

The Influence of Principals' Transformational Leadership on Teacher Learning Innovation at Public Vocational High Schools in South Solok Regency

Ayesa Putri Renisa^{1*}, Sulastris², Jasrial³, Enderia Damanik⁴

¹²³⁴ Department of Educational Administration, Padang State University, Padang, Indonesia

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ABSTRACT

This research is motivated by problems related to the transformational leadership of school principals and teachers' learning innovations in Vocational High Schools in South Solok Regency. The focus of this study is to understand the condition of teachers' learning innovations, the transformational leadership of the school principal, as well as the influence of transformational leadership on teachers' learning innovations. This study uses a quantitative approach with a population of 154 teachers and a sample of 114 teachers determined through a proportionate stratified random sampling technique. Data collection was conducted using a Likert scale questionnaire that had been tested on 30 respondents and declared valid (calculated $r > 0.361$) and reliable, with a Cronbach's Alpha value of 0.985 for the teachers' learning innovation variable and 0.950 for the transformational leadership of school principals. Data analysis includes descriptive statistics, normality tests, linearity tests, and simple linear regression using SPSS 26. The research results show that teacher learning innovation falls into the fairly good category (78%) and the principal's transformational leadership is in the good category (81%). Regression tests show a significant positive effect with a regression coefficient value of 0.455, calculated $t (7.010) > \text{table } t (1.658)$, and significance $0.000 < 0.05$. The coefficient of determination (R^2) of 0.305 indicates that the principal's transformational leadership contributes 30.5% to teacher learning innovation, so the better the transformational leadership, the higher the teacher learning innovation.

Corresponding Author:

Ayesa Putri Renisa

Email: ayesarenisa@gmail.com

1. INTRODUCTION

Education plays a fundamental role in determining the progress of a nation, as it contributes to the development of human capital and overall societal advancement. In Indonesia, the function and objectives of education are clearly stated in Undang-Undang Nomor 20 Tahun 2003 tentang Sistem Pendidikan Nasional, which emphasizes the development of students' potential to become knowledgeable, creative, independent, and responsible citizens. The success of educational implementation is largely determined by teachers as the main actors in the learning process.

Teachers are not only responsible for transferring knowledge but also for creating meaningful and innovative learning experiences. In this context, teachers' innovative behavior becomes a crucial factor in improving the quality of education. Innovative teachers are able to design creative, interactive, and adaptive learning processes that align with students' needs and current developments (Iriansyah, 2020; Sani, 2022). Moreover, innovation in learning is not limited

to ideas but also involves the implementation of these ideas to improve both individual and institutional performance.

However, in practice, teachers' innovative behavior is still not optimal. Based on preliminary observations conducted in State Vocational High Schools in Solok Selatan Regency in November 2025, several issues were identified. Teachers tend to rely on conventional teaching methods, show limited ability to generate new learning ideas, and rarely participate in professional development activities. In addition, the implementation of innovative learning practices remains low, as indicated by minimal student participation and limited use of technology in classroom instruction. These conditions suggest that innovation in teaching has not been effectively developed or implemented.

One of the key factors influencing teachers' innovative behavior is the leadership of the principal. Transformational leadership, as proposed by Bernard M. Bass and Bruce J. Avolio (2019), refers to the ability of leaders to inspire, motivate, and encourage subordinates to exceed expectations and embrace change. Principals who demonstrate transformational leadership can provide a clear vision, intellectual stimulation, and individual support, which are essential in fostering teachers' creativity and innovation (Isnaini Maullidin, 2019).

Nevertheless, field findings indicate that the implementation of transformational leadership in schools is still inadequate. Principals have not optimally demonstrated role modeling, inspirational motivation, intellectual stimulation, and individualized consideration. As a result, teachers' confidence, motivation, and willingness to innovate remain relatively low, leading to stagnation in instructional practices.

Various factors are known to influence teachers' innovative behavior, including leadership, work motivation, organizational culture, and self-efficacy (Pertiwi & Prasetyo, 2021; Ariyani & Hidayati, 2020; Nandini & Indrasari, 2022; Suryati et al., 2024). However, this study specifically focuses on transformational leadership as the independent variable, considering its strategic role in shaping a supportive environment for innovation.

