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The Influence Of Principal Leadership Management On Teacher Self-Efficacy Through Teacher Learning Innovation At SMAN 1 Utan, Sumbawa Regency

Original Article

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Abstract

This study aims to analyze the influence of principals' leadership management on teacher self-efficacy through teacher learning innovations at SMAN 1 Utan, Sumbawa Regency. In particular, this study aims to: (1) determine the influence of principal leadership management on teacher learning innovation; (2) determine the influence of teacher learning innovations on teacher self-efficacy; and (3) determine the influence of principal leadership management on teacher self-efficacy through teacher learning innovations. The population in this study is all teachers of SMAN 1 Utan, Sumbawa Regency, which is 45 people. Because the population is relatively small, this study uses the census method, where the entire population is used as a research sample, with the criterion of teachers who have worked for more than one year. This type of research uses a quantitative approach with data analysis using Partial Least Squares (PLS), which is processed with the help of SmartPLS 3.0 software. The results of the study showed that: (1) the principal's leadership management had a significant effect on teacher learning innovation at SMAN 1 Utan, Sumbawa Regency; (2) teacher learning innovations have a significant effect on teacher self-efficacy; and (3) Principal leadership management has a significant effect on teacher self-efficacy through teacher learning innovation. These findings show that effective principal leadership is able to create a work environment that supports innovation, increases teachers' creativity in learning, and strengthens teachers' confidence in their professional abilities. Thus, strengthening the principal's leadership management and increasing learning innovation are key factors in building confident, adaptive, and high-performing teachers.

Keywords: Principal Leadership Management, Learning Innovation, Teacher Self-Efficacy.

1. Introduction

Education is a fundamental element in building human resources that are superior, characterful, and adaptive to the dynamics of the times. In the context of secondary education, teachers have a strategic role as learning facilitators, innovators, and agents of change who determine the quality of students' learning processes and outcomes. Entering the era of Industrial Revolution 4.0, which is marked by the acceleration of digital technology, the role of teachers has undergone a significant transformation. Teachers no longer only function as transmitters of knowledge, but are also required to be able to integrate technology in learning to create learning experiences that are interactive, contextual, and relevant to the needs of the 21st century (Fabiana, 2022). Therefore, the innovative competence of teachers is a key factor in dealing with these changes.

Teachers' innovation is closely related to the ability to develop ideas, implement creative learning strategies, and utilize technology effectively. Wahardi et al. (2017) emphasized that teachers with a high level of innovation tend to be more adaptive, creative, and able to respond to changes in the educational environment dynamically. However, the results of a preliminary survey at SMAN 1 Utan show that the level of teacher innovation is still relatively low, characterized by difficulties in accepting and creating new ideas, as well as limitations in implementing innovative learning methods. This condition indicates the need for strategic interventions to increase teachers' innovative capacity to be in line with the demands of modern education (Usmayadi et al., 2020).

One of the determining factors that affects teachers' innovation is the leadership of the principal. School principals have an important role in creating an organizational climate that is conducive to the growth of creativity and innovation. Transformational leadership styles, for example, have been shown to increase teacher motivation, confidence, and involvement in developing learning innovations (Zhao et al., 2024). In addition, the servant leadership approach also contributes to increasing innovation through strengthening innovation self-efficacy, namely an individual's confidence in their ability to innovate (Ren et al., 2024). Thus, the principal's leadership not only serves as a director, but also as a facilitator who empowers teachers to develop professionally (Uppathampracha et al., 2022).

In this context, teacher self-efficacy is a crucial psychological variable. Self-efficacy is defined as an individual's belief in his or her ability to perform certain tasks effectively (Wray, 2022). Teachers with high levels of self-efficacy tend to be more confident, resilient to challenges, and dare to try new learning approaches. Support from school principals, both in the form of constructive feedback, awards, and professional development facilitation, has been proven to be able to increase teachers' self-efficacy (Purwanto, 2022). In addition, collaboration between teachers also plays an important role in creating a supportive and innovative work environment.

Previous research has shown that self-efficacy serves as a mediating variable in the relationship between transformational leadership and teacher innovation. Nisa and Indrawati (2024) found that the influence of leadership on innovation will be stronger כאשר supported by a high level of self-efficacy. This is reinforced by Jun et al. (2023), who state that transformational leadership is able to improve innovative behavior through increased motivation and individual confidence. Thus, self-efficacy becomes a psychological bridge that connects the principal's leadership with the teacher's innovative behavior.

