

**TEACHERS' PERCEPTIONS OF THE SCHOOL PRINCIPAL'S
TECHNOPRENEURSHIP LEADERSHIP AND ITS IMPACT ON INNOVATION
MOTIVATION**

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ABSTRACT

This study aims to analyze the relationship between teachers' perceptions of the principal's technopreneurial leadership and their motivation to innovate in public senior high schools (SMA Negeri) in Bogor City. The research is grounded in the vital role of school principals in integrating technology use and entrepreneurial spirit to promote educational innovation in the digital era. A quantitative approach was applied using a survey method involving 127 teachers from 12 public senior high schools. Data were collected through a Likert-scale questionnaire and analyzed using Pearson correlation techniques. The results reveal a positive and significant relationship between teachers' perceptions of technopreneurial leadership and their motivation to innovate. Teachers who perceive their principals as technopreneurial leaders are more motivated to develop and implement innovative teaching practices. These findings indicate that technopreneurial leadership can serve as an effective model to address challenges in 21st-century education. The study contributes theoretically by supporting the relevance of technopreneurship in educational leadership. In practical terms, it underscores the need for principal training programs focused on digital innovation, technology integration, and entrepreneurial decision-making. Additionally, the study recommends supportive policies to build an educational environment that fosters collaboration, creativity, and sustainable innovation among teachers.



INTRODUCTION

The development of digital technology has become a major force in transforming various sectors of life, including the education sector. The world of education is now faced with the demand not only to adapt to technological advancements but also to strategically leverage them to enhance the effectiveness of learning. In this context, school principals, as leaders of educational institutions, are required to possess adaptive and visionary leadership capacities. One form of leadership that is highly relevant to contemporary challenges is technopreneurial leadership an approach that combines the utilization of technology with an entrepreneurial spirit to foster educational innovation. (Hassan et al., 2021).

Technopreneurial leadership emphasizes a leader's ability to think creatively, take calculated risks, and utilize digital technology as a tool for organizational transformation (Rahmawati, Lestari, dan Sa'diyah, 2024). In the context of schools, principals who adopt this leadership style foster a culture of innovation, develop technology-based policies, and empower teachers to innovate in the learning process (Ayu et al., 2020; Rahmawati et al., 2025). This form of leadership not only highlights technological proficiency, but also the strategic use of technology to create competitive advantage and differentiation in educational practices. (Samsir, 2022; Rachmawati & Fitria, 2023).

Innovation motivation is one of the key factors in encouraging teachers to create and implement new ideas in the teaching and learning process. This motivation can be both internal and external, including the desire for self-development, recognition of innovative work, incentives, and a supportive work climate (Utami & Sudira, 2021). Teachers who are motivated to innovate tend to take initiative in seeking more effective teaching methods, exploring technology, and adapting instructional strategies to the characteristics of their students. A school environment that supports creativity and is led by an innovative principal can strengthen teachers' motivation to continuously improve the quality of learning. (Ambarwati & Yuliana, 2022).

A principal with a technopreneurship leadership style possesses the ability to encourage teachers in designing innovative learning experiences. Such a leader fosters a work environment that is open to change, provides adequate technological resources, and offers space for teachers to experiment and learn from failure. This type of principal also serves as a role model in the use of technology and supports collaboration among teachers in generating new ideas (Puspitasari et al., 2022; Putra & Hartini, 2021). Teachers' perceptions of the principal's leadership play a significant role in facilitating innovation- and technology-based learning processes.

In Bogor City, public senior high schools face challenges in improving the quality of education amidst the rapid pace of digitalization. The availability of technological facilities has not yet been fully aligned with their optimal utilization in learning activities. Although some teachers have made efforts to innovate, obstacles remain in terms of leadership support, technological training, and policies that encourage the exploration of new teaching methods (Ningsih et al., 2023; Yulianti & Herlina, 2020).

