

The research scheme is illustrated in Scheme 3, which explains the influence of both exogenous and endogenous variables. The influence of leadership for learning on learning communities, the influence of organizational culture on professional learning communities and the influence of motivation on professional learning communities.

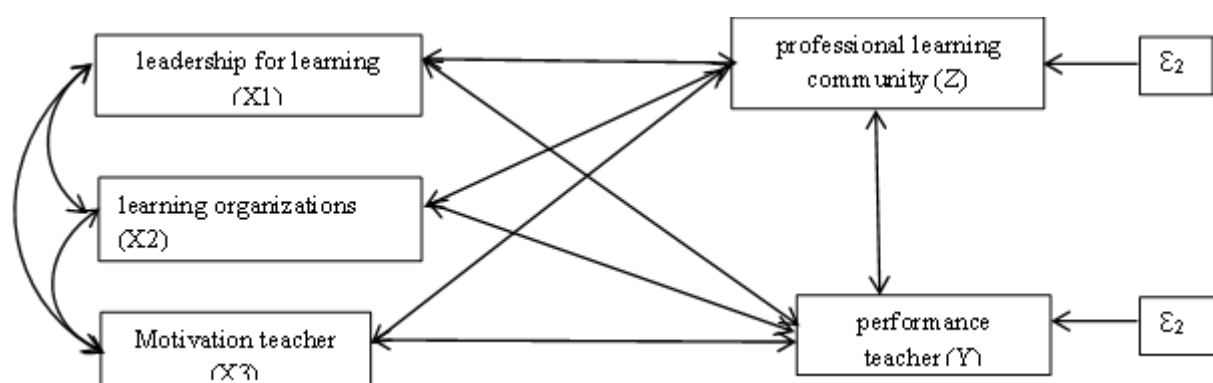


Figure 3. Research Scheme

3.3.5. Sobel Test

Test the mediator variable using the Sobel Test. The Sobel test was developed by Sobel (1982) by testing the strength of the indirect influence of the Exogenous variable (X) on the endogenous variable (Y) through the moderator (Z). The Sobel leadership test assesses learners' perceptions of teacher performance through professional learning communities.

3.5. Ethical Considerations

This research was conducted with ethical principles that guarantee the rights, comfort, and convenience of respondents. Upholding the confidentiality of respondents' identities. Respondents voluntarily provide information and have the right to refuse. Researchers ensure that the research process does not cause psychological pressure on respondents and the data is intended for academic purposes.

4. Results and Discussion

4.1. Results

4.1.1. Multiple Regression Analysis of First Sub Structure

The first analysis was conducted along that analysis path, focusing on the initial structure for examining the influence of leadership, learning organization, and motivation on professional learning communities. The analysis path of the Frits substructure can be seen in Figure 4.

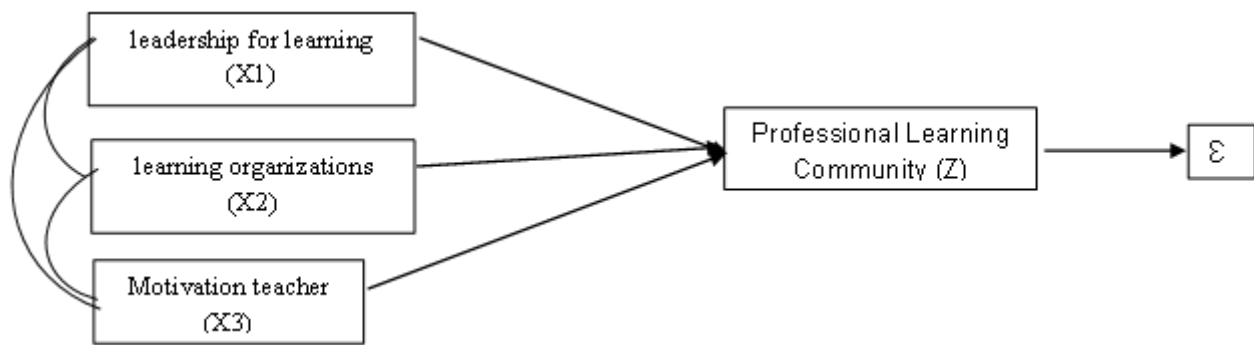


Figure 4. First Substructure Analysis Path.