Based on this description, it can be concluded that principal leadership, learning innovation, and teacher self-efficacy are three interrelated components in improving the quality of education. Therefore, this study is important to analyze the influence of principals' leadership management on teacher self-efficacy through teacher learning innovations at SMAN 1 Utan, Sumbawa Regency, to make an empirical contribution to the development of more adaptive and sustainable education policies.

Based on this background, this research is focused on answering several key questions, namely:

1) Does the Principal's Leadership Management affect the learning innovation of teachers at SMAN 1 Utan, Sumbawa Regency?
2) Does teacher learning innovation affect teacher self-efficacy at SMAN 1 Utan, Sumbawa Regency?
3) Does the Principal's Leadership Management affect teacher self-efficacy through teacher learning innovations at SMAN 1 Utan, Sumbawa Regency?

2. Literature Review

2.1. Human Resource Management in the Context of Independent Workers

Human Resource Management (HRDM) was originally defined as a set of policies, practices, and systems that aim to organize individuals in an organization to achieve strategic goals effectively and efficiently. Dessler (2020) states that HR includes workforce planning, recruitment, selection, training, performance appraisal, as well as compensation management and career development. In the traditional approach, HRDM is usually centered on the management of permanent employees who are in a formal and hierarchical organizational structure. However, changes in global business dynamics, advances in digital technology, and shifts in post-pandemic work patterns have triggered a significant transformation in the concept and practice of HRM. Employment relationships are no longer dominated by conventional patterns, but are increasingly shifting to flexible, contractual, and independent work. Armstrong and Taylor (2020) affirm that modern MSDM is no longer tied to staffing status, but rather oriented towards optimizing individual contributions through adaptive work practices, empowerment, and the creation of working conditions that support high performance.

2.2. Performance of an Independent Property Agent

Performance is the result of work that can be achieved by individuals or groups in an organization in accordance with their respective authorities and responsibilities, in order to achieve organizational goals effectively and efficiently (Mangkunegara, 2019). According to Robbins and Judge (2020), performance reflects the level of achievement of tasks that are influenced by ability, motivation, and job opportunities. For Independent property agents, performance is not solely measured by the number of successful sales transactions, but also includes the quality of service to clients, the ability to build long-term relationships, the speed of responding to consumer needs, and the achievement of self-set personal targets.

2.3. Work Flexibility

Work flexibility is defined as the individual's freedom to set schedules, locations, and ways of working according to personal needs and job demands (Kossek & Thompson, 2016). This concept includes flexible working hours, workplace flexibility (remote working), and flexibility in managing workloads and work patterns. For independent property agents, work flexibility is a key feature because they are not tied to official working hours and can adapt activities to market situations as well as client needs. According to Robbins and Judge (2020), when managed effectively, work flexibility can increase employee satisfaction, commitment, and productivity. In Bali, this flexibility allows property agents to manage their time without clashing with family activities as well as customary and religious obligations, such as ngayah or religious ceremonies that are often unscheduled. Property agents take advantage of the flexibility to time-shift, which is moving work from traditional ritual time to non-ritual time or even during holidays.

2.4. Self-Efficacy

Self-efficacy is a person's belief in his or her ability to plan and carry out the actions necessary to achieve certain work results (Bandura, 1997). Individuals who have high self-efficacy typically have a strong sense of self-confidence, set more challenging goals, and show greater perseverance when facing obstacles. According to Judge and Bono (2001), there is a significant positive relationship between self-efficacy and work performance because it affects the amount of effort and resilience of individuals in demanding work situations. In the context

of independent property agents, self-efficacy is very important, considering that this job requires communication skills, negotiation, and mental toughness in the face of rejection from potential consumers.

2.5. Work-Life Balance

Work-life balance is a state in which a person can balance the demands of work with personal, family, and non-work life (Greenhaus & Allen, 2011). According to Clark (2000), in the work-family border theory, a balance is achieved when individuals can set the boundary between work roles and family roles flexibly and manage. For independent property agents, work-life balance is an important issue because job freedom often gives rise to irregular working hours and overwork tendencies. Handoko (2018) revealed that the imbalance between work and personal life can trigger stress, fatigue, and decreased productivity. In contrast, optimal work-life balance supports improved psychological well-being, job satisfaction, and motivation, which in turn has a positive impact on individual performance (Greenhaus & Allen, 2011).

