

# The Role of School Culture and Progressive Leadership in Promoting Innovative Learning in the Era of the Fourth Industrial Revolution: A Study in Integrated Islamic Schools in West Java

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## ABSTRACT

**Purpose** – This research aims to investigate, identify, and analyze the factors of school culture that support or hinder the implementation of innovative learning methods and their impact on learning effectiveness in facing the challenges of the Fourth Industrial Revolution era

**Design/methods/approach** – Adopting a qualitative methodology with an ethnographic approach, this study collected data through in-depth interviews, literature review, documentation studies, and direct observations in several schools with an Islamic background in West Java. Data analysis was conducted inductively to identify emergent themes.

**Findings** – The study results indicate that progressive leadership and a school culture that supports innovation play a crucial role in enhancing student engagement and the effective use of educational technology. Conversely, a conservative school culture and limited resources were the main barriers to adopting innovative learning methods. This study also found that changes in norms, values, and school practices that support innovation and change are essential for effective education transformation.

**Research implications** – These findings provide valuable insights for policymakers, educational practitioners, and school leaders about the importance of school culture and leadership in designing and implementing innovative learning strategies. This research emphasizes the need for a holistic and inclusive approach to education, considering cultural and leadership aspects to maximize the effectiveness of innovative learning. Recommendations for future research include using more diverse approaches to expand understanding of the dynamics between school culture, leadership, and educational innovation.

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## 1. Introduction

The era of the Fourth Industrial Revolution marks an unprecedented pace of technological and social progress, forcing educational institutions to adapt and evolve significantly (Rafiola et al., 2020; Sator et al., 2019; Satpathy et al., 2020; Shamad & Wekke, 2019). In the realm of contemporary education, the main challenge lies in integrating innovation into the education system while preserving the traditional values that have proven their effectiveness (Hopster-den et al., 2023; Konečná et al., 2023; Rodés et al., 2023; Bsoul et al., 2022; Sousa et al., 2022). The learning process now must transcend conventional methods, requiring a deeper understanding of how educational institutions manage adaptation and competition on a broader scale.

This study focuses on the transition of educational institutions from traditional approaches to more innovative and adaptive learning strategies in response to the demands of the times (Rahman &



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Ahmar, 2020; Satpathy et al., 2020; Sinar et al., 2023). The research question underlying this study revolves around how schools can integrate technology, new learning methods, and responsive curriculum development without sacrificing the fundamental values of traditional education systems that have proven effective.

This investigation is highly relevant in the context of educational evaluation, considering the importance of understanding how educational institutions assess and adjust new learning strategies to meet the needs of students in the digital age, which is crucial in the context of academic learning outcomes and the development of 21st-century skills such as creativity, critical thinking, and collaboration (Almazroa & Alotaibi, 2023; Dahri et al., 2023; Hadiyanto et al., 2021). The findings of this research are expected to provide significant input for educational policy-making, teacher professional development, and the design of practical and relevant curricula for the future.

In a broader context, the integration of technology in the learning process is showing increasing relevance (Gordillo et al., 2020; G. et al., 2022), in line with previous research that highlights the importance of an interactive and practical learning environment in enhancing student literacy (Sarjoni, 2020). Additionally, related research indicates that active student engagement, both inside and outside the classroom, contributes to more effective learning (Kim & Lee, 2021; Olmedo-Torre et al., 2021), as well as the significance of online learning support in sustaining effective learning strategies (Banire et al., 2020; Masoud & Al Muhtaseb, 2021).

Unlike previous studies that focused more on specific aspects such as online learning and educational technology, this study seeks to fill the knowledge gap regarding how school culture influences the transition from traditional learning approaches to innovative ones (Abdullah, 2019; Karadağ et al., 2020; Nguyen et al., 2021). Thus, this research aims to investigate, identify, and analyze the factors of school culture that support or hinder the implementation of innovative learning methods and their impact on learning effectiveness. The outcomes of this study are expected to provide new insights into educational literature, particularly regarding the role of school culture in supporting effective learning and adapting relevant learning methods for the future.

## 2. Methods

To achieve the research objectives of exploring and understanding the factors of school culture that influence the implementation of innovative learning methods and their implications on the effectiveness of the teaching and learning process, this study adopts a qualitative research methodology with an ethnographic approach. This approach was selected for its advantage in obtaining a comprehensive understanding of the complexity of cultural dynamics in their natural context through in-depth observation of behaviors, interactions, and perceptions occurring within the school environment.