Various studies have shown that the leadership style of school principals has a significant influence on teacher performance, job satisfaction, and innovative behavior. However, research specifically exploring the relationship between teachers' perceptions of

principals' technopreneurship leadership and its impact on their motivation to innovate remains limited. In fact, teachers' perceptions reflect how they evaluate the support, inspiration, and empowerment provided by school leaders in the context of educational change and renewal (Susanto et al., 2021; Wibowo & Adi, 2022).

The significance of this study lies in its relevance to addressing the need to enhance teachers' capacity for innovation in the era of digital transformation in education. This research is also important in providing a foundation for developing an educational leadership model that is more responsive to the challenges of the twenty-first century. Without leadership capable of fostering an innovative climate, the potential of technology and teacher creativity cannot be fully realized.

This study aims to analyze teachers' perceptions of school principals' technopreneurship leadership and its impact on their motivation to innovate in public senior high schools in Bogor City. The findings of this research are expected to contribute theoretically to the development of the technopreneurship leadership concept within the context of secondary education, as well as provide practical insights for school principals in designing effective leadership strategies to encourage teachers to become innovative agents of change.

METHODS

This study employs a quantitative approach with a correlational survey design aimed at analyzing the relationship between teachers' perceptions of school principals' technopreneurship leadership and their motivation to innovate. The research subjects were public senior high school teachers in Bogor City. A proportional stratified random sampling technique was used to ensure balanced representation across all public high schools in the city. The sample size was determined using the Krejcie and Morgan table, resulting in 127 teachers selected from a population of approximately 200. Data were collected through a closed-ended questionnaire using a 4-point Likert scale, covering two main variables: perception of technopreneurship leadership and motivation to innovate. The indicators for technopreneurship leadership were based on the frameworks of Hassan et al. (2021) and Samsir (2022), which include technological vision, digital innovation, technology empowerment, and strategic decision-making. Meanwhile, the indicators for teacher innovation motivation were adapted from the models of Utami and Sudira (2021) and Ambarwati and Yuliana (2022), consisting of intrinsic drive, need for achievement, acceptance of challenges, and commitment to self-development.

Before the instrument was widely distributed, content validation was conducted by three education experts, followed by a field trial involving 30 respondents. Validity was tested using the Pearson Product-Moment correlation technique with a significance level of < 0.05 , while reliability was assessed using Cronbach's Alpha with a minimum threshold of 0.70 (Sugiyono, 2021). Data analysis techniques included descriptive analysis to describe data trends and Pearson correlation analysis to examine the relationship between variables, utilizing SPSS version 26. This method was selected due to its capacity to objectively explain inter-variable relationships in educational research (Creswell & Creswell, 2018). All research procedures were systematically organized to ensure the validity of the findings and the measurability of the relationships between the studied variables..

RESULTS

This study aims to analyze the relationship between teachers' perceptions of school principals' technopreneurship leadership and their motivation to innovate among public senior high school teachers in Bogor City. Data were collected through the distribution of questionnaires to 127 respondents from 12 public senior high schools in Bogor City.

1. Descriptive Data of Teachers' Perceptions on Technopreneurship Leadership

The results of the measurement indicate that the majority of teachers perceive their principals as demonstrating technopreneurial leadership characteristics in managing the school. Teachers' perceptions of technopreneurship leadership were measured using five key indicators: (1) Technological vision, (2) Innovation in leadership, (3) Utilization of information technology, (4) Entrepreneurial orientation, and (5) Risk-taking propensity. The following table presents the descriptive statistics for each of these variables.

Tabel 1. Descriptive Statistics per Indicator of Perceived Technopreneurship Leadership

Indikator	Mean	SD	Kategori
Technological Vision	3.51	0.47	Very Good
Leadership Innovation	3.47	0.49	Good
Use of Information Technology	3.39	0.54	Good
Entrepreneurial Orientation	3.36	0.52	Good
Risk-Taking Tendency	3.36	0.51	Good
Overall Mean	3.42	0.51	Good

The "Technological Vision" indicator received the highest score (mean = 3.51), indicating that principals are perceived as capable of formulating a strategic vision based on technology. Other indicators, such as "Utilization of Information Technology" and "Risk-Taking Propensity," also obtained high scores, reflecting teachers' positive perceptions of the principals' openness to digital transformation in school management

2. Deskripsi Data Motivasi Berinovasi Guru

The variable of teachers' motivation to innovate indicates that teachers possess a strong desire to implement improvements in the learning process. Motivation to innovate was measured based on five indicators: (1) Willingness to try new things; (2) Goals for instructional development; (3) Problem-solving through innovation; (4) Initiative-taking, and (5) Perseverance in implementing innovation.