2.6. Conceptual Framework and Hypothesis

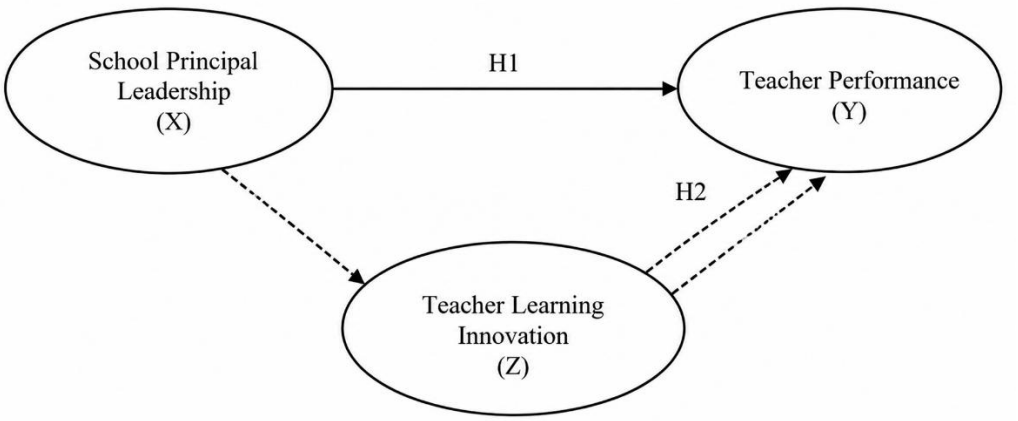

Figure 1. Conceptual Framework

Hypothesis

1) It is suspected that the Principal's Leadership Management affects the learning innovation of SMAN 1 Utan teachers in Sumbawa Regency
2) It is suspected that teacher learning innovations affect teacher self-efficacy of SMAN 1 Utan, Sumbawa Regency
3) It is suspected that the Principal's Leadership Management affects teacher self-efficacy through teacher learning innovations at SMAN 1 Utan, Sumbawa Regency.

3. Methods

This study uses a quantitative approach with a causal design to analyze the influence of principal leadership management on teacher self-efficacy through teacher learning innovation as a mediating variable. The research variables are operationally defined so that they can be measured empirically. Teacher learning innovation is measured through four indicators, namely process innovation, media innovation, learning service innovation, and character integration and literacy. Teacher self-efficacy is measured based on confidence in completing tasks, confidence in one's own abilities, confidence in facing various situations, and the belief that difficulties are not threats. Meanwhile, the leadership management of school principals is measured through communication skills, decision-making, motivation, accountability, and the ability to direct and control subordinates. Variable measurements use a Likert scale with

a score range of 1 to 5. The population in this study is all teachers at SMAN 1 Utan, Sumbawa Regency, as many as 45 people, with saturated sampling techniques, so that the entire population is used as a research sample.

The data used consists of primary and secondary data. Primary data was obtained through questionnaires, interviews, and direct observations, while secondary data was obtained from literature and supporting documents. The data analysis technique used Partial Least Squares (PLS) with the help of SmartPLS 3.0, which was chosen because it was able to test the relationships between latent variables simultaneously and was suitable for small sample sizes. The analysis was carried out through two stages, namely the evaluation of the outer model to test the validity and reliability of the construct using convergent validity, discriminant validity, and composite reliability, and the evaluation of the inner model to test the relationship between variables through the value of R Square, predictive relevance (Q^2), and path coefficient. The hypothesis test was carried out by looking at the t-statistical value ≥ 1.96 and the p-value < 0.05 as significance criteria, so that the relationship between variables in the research model can be empirically concluded.

4. Results and Discussion

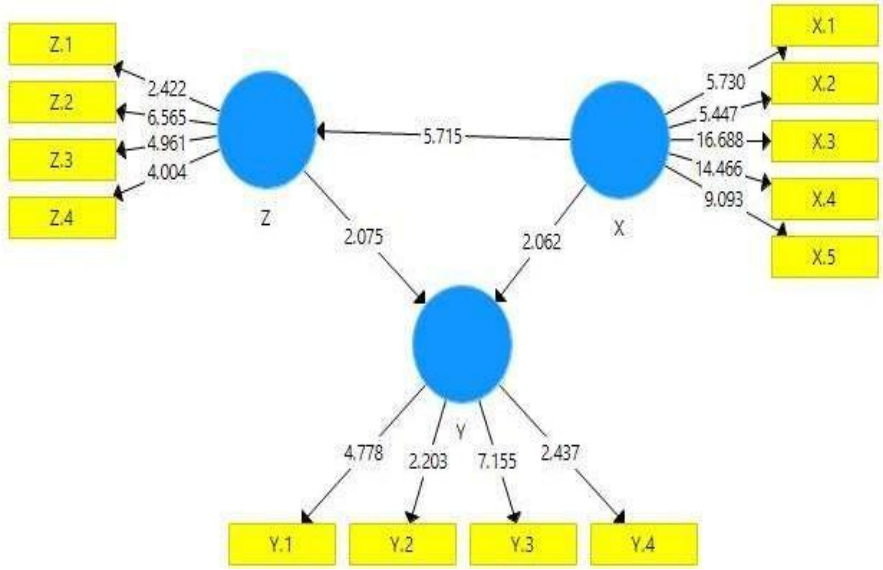

Figure 1. SEM-PLS Result

The results of data analysis were carried out using Partial Least Squares–Structural Equation Modeling (PLS-SEM) to test the direct and indirect influence of mediation. Below is a table of the results of the analysis along with their explanations.