The results of the analysis of the direct influence of learning leadership, learning organization, and motivation on educator performance are seen in Table 2.

Table 2. Results of the First Substructure Analysis

Connection		Path Coefficient (β)	t_{count}	Sig	F_{count}	Sig	RSquare
From	To						
Leadership for Learner	Professional Learning Community	0,123	2,120	0,035	186,978	0,000	0,752
Organization Learner		0,609	8,902	0,000			
Motivation		0,189	2,489	0,014			

To determine the influence of leadership variables on learning, organizational culture, and motivation on performance through professional learning communities, the decision is made based on whether the Sig value is < 0.05 or the value $t_{count} > t_{table} = 1,653$ (Adiningrum & Lestari; Eni, 2013).

Based on Table 2, it can be explained as follows:

Leadership for learners towards professional learning communities shows a path coefficient value of 0.123 and a sig value of 0.035 in a positive direction. Sig value = $0.035 < 0.05$. value $t_{count} = 2,120 > t_{table} = 1,653$. The results of the analysis indicate a significant relationship between leadership for learning and professional learning communities.

The culture of learning organizations towards professional learning communities exhibits a path coefficient value of 0.609 and a significant value of 0.000, indicating a positive direction. Sig value = $0.00 < 0.05$. The value $t_{count} = 8,902 > t_{table} = 1,653$. The results of the analysis show that there is a significant influence between learning organizations and professional learning communities.

Teacher motivation towards professional learning communities shows a path coefficient value of 0.189 and a significance value of 0.014, indicating a positive direction. Sig value = $0.014 < 0.05$. The value $t_{count} = 8,902 > t_{table} = 1,653$. The results of the analysis show that there is a significant influence of motivation on professional learning communities.

From the results of the t_{count} value analysis on the influence of leadership for learning, learning

organizations, and motivation, professional learning communities that the variables of leadership for learners, learning organizational culture, and motivation have a simultaneous influence on professional learning communities.

The magnitude of the simultaneous coefficients on the variables of leadership for learners, organizational culture, and teacher motivation towards professional learning communities is evident in the column R^2_{value} of 0.752, which represents 75.2% of the variance. The results of the $R_{-square}$ value analysis explain that leadership for learning, learning organizations, and teacher motivation as exogenous variables influence the professional learning community as an endogenous variable by 75.2%.

While residual $\varepsilon = (1 - R_{square})^{0.5} = (1 - 0,752)^{0.5} = (0,248)^{0.5} = 0,498$ is a contribution from other variables that are not included in this study. Figure 5 shows the results of the analysis of the first structural model, statistics of the influence of leadership on learning, learning organizations and motivation on professional learning communities.

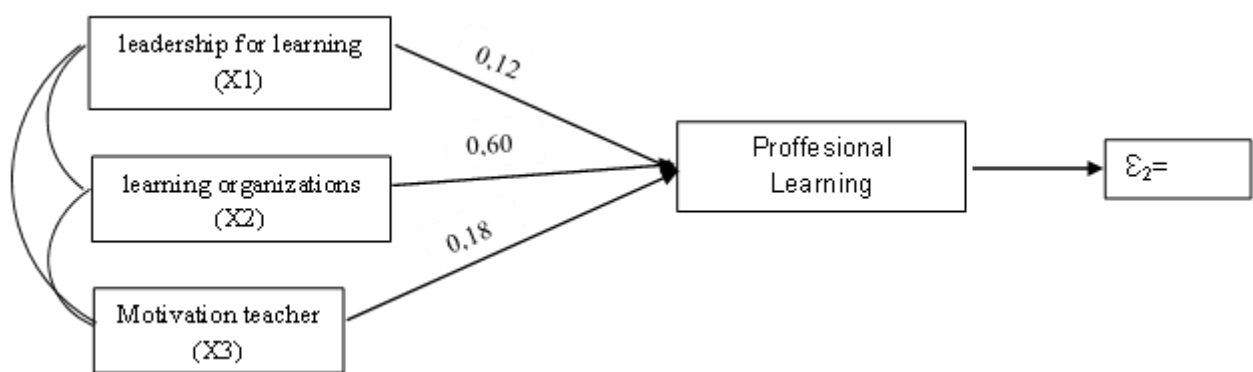


Figure 5. Results of the First Substructure Analysis.