Therefore, this study aims to analyze the influence of principals' transformational leadership on teachers' innovative behavior in State Vocational High Schools in Solok Selatan Regency. The research seeks to answer the question: "Is there a significant influence of principals' transformational leadership on teachers' innovative behavior?" The findings of this study are expected to contribute to the development of educational management theory and provide practical insights for improving leadership practices and fostering innovation in schools.

2. METHOD, DATA, ANALYSIS

This study employs a quantitative approach to examine the influence of principals' transformational leadership on teachers' instructional innovation in public vocational high schools in Solok Selatan Regency. The population consisted of 154 teachers, and the sample size was 114, selected using Proportional Stratified Random Sampling. The Cochran formula was applied to determine the sample size. Data were collected using a questionnaire based on a Likert scale with five response options: Always, Often, Sometimes, Rarely, and Never. According to Sugiyono (2019), the Likert scale is used to measure attitudes, opinions, and perceptions toward social phenomena.

The research phase began with the development of a questionnaire framework, which required guidance from the supervising lecturer in formulating statements for each questionnaire. A pilot test of the questionnaire was conducted with 30 teachers outside the research sample. The results of the questionnaire trial were then analyzed using SPSS (Statistical Package for the Social Sciences) version 26 to determine its validity and reliability. After testing and analysis, the questionnaire was distributed to respondents, and the collected data was analyzed by calculating the average of respondents' answers using the mean formula. The research results were then processed to determine the level of achievement using research classification and categories. After that, classical assumption tests were conducted with normality and linearity tests, followed by simple linear regression tests, and finally, hypothesis tests with T and R².

3. RESULT AND DISCUSSION

Result

The research results on the effect of the principal's transformational leadership on teacher learning innovation at State Vocational High Schools in South Solok Regency have two variables,

namely the principal's transformational leadership variable (X) and the teacher learning innovation variable (Y).

Principal's Transformational Leadership

Viewed from four indicators, namely 1) Idealized Influence, 2) Inspirational Motivation, 3) Intellectual Stimulation, 4) Individualized Consideration. The following research results were conducted to determine the effect of school principals' transformational leadership on teacher learning innovation at Vocational High Schools in South Solok Regency are explained in the following table:

Table 1. Level of Achievement of Transformational Leadership Indicators School Principal

No.	Indicator	Average	%TCR	Classification
1	Idealized Influence	3.46	86%	Good
2	Inspirational Motivation	3.47	87%	Good
3	Intellectual Stimulation	3.52	88%	Good
4	Individualized Consideration	3.68	92%	Very Good
Average Score		3.53	88%	Good

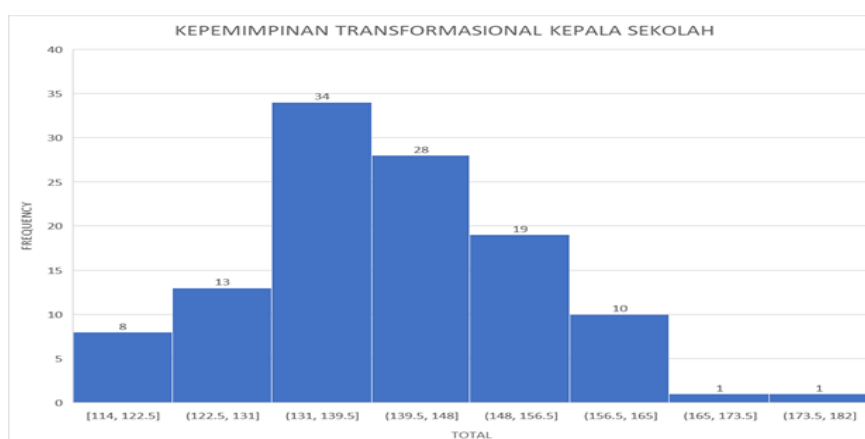


Figure 1. Histogram of Principals' Transformational Leadership

The table above shows that the highest average score is found in the Individualized Consideration indicator, which is 3.68 with a percentage of 92%, while the lowest average score is found in the Idealized Influence indicator, which is 3.46 with a percentage of 86%. This means that the transformational leadership of the principal at the Public Vocational High School of South Solok Regency is already in the good category.