Tabel 2. Descriptive Statistics of Innovation Motivation

Indikator	Mean	SD	Kategori
Willingness to Try New Things	3.65	0.46	Very High
Purpose of Learning Development	3.59	0.45	High
Problem Solving Through Innovation	3.55	0.48	High
Initiative in Innovation	3.55	0.47	High

Persistence in Applying Innovation	3.54	0.50	High
Overall Mean	3.58	0.48	High

The indicator “Willingness to try new things” received the highest score (mean = 3.65), reflecting teachers’ openness and exploratory spirit in delivering innovative learning. All indicators were categorized as high, indicating that teachers have a strong motivation to implement improvements in their professional activities

3. The Relationship between Perceptions of Technopreneurial Leadership and Innovation Motivation

The Pearson correlation test was used to examine the relationship between the two variables. The results are as follows:

Tabel 3. The Correlation between Teachers’ Perceptions of Technopreneurial Leadership and Their Innovation Motivation

Variabel	r Pearson	Sig. (2-tailed)
Perception of Technopreneurial Leadership and Teachers’ Innovation Motivation	0.643**	0.000

A correlation coefficient of 0.643 indicates a strong and statistically significant positive relationship. This suggests that the higher the teachers’ perception of the principal’s technopreneurial leadership, the greater their motivation to engage in innovative practices.

DISCUSSION

The results of the study indicate that teachers at public senior high schools (SMA Negeri) in Bogor City hold positive perceptions of their principals’ technopreneurial leadership, particularly in the areas of technological vision and innovation in leadership. This finding supports the study by Hassan et al. (2021) which states that principals with technopreneurial characteristics tend to facilitate and accelerate the adoption of digital-based innovations.

The level of teachers’ motivation to innovate is also categorized as high, particularly in terms of their willingness to try new things and take personal initiative. This finding is consistent with the study by Utami dan Sudira (2021) which found that a supportive work environment strengthens teachers’ motivation to create innovations in the learning process.

The positive correlation between the two variables indicates that the principal’s leadership style has a significant influence on teachers’ innovative motivation. This finding reinforces the argument made by Samsir (2022) which states that technopreneurial leadership is capable of fostering entrepreneurial spirit and creativity among educators.

The practical implication of this finding is the importance of strengthening principals’ technopreneurial competencies through training in innovative management and digital transformation. Educational policy support that facilitates technological transformation in schools also serves as a critical supporting factor.

However, this study is limited by its quantitative approach, which does not explore contextual factors that may influence the relationship between variables. Future research using a qualitative approach is recommended to gain a deeper understanding of the social and organizational cultural dynamics within schools that support teacher innovation.

CONCLUSION

Based on the findings of this study, it can be concluded that teachers' perceptions of the school principal's technopreneurial leadership play a significant role in shaping and strengthening teachers' motivation to innovate within public high schools in Bogor City. Principals who are capable of developing a technological vision, initiating the use of digital innovations, and exhibiting an entrepreneurial orientation foster a work environment that supports creativity and instructional renewal. These findings affirm that technopreneurial characteristics in educational leaders not only contribute to institutional transformation but also positively influence teachers' professional behavior.

This study provides a conceptual contribution to the development of educational leadership theory by emphasizing the importance of the technopreneurship approach in the context of 21st-century school management. By linking the dimension of digital leadership with personal motivation for innovation, this study enriches the academic discourse on the relationship between leadership styles and the dynamics of human resource development in the education sector. Furthermore, the findings of this research can serve as a basis for developing leadership training policies for school principals that are adaptive to technological changes and the demands of continuous instructional innovation.

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