From Figure 5 it shows that only $X1Z$; $X2Z$; and $X3Z$ are significant, so the first structural equation uses equation (2), namely $M = p_{MX1} X1 + p_{MX2} X2 + p_{MX3} X3 + \varepsilon_1$. So that sub-structure model 1 does not experience any changes. $Z = 0,123 X1 + 0,609 X2 + 0,189 X3 + 0,498$

4.1.2. Multiple Regression Analysis of Second Substructure

The second structural analysis aims to determine the direct influence of leadership for learning, the Learning Organization, motivation, and professional learning community on performance, as shown in Figure 6.

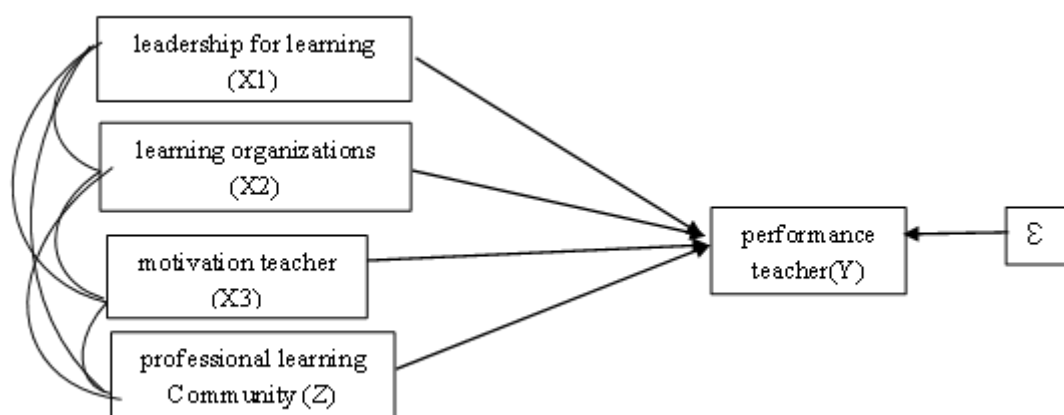


Figure 6. Second Substructure Analysis Path

The results of the second structural analysis, which analyzes the influence of leadership for learning, learning organization, and motivation, professional learning community on performance, can be seen in Table 3.

Table 3. Results of the Second Sub-Structure Analysis

Connection		Path Coefficient (β)	t_{count}	Sig	F_{count}	Sig	R_{square}
From	To						
Leadership for Learner	Performance	0,209	0,447	0,010	52,269	0,000	0,532
Organization Learner		0,394	1,656	0,001			
Motivation		-0,030	0,006	0,778			
Community Learner Professional		0,215	4,951	0,035			

Based on Table 3 it can be explained as follows:

Leadership for learners on educator performance shows a path coefficient value of 0.209 and a significance value of 0.010, indicating a positive direction. Sig value = $0.010 < 0.05$. The t_{count} value = $0.447 > t_{\text{table}} = 1.653$. The results of the analysis show that there is a significant influence between leadership for learning on teacher performance. The culture of learning organizations regarding educator performance shows a path coefficient value of 0.394 and a significance value of 0.001, indicating a positive direction. The sig value is $0.001 < 0.05$. The t_{count} value = $1.656 > t_{\text{table}} = 1.653$. The results of the analysis show that there is a significant influence between learning organizations on teacher performance. Teacher motivation on performance shows a path coefficient value of -0.215 and a significance value of 0.778, indicating a negative direction. Sig value = $0.778 > 0.05$. The t_{count} value = $0.006 > t_{\text{table}} = 1.653$. The results of the analysis show that there is no significant influence between motivation and performance teacher. The Professional Learning Community on performance shows a path coefficient value of 0.215 and a significance value of 0.035, indicating a positive direction. Sig value = $0.035 < 0.05$. The t_{count} value = $4.951 > t_{\text{table}} = 1.653$. The results of the analysis show that there is a significant influence between the professional learning community and teacher performance. From the results of the t_{count} value analysis on the influence of leadership for learning, learning organizations, motivation, and professional learning communities on performance, it is evident that leadership for learning, learning organizational culture, and motivation have a simultaneous impact on professional learning communities. The magnitude of the coefficient simultaneously on the variables of leadership for learning, organizational culture, teacher motivation, and professional learning communities on performance can be seen in the R_{square} value of $0.532 = 53.2\%$. The results of the R_{square} value analysis explain that leadership for learning, learning organizations, teacher motivation, and professional learning communities as exogenous variables affect the performance of educators as endogenous variables by 53.2%. While the residual $\varepsilon = (1 - R_{\text{square}})^{0.5} = (1 - 0.532)^{0.5} = (0.648)^{0.5} = 0.684$ is the contribution of other variables that are not included in this study. The results of the analysis indicate that motivation does not have a significant influence on teacher performance; therefore, the trimming method is applied to motivation to produce a two-

structure model. Figure 7 shows a statistical model of the influence of leadership for learning, learning organizations, professional learning communities on performance.

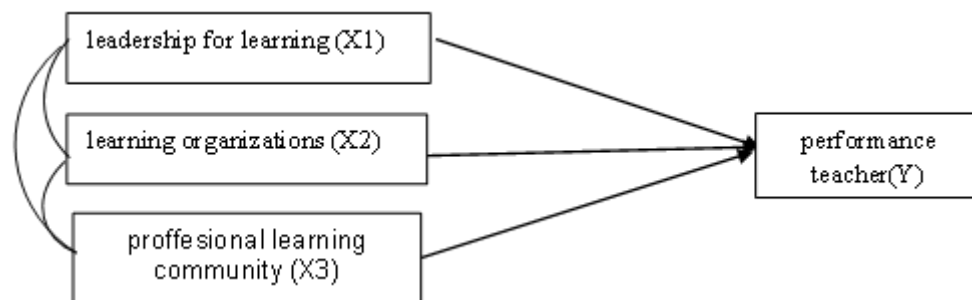


Figure 7. Second Substructure Analysis Path After trimming.

Figure 7 illustrates the second sub-structure model obtained by removing the motivation variable using the trimming method, resulting in a second structural model that displays the influence of the analysis of leadership for learning, learning organizations, and professional learning communities on performance. The results of the analysis can be seen in Table 4.

Table 4. Results of the Second Substructure Analysis After Trimming

Connection		Path Coefficient (β)	t _{count}	Sig	F _{count}	Sig	Rsquare
From	To						
Leadership for Learner	Performance	0,200	2,711	0,007	70,015	0.00	0,532
Organization Learner		0,381	2,767	0,000			
Community Learner Professional		0,210	2,112	0.036			

Based on Table 4, it can be explained as follows:

Leadership for learners on educator performance shows a path coefficient value of 0.200 and a significance value of 0.007, indicating a positive direction. Sig value = $0.007 < 0.05$, t_{count} value = 2,711 $> t_{\text{table}} = 1,653$. The results of the analysis show that there is a significant influence between Leadership for learning on teacher performance. The culture of a learning organization on educator performance shows a path coefficient value of 0.381 and a sig value of 0.000 in a positive direction. Sig value = $0.000 < 0.05$, t_{count} value = 2,767 $> t_{\text{table}} = 1,653$. The results of the analysis show that there is a significant influence between learning organizations on teacher performance. The professional learning community on performance shows a path coefficient value of 0.210 and a sig value of 0.036 in a positive direction. The sig value = $0.035 < 0.05$ and the t_{count} value = 4,951 $> t_{\text{table}} = 1,653$. The results of the analysis show that there is a significant influence between the professional learning