Teacher Learning Innovation

Viewed from four indicators, namely 1) opportunity exploration, 2) idea creation, 3) advocating ideas, 4) idea application. The following research results were conducted to determine the effect of school principals' transformational leadership on teacher learning innovation at Vocational High Schools in South Solok Regency are explained in the following table:

Table 2. Achievement Level of Teacher Learning Innovation Indicators

No.	Indicator	Average	%TCR	Classification
1	Opportunity Exploration	3.38	89%	Good
2	Idea Creation	3.69	90%	Very Good
3	Advocating Ideas	3.70	89%	Good
4	Idea Application	3.45	88%	Good
Average score		3.56	89%	Good

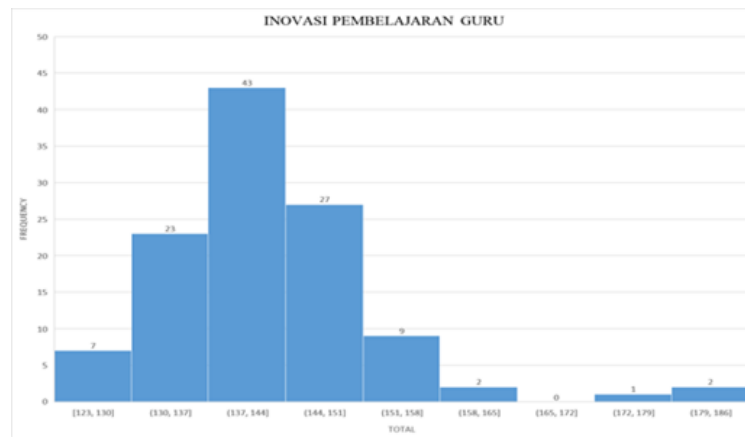


Figure 2. Histogram of Teacher Learning Innovation

The table above shows that the highest average score is on the indicator of advocating ideas, which is 3.70 with a percentage of 89%, while the lowest average score is on the indicator of exploring opportunities, which is 3.38 with a percentage of 89%. This means that teacher learning innovations at the Vocational High School of South Solok Regency are already in the good category.

The Impact of School Principals' Transformational Leadership on Teacher Learning Innovation

The prerequisite tests and hypothesis tests in this study are as follows:

a. Prerequisite Test

1) Normality Test Results

The normality test aims to determine whether the data in the study are normally distributed. If the distribution is normal, then an alternative non-parametric test can be used. The normality test in this study was processed using SPSS version 26. To obtain an overview of the normality test of teacher learning innovation and principal transformational leadership, see the following table:

Table 3. Normality Test Results

Transformational Leadership of School Principals and Teacher Learning Innovation	
Asymp.Sig. (2-Tailed)	Sig.
0.200	0.05

If the significance value is greater than 0.05, the data are considered to be normally distributed. Conversely, if the significance value is less than 0.05, the data are considered not to be normally distributed. The normality test yielded a significance value of 0.200. Since $0.200 > 0.05$, the results indicate that the data are normally distributed.

2) Linearity Test Results

The linearity test aims to determine whether the data of the principal's transformational leadership variable tends to form a linear line with the teacher's learning innovation variable. If the significance value is greater than alpha 0.05, this indicates a linear regression line. However, if the significance value is less than alpha 0.05, this indicates a non-linear regression line. 0.05 means the regression is not linear. To determine whether the regression is linear or not, see the following table:

Table 4. Linearity Test Results

Transformational Leadership of School Principals and Teacher Learning Innovation	
Asymp.Sig. (2-Tailed)	Sig.
0.270	0.05

The linearity test shows the significance value (Sig). In the deviation from linearity, which is 0.270, it can be concluded that there is a linear effect between variable X (school principal's transformational leadership) and variable Y (teacher learning innovation) because the deviation from linearity (0.270) > significance level (0.05), so there is a linear effect.

b. Hypothesis Testing

1) Simple Linear Regression Test Results

Simple linear regression test is used to test or predict the influence of one independent variable (school principal's transformational leadership) on the dependent variable (teacher learning innovation). The results of the simple linear regression test can be seen in the following table:

Table 5. Regression Analysis Results of the Transformational Leadership Variable of School Principals with Teacher Learning Innovation

Model		Coefisien ^a			t	Significance
		Unstandardized Coefficients		Standardized Coefficient		
		B	Coefisien	Beta		
1	(Constant)	78.467	9.194		8.535	.000
	Principal's Transformational Leadership	.455	.065	.552	7.010	.000

a. Dependent variable: Teacher Learning Innovation

Based on Table 5, the results of data testing using hypothesis test data analysis state that the t-test obtained a calculated t greater than the t-table, namely 7.010 > 1.658 and with a significance level of 0.000 < 0.05. This indicates that partially the transformational leadership variable of the school principal has a positive and significant effect on teacher learning innovation.