4.1. Evaluation of Measurement Models (Outer Model)

Table 1 shows the loading value and validity of each indicator used in this study.

	Original Sample (O)	*Sample Mean (M)*	*Standard Deviation (STDEV)*	*T Statistics (O/STDEV)*	*P Values*
X. 1 <- X	0,650	0,639	0,113	5,730	0,000
X. 2 <- X	0,750	0,725	0,138	5,447	0,000
X. 3 <- X	0,871	0,862	0,052	16,688	0,000
X. 4 <- X	0,823	0,818	0,057	14,466	0,000
X. 5 <- X	0,728	0,720	0,080	9,093	0,000

Y.1 <- Y	0,726	0,707	0,152	4,778	0,000
Y.2 <- Y	0,537	0,522	0,244	2,203	0,028
Y.3 <- Y	0,805	0,786	0,112	7,155	0,000
Y.4 <- Y	0,538	0,497	0,221	2,437	0,015
Z.1 <- Z	0,501	0,512	0,207	2,422	0,016
Z.2 <- Z	0,775	0,757	0,118	6,565	0,000
Z.3 <- Z	0,753	0,723	0,152	4,961	0,000
Z.4 <- Z	0,710	0,688	0,177	4,004	0,000

All indicators show an Outer Loading value above 0.70, indicating that they have excellent convergent validity and are reliable in measuring the construct in question.

4.2. Construct Reliability Testing

Table 2 presents the results of the reliability test, which utilized Cronbach's Alpha and Composite Reliability.

	Cronbach's Alpha	**rho_A**	**Composite Reliability**	**Average Variance Extracted (AVE)**
Leadership Management Principal (X)	0,891	0,900	0,911	0,535
Teacher self-efficacy (Y)	0,967	0,985	0,993	0,641
Teacher learning innovation (Z)	0,907	0,914	0,923	0,549

All constructs have Cronbach's Alpha and Composite Reliability values above 0.70, which indicates an excellent level of internal consistency. This indicates that the research instrument can be relied upon to measure the desired construct.

4.3. Evaluation of Structural Models (Inner Model)

Table 3 shows the results of the R^2 test.

	R Square
Teacher self-efficacy (Y)	0,819
Teacher learning innovation (Z)	0,666

The R-Square value indicates the ability of independent variables to explain dependent variables in the research model. Based on the results of the analysis, the R Square value for the teacher self-efficacy (Y) variable was 0.819. This means that 81.9% of the variation in teacher self-efficacy can be explained by variables that affect it in the model, namely principal leadership management and teacher learning innovation, while the remaining 18.1% is influenced by other factors outside the research model. This value belongs to the strong category, which indicates that the model has excellent explanatory power.

Meanwhile, the R Square value for the teacher learning innovation variable (Z) of 0.666 showed that 66.6% of the variation in teacher learning innovation could be explained by the principal's leadership management, while the remaining 33.4% was influenced by other variables that were not studied. This value is also included in the strong to moderate category. Overall, these results indicate that the research model has good predictive power in explaining the relationship between variables, especially in the context of the influence of principals' leadership on learning innovation and teacher self-efficacy.

4.4. Test the Significance of Direct and Indirect Influences

Table 4 presents the results of the significance test of direct and indirect influences between variables.

	Original Sample (O)	*Sample Mean (M)*	*Standard Deviation (STDEV)*	*T Statistics (O/STDEV)*	*P Values*
X -> Z	0,583	0,622	0,102	5,715	0,000
Z -> Y	0,381	0,384	0,183	2,075	0,038
X -> Z -> Y	0,295	0,329	0,162	2,818	0,040

The results of the hypothesis test showed that all relationships between variables in the research model were statistically significant.