community and teacher performance. From the results of the t_{count} value analysis about the influence of leadership for learning, learning organizations, and professional learning communities on teacher performance, it shows that leadership for learning, learning organizational culture, and professional learning communities have a simultaneous influence on educator performance. The magnitude of the coefficient simultaneously on the variables of leadership for learning, organizational culture, and professional learning communities on performance can be seen in the R_{square} value of $0.532 = 53.2\%$. The results of the R_{square} value analysis indicate that leadership for learning, learning organizations, and professional learning communities, as exogenous variables, affect teacher performance as an endogenous variable by 53.2%. While the residual $\varepsilon = (1 - R_{\text{square}})^{0,5} = (1 - 0,532)^{0,5} = (0,648)^{0,5} = 0.684$ is the contribution of other variables that were not included in this study.

The results of the multiple regression analysis on the second substructure after trimming shows that the path coefficient of direct influence between leadership for learning and performance is indicated by the path coefficient value of 0.200. The path coefficient of direct influence of the learning organization culture variable and performance is 0.381. The direct influence of the professional learning community on performance is 0.210. The results of the analysis show that the direct influence between leadership for learning, learning organization culture, professional learning community on performance is significant.

From the results of the analysis, a statistical model of the influence of leadership for learning, learning organizations and professional learning communities on teacher performance was obtained, which can be seen in Figure 8.

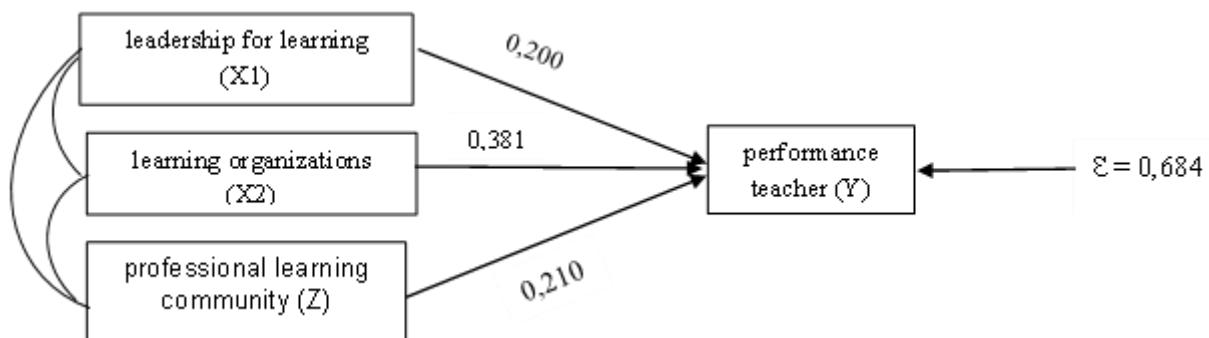


Figure 8. Results of the second structural analysis after trimming

The second substructure equation uses equation (3) by eliminating the band $\rho_{YX3}X3$ Becomes

$$Y = \rho_{YX1} X1 + \rho_{YX2} X2 + \rho_{YZ} Z + \varepsilon_2 \text{ so that } Y = 0.200 X1 + 0.381 X2 + 0.210 (Z) + 0.684$$

4.1.3. Empirical Model of the Results of Assembling the First Substructure and the Second Substructure

The ensembling result between the first and second structures produces a model.