The value of the regression slope coefficient is 0.455. Thus, the regression equation is $Y = 78.467 + 0.455X$. Based on this equation, it can be interpreted that the constant of 78.467 indicates that if the transformational leadership of the school principal (X) is zero, then the teacher's learning innovation (Y) has a value of 78.467. Meanwhile, the regression coefficient of 0.455 states that for every one-unit increase in the principal's transformational leadership (X), there is an increase in teacher learning innovation (Y) of 0.455X. The positive value of the regression coefficient indicates that there is a positive effect between the principal's transformational leadership and teacher learning innovation. This means the higher the transformational leadership of the school principal applied, the more the teacher learning innovation increases.

2) T-Test Results

To see the significance of the effect of the independent variable (principal's transformational leadership) partially or individually on the dependent variable (teacher's learning innovation), a significance test (t-test) is conducted. The decision-making in this t-test is that if the sig value < 0.05 or the calculated t > the t-table, there is an effect of variable X on Y. Conversely, if sig > 0.05 or the calculated t < the t-table, there is no effect of variable X on variable Y. The t-table value with a confidence level of 0.05 (N = 108) in the t-table distribution is 1.659. To see the t-value, it can be seen in the table below:

Table 6. T-Test Results

Transformational Leadership of the School Principal	
t count	t table
7.010	1.658

If it can be seen that the calculation result obtained $t_{\text{count}} = 7.010 > t_{\text{table}} = 1.658$ and $\text{sig } 0.000 < 0.05$. So it can be concluded that the transformational leadership variable of the principal (X) has a positive and significant effect on the teacher learning innovation variable (Y) in the State Vocational High School of South Solok Regency.

3) Coefficient of Determination Test (R²)

The coefficient of determination (R²) test is used to determine the extent to which the independent variable (principals' transformational leadership) explains the dependent variable (teachers' learning innovation). If the coefficient of determination approaches zero, the relationship between the two variables is considered weak. Likewise, if the coefficient approaches one, the relationship between the two is considered strong. The results of the coefficient of determination test can be seen in the following table:

Table 7. R² Test Results

Transformational Leadership of School Principals and Teacher Learning Innovation		
R	R Squared	Adjusted R Squared
0,552	0,305	0,229

Based on the table above, the percentage of the influence of the independent variable (school principal's transformational leadership) on the dependent variable (teacher learning innovation), also called the coefficient of determination (R Squared), is 0.305 or 30.5%. This means that the school principal's transformational leadership is able to influence teacher learning innovation by 30.5%, and the remaining 69.5% is influenced by other variables outside of this.

Discussion

Transformational Leadership of School Principals

The results of the study indicate that the principal's transformational leadership in public vocational high schools in Solok Selatan Regency is categorized as good, with an average score of 81%. This is reflected in four main indicators: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. In general, principals have been able to perform their roles as leaders who provide role models, inspiration, and support for teachers in improving the quality of learning. These findings are in line with Bernard M. Bass (2021), who states that transformational leadership is characterized by the ability of leaders to influence, inspire, and develop their subordinates.

In terms of idealized influence and inspirational motivation, principals demonstrate exemplary behavior through integrity, commitment, and consistency in carrying out their duties, thus becoming role models for teachers. In addition, principals are able to communicate a clear vision and provide encouragement for teachers to continuously innovate in teaching and learning processes. This creates a positive, collaborative work environment oriented toward improving educational quality. This is supported by Peter G. Northouse (2021), who emphasizes that transformational leaders build trust and motivate subordinates through an inspiring vision and effective communication.

Meanwhile, in the aspects of intellectual stimulation and individualized consideration, principals have been able to encourage teachers to think creatively, innovate, and receive personal attention according to their individual needs. Principals act as mentors who facilitate competency development, provide support, and create a conducive working environment. Therefore, transformational leadership not only enhances teachers' motivation and performance but also promotes sustainable instructional innovation, as stated by Bruce J. Avolio (2021), who highlights that transformational leadership plays an important role in developing individual potential and improving organizational performance.

Teacher Learning Innovation

The results of the study indicate that teachers' instructional innovation in public vocational high schools in Solok Selatan Regency is categorized as fairly good, with an average score of 78%. This is reflected in four main indicators: opportunity exploration, idea generation, idea promotion, and idea implementation. Overall, teachers have demonstrated the ability to innovate in the teaching and learning process, although further improvement is still needed to achieve optimal outcomes. This finding is consistent with Michael Fullan (2021), who emphasizes that sustainable educational innovation requires continuous development and a supportive school environment.