1. Principal Leadership Management has a Significant Positive Effect on *Teacher Self-efficacy* with a T Statistics value of 2,296, where the p-values = 0.022 are smaller than the α = 0.05 (5%) value
2. Teacher learning innovation has a Significant Positive Effect on *Teacher self-efficacy,* with a T Statistics value of 6,556, where the p-values = 0.000 are smaller than the value of α = 0.05 (5%)
3. Principal Leadership Management has a significant effect on *teacher self-efficacy* through teacher learning innovations, with a T Statistics value of 5,293, where the p-values = 0.000 are smaller than the α = 0.05 (5%) values

4.5. Discussion

4.5.1. The Influence of Principal Leadership Management on Teacher Learning Innovation

The results of the study show that the leadership management of school principals has a positive and significant effect on teacher learning innovation. These findings confirm that good leadership quality is able to encourage teachers to be more creative and adaptive in developing learning strategies. Effective principals not only carry out administrative functions, but also play the role of *instructional leaders* who are able to create a conducive, collaborative, and supportive work environment that supports the development of innovation. Through open communication, motivation, and support for professional development, school principals can encourage teachers to dare to try new learning methods that are relevant to the needs of students and educational technology developments (Mustaghfirin et al., 2025; Saputra, 2023).

In addition, transformational leadership has been proven to be able to increase teachers' innovation through inspiration, intellectual stimulation, and strengthening teachers' *self-efficacy* (Eko et al., 2022; Uppathampracha & Liu, 2022). Principals who are able to create a school culture that is open to new ideas and provides a sense of psychological security will encourage teachers to experiment without fear of failure. Thus, the principal's leadership management is a key factor in building an innovative learning ecosystem, which ultimately impacts the quality of learning and the competitiveness of schools.

4.5.2. The Influence of Teacher Learning Innovation on Teacher Self-Efficacy

The results of the study show that teacher learning innovation has a positive effect on *teacher self-efficacy*. This indicates that the higher the level of innovation that teachers demonstrate, the higher their confidence in their professional abilities. Teachers who can develop creative learning methods, utilize technology, and apply a student-centered approach tend to have a stronger sense of confidence in managing the classroom and facing various learning challenges. Learning innovations not only improve the quality of the teaching and learning process but also strengthen the psychological aspects of teachers in the form of motivation and confidence (Eko et al., 2022).

Theoretically, *teacher self-efficacy* is related to an individual's confidence in planning and executing learning effectively (Uppathampracha & Liu, 2022). Teachers who actively innovate will be better prepared to face classroom dynamics and better able to adapt learning strategies to student needs. The support of a conducive school environment also strengthens this relationship, as teachers who get the opportunity to experiment and develop will have higher levels of confidence. Thus, learning innovation is an important factor in building confident, adaptive, and professional teachers in the modern era of education.

4.5.3. The Influence of Principal Leadership Management on Teacher Self-Efficacy through Teacher Learning Innovation

The results of the study show that the leadership management of school principals has a significant effect on *teacher self-efficacy* through teacher learning innovations as a mediating variable. This means that the leadership of the principal not only has a direct impact on increasing teachers' self-confidence, but also indirectly through the creation of learning innovations. Principals who are able to manage resources effectively, provide motivation, and create a supportive work environment will encourage teachers to innovate, which ultimately increases their confidence in carrying out professional duties (Saputra, 2023; Basri, 2023).

Furthermore, *teacher self-efficacy* acts as a psychological bridge that connects the principal's leadership with teacher performance (Eko et al., 2022; Uppathampracha & Liu, 2022). Visionary and inspirational principals can build an innovative and collaborative school culture, so that teachers feel supported and appreciated in developing their potential. In these conditions, teachers will be more confident, creative, and committed to improving the quality of learning. Thus, effective leadership, learning innovation, and *teacher self-efficacy* are three components that are integrated to sustainably improve the quality of education.

5. Conclusion

Based on the results of the research and discussion, it can be concluded that the leadership management of school principals has a positive and significant influence on teacher learning innovation. Effective, visionary, and participatory leadership is able to create a conducive work environment and encourage teachers to be more creative and adaptive in developing learning strategies. In addition, teacher learning innovation has also been proven to have a positive effect on teacher self-efficacy, which shows that the higher the level of innovation carried out by teachers, the stronger their confidence in their professional abilities in managing the learning process.

Furthermore, this study confirms that the leadership management of school principals also has a significant effect on teacher self-efficacy through teacher learning innovations as a mediating variable. This shows that learning innovation is an important mechanism that bridges the relationship between principal leadership and teacher confidence enhancement. Thus, the three variables are interrelated and contribute to improving the quality of learning.

Therefore, strengthening the leadership competence of school principals and the development of teacher learning innovations in a sustainable manner is a strategic step in improving the quality of education as a whole.

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