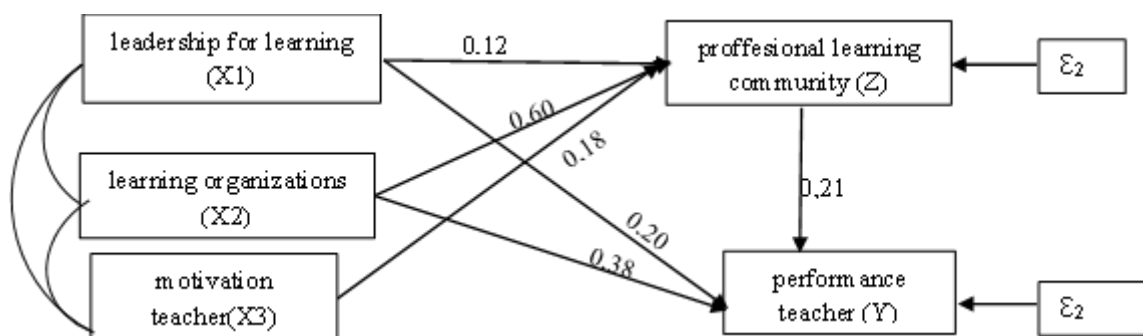
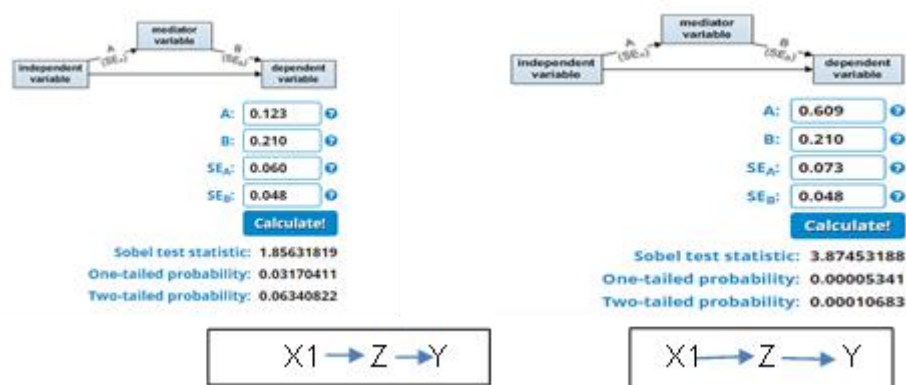


Figure 9. Results of assembling the first substructure and the second sub structure after trimming.

4.1.4. Model Testing Using Q Distribution

The model obtained from the results of the path analysis in Figure 9 shows multiple determination coefficients (R_m^2) = 0.884. While the multiple determination coefficient (M) after the Motivation path towards teacher performance ($\rho_{YX_3X_3}$) is removed (*trimming* method) = 0.884. Based on the value R_m^2 and M obtained, the model suitability is calculated using the Q test equation (4), which obtains $Q = 1$.



4.2. Discussion

Leadership for learning, learning organizations and teacher motivation have a significant influence on the formation of professional learning communities. The results of the analysis show that learning organizations have the greatest influence on professional learning communities (0.609), so it can be said that learning organizations have a major contribution to the formation of professional learning communities. This finding supports the findings by Peter Sange, who said that the process of forming a professional learning community comes from the theory of learning organizations (Sange, 1990). The influence of leadership for learning on the formation of professional learning communities (0.123). The influence of motivation on professional learning communities (0.189). This is emphasized by Sun et al. (2019), who suggest that building teacher behavioral motivation is one strategy to make the role of online professional learning communities more effective. However, the influence of leadership for learning and motivation on the formation of professional learning communities is relatively small. The second structural regression analysis model can be seen in Figure 5.

The second sub-structure model, before trimming, explains the influence of leadership for learners, learning organizations, teacher motivation, and professional learning communities on teacher performance. The results of the analysis show that the influence of leadership for learning on performance (0.209) is significant, the significant influence of learning organizations on performance (0.394) is significant, the influence of motivation on performance (-0.030) is not significant and the influence of professional learning community (0.215) is significant. Furthermore, motivation is removed by using the trimming method so that the analysis results after trimming show The direct influence of leadership for learners, motivational learning organizations and professional learning communities on teacher performance shows that the greatest influence on teacher performance is the learning organization (0.609) which increased after trimming, this shows that the learning organization is the main predictor of teacher performance compared to the other two variables. The same thing was found that learning organizations are able to improve performance (Alrashidi et al., 2023). This finding is in line with Watkins and Marsick who stated that the culture of a learning organization can improve performance, this is because the character of a learning