In the aspect of opportunity exploration, teachers show a good level of achievement through active participation in teacher learning communities that encourage openness to new ideas, collaboration, and reflective practices. These activities provide opportunities for teachers to analyze various teaching strategies and adapt them to students' needs. Support from school leadership also plays a key role in creating an environment that encourages experimentation and professional growth. Such conditions align with the view of Viviane Robinson (2021), who highlights that leadership focused on teacher development significantly improves classroom practices.

In terms of idea generation, teachers demonstrate a very good ability to create innovative ideas by identifying learning problems and developing alternative solutions. The integration of technology and instructional media further enhances teachers' creativity and supports the design of more engaging and meaningful learning experiences. This is supported by Punya Mishra (2020), who argues that technology integration encourages creativity and innovation in teaching practices.

Meanwhile, in the aspects of idea promotion and implementation, teachers show the ability to communicate, advocate, and apply their ideas in real classroom settings. Teachers are not only capable of generating ideas but also actively collaborate with colleagues to refine and implement them effectively. A supportive school culture, including collaboration and psychological safety, strengthens teachers' confidence in sharing and applying innovations. This is in line with Amy Edmondson (2019), who states that psychologically safe environments foster innovation and open communication. Therefore, strengthening collaboration, continuous training, and reflective practices are essential to further enhance instructional innovation and improve learning quality sustainably.

The Influence of School Principals' Transformational Leadership on Teachers' Learning Innovation

Based on the results of correlation and simple linear regression calculations, it is concluded that there is a significant influence of the principal's transformational leadership on teachers' learning innovation at the State Vocational High School in South Solok Regency. At a significance level of 0.05, the coefficient is 0.552 and the correlation test is 7.010. This indicates a significant influence of the principal's transformational leadership on teachers' learning innovation.

Transformational leadership is a leadership style that focuses on inspiring, motivating, and transforming the behavior of organizational members to grow and achieve shared goals. This perspective is supported by E. Mulyasa (2022), who explains that transformational leaders play a crucial role in driving change and improving performance within educational institutions.

In this context, the principal acts as a transformational leader who directs, motivates, and inspires teachers to innovate and adapt to ongoing changes. This role is also supported by strong decision-making skills to maintain school stability in uncertain conditions. Furthermore, transformational leadership encourages teachers to engage in continuous reflection and strengthen collaboration in developing learning media, methods, and strategies through teacher learning communities, as highlighted by R. Nugraha (2022).

With strong transformational leadership, principals are able to encourage teachers to adopt innovation optimally and foster creativity within the school environment. Principals function not only as facilitators but also as agents of change who can enhance teachers' motivation to continuously develop their professional competencies. This is reinforced by D. Prasetyo (2023), who emphasizes that effective leadership supports sustainable professional growth and continuous improvement in teaching practices.

From this description, it can be concluded that the transformational leadership of the school principal affects teachers' learning innovation. The better the transformational leadership of the school principal, the better the teachers' learning innovation. Conversely, the less effective the transformational leadership of the school principal, the lower the level of teachers' learning innovation in carrying out their professional tasks.

4. CONCLUSION

Based on the results of the research and discussion presented in the previous chapter, it can be concluded that teachers' instructional innovation in public vocational high schools in Solok Selatan Regency is categorized as fairly good, with an achievement percentage of 78%. The highest average score is found in the idea promotion indicator (3.70) with a percentage of 89%, while the lowest average score is in the opportunity exploration indicator (3.38) with a percentage of 89%. Meanwhile, the principal's transformational leadership is categorized as good, with an achievement percentage of 81%. The highest average score is found in the individualized consideration indicator (3.68) with a percentage of 92%, while the lowest is in the idealized influence indicator (3.46) with a percentage of 86%. Furthermore, there is a significant influence between the principal's transformational leadership and teachers' instructional innovation, with a correlation coefficient of 0.552 and a correlation significance test value of 7.010. The calculation results show that the calculated t is greater than the t table at a significance level of 0.05 ($7.010 > 1.658$), indicating that H_0 is rejected and H_a is accepted, meaning that transformational leadership has a significant effect on teachers' instructional innovation.

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