organization that prioritizes continuous learning, is able to make environmental changes and always encourages members of the organization to adapt to environmental changes (Marsick & Watkins, 2003). The influence of leadership for learners on teacher performance (0.200) decreased, but still has a contribution even though its influence is relatively weak, while motivation does not have a significant influence on performance, the results of the study were strengthened by (Layek & Koodamara, 2024), which states that extrinsic motivation does not affect teacher performance. It is further explained that Maslow's hierarchy of needs describes an overlapping model of the structure of needs showing intrinsic and extrinsic motivation factors (Ihensekien & Joel, 2023). The second sub-structure regression analysis model, after trimming, can be seen in Figure 8. The results of estimating the first sub-structure and the second sub-structure (β) produced a research model as seen in Figure 9, then a model test was carried out using the Q distribution which produced a value = 1 so that the first sub-structure model and the second sub-structure model are Fit, thus both models can explain the phenomenon of leadership for learning, learning organizations and teacher motivation towards performance through professional learning communities well.

Analysis of the indirect influence of leadership for learning, learning organizations and motivation on teacher performance mediated by professional learning communities. The results of the analysis indicate that the indirect influence of leadership on learning, as mediated by professional learning communities, has a value of 0.027 (0.123×0.218). The influence of learning organizations on performance through professional learning communities is shown to have a value of 0.133 (0.609×0.218). The influence of motivation on teacher performance through professional learning communities shows a value of 0.0412 (0.189×0.218). It can be explained that professional learning communities significantly mediate the indirect influence of learning organizations on performance. Additionally, leadership for learners and motivation also have an indirect influence on performance through professional learning communities, although the value is relatively small.

Overall, the analysis revealed that the direct influence was greater than the indirect influence, although the role of the professional learning community remained relevant as a mediator variable. The results of the mediator test on the path of the leadership variable for learners towards the professional learning community showed a one-tailed probability value of $0.03170411 < 0.05$ and a two-tailed probability of 0.063408822 so that it can be said that the professional learning community variable has a mediating influence on leadership and performance but is not significant.. The results of the test using the Sobel test showed that the mediator on the path from learning organizational culture to professional learning communities obtained a score of one-tailed probability of 0.000005341 and two-tailed probability of $0.00010683 < 0.05$, so it can be said that the professional learning community variable is able to mediate learning organizations and performance.

5. Conclusion

Leadership for learning, which fosters a learning organization, has a direct impact on performance. Motivation does not have a direct influence on performance. However, the one that contributes a lot to improving performance is the learning organization. Leadership for learning, learning organization and motivation have an indirect influence on performance through professional learning communities. However, the one that contributes the most to performance through professional learning communities is the learning organization.

6. Suggestions

For the principal, it is essential to adopt a leadership style that fosters learning and encourages a culture of collaboration among all teachers. For schools, it is essential to cultivate a learning organization culture, enabling teachers to continue learning and sharing knowledge. The Papua Provincial Education Office disseminates the values and principles that exist in Learning Organizations to all heads of educational units within the educational environment.

Papua Province. Considering that learning organizations are highly sensitive to changes in the era, they are able to facilitate educational transformation. One effort to accelerate this transformation is to convert schools into learning organizations. Another approach that can be taken by utilizing the basic principles of learning organizations is to establish a highly effective professional learning community, which, in turn, will positively impact teacher performance. Therefore, a policy is needed by the Papua Provincial Government to continue encouraging the formation of professional learning communities in each school, thereby improving teacher performance.

Declarations

Author Contribution Statement. Sandra Titihlawa conducted the research and compiled the research report. Suwito Eko Pramono supervised the preparation of the theoretical framework and discussion. Ida Zulaeha supervised the preparation of the theory. Yeri Sutopo supervised the research method. The original manuscript statement has been read and approved by all supervisors, and the final version of the manuscript confirms that there is no conflict of interest in funding. Supporting research data is stored by the author.

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