The data sources for analysis involve a combination of in-depth interviews, literature reviews, documentation studies, and direct observations. Primary data was collected through interviews with relevant school stakeholders, including teachers, administrative staff, and students, to gain firsthand insights into their experiences and perceptions regarding learning innovation. Meanwhile, the literature review and documentation study involved collecting information from scientific publications, journal databases, and official documents from related educational institutions to identify current trends, theories, and practices in education relevant to the research focus.

The research was conducted in several schools with an Islamic background in the West Java region, including Integrated Islamic Schools and Madrasahs. The choice of location is based on the desire to examine the diversity of educational cultures and innovative initiatives implemented, considering West Java as a region with a rich diversity of cultures and education systems. This aims to

obtain a broad and diverse perspective on the influence of school culture on the adoption of innovative learning methods.

Data analysis was performed through an inductive approach, allowing for developing themes and findings based on the collected data without relying on predetermined theories or hypotheses. This process includes data categorization, identification of patterns, and the formation of emergent themes from the data (Kahl, 2019; Pope & Mays, 2019). This approach is expected to produce an authentic understanding based on empirical realities regarding the influence of school culture in Indonesia in implementing innovative learning (Delamont & Atkinson, 2021). The results obtained are expected to provide valuable contributions to the educational literature by offering new insights into how school culture factors can support or hinder the implementation of innovative learning methods and provide guidance for developing effective learning strategies in the future.

### 3. Results and Discussion

#### 3.1. *Progressive Leadership as a Catalyst for Learning Innovation*

The results of this study reveal the crucial role of progressive leadership in advancing the implementation of innovative learning methods in schools. Schools with leadership that supports innovation showed significant improvements in student engagement and the effective use of educational technology. Proactive leadership in encouraging exploration and risk acceptance in learning methods is vital in developing a positive attitude towards change among teachers and students. This leadership comes from school principals and involves senior teachers and academic department leaders, creating a supportive ecosystem for innovation and experimentation.

On the other hand, a more conservative school culture was identified as a significant barrier to adopting innovative learning methods. Schools with strong norms and traditions showed resistance to change, with factors such as fear of failure, uncertainty towards new technology, and a lack of support for professional development contributing to a skeptical attitude towards learning innovation. Limitations in resources and infrastructure support were also seen as significant obstacles, indicating that environmental factors and resource limitations are significant constraints despite the willingness to innovate.

The research also found that schools with an initially conservative culture could successfully transition to a more innovative approach under certain conditions, such as leadership change or crises that force a reevaluation of traditional values and practices. This suggests strong leadership and specific conditions can trigger positive change even in conservative environments.

Progressive leadership and a school culture open to change have a significant positive impact in encouraging the adoption of new learning practices, supporting previous findings on the importance of effective learning and student engagement (Boor & Cornelisse, 2021; Olmedo-Torre et al., 2021; Subasman, 2024). This research affirms that a school culture supportive of innovation and creativity is essential for implementing effective learning methods, such as TPCK.

Furthermore, this study underscores that transitioning to innovative learning methods is not only related to adopting technology or new strategies but also requires a change in the supportive school culture. School culture elements such as leadership, norms, and values play a crucial role in a school's readiness to innovate and adapt, offering guidance for practitioners and policymakers in developing strategies that consider cultural and social aspects of the learning process.

This research broadens the understanding of the role of school culture in innovative education, challenging the views that generally focus on technical and pedagogical aspects and emphasizing the importance of paying attention to the internal cultural dynamics of schools in the

planning and implementation of educational innovation. The practical implications of these findings include the need for professional development programs that touch on cultural aspects and attitudes towards innovation, as well as the design of educational policies that consider the cultural context of schools to maximize the effectiveness of innovative learning.

**Table 1. Interview Results Themes**

Theme Findings Interviews	from	Number of Informants	Informant Quotes
Progressive Leadership Innovation	and	10	Leadership here encourages us to try new things. As a teacher, I feel supported to experiment with learning methods. Our principal is always open to innovative ideas. I am given the freedom to take risks in my teaching. Innovative leadership makes our learning environment more dynamic.
Increased Student Engagement	Student	15	Students are more engaged when we use technology in lessons. There has been an actual increase in student participation since we implemented new methods. Students become more active and involved in class discussions. Student engagement increases with the use of interactive learning tools. Technology makes lessons more enjoyable for students.
Conservative School Culture	School	8	Change here is difficult due to strong traditions. Many teachers here are afraid of failing if they try something new. We are hesitant about new technology. A lack of resources makes us reluctant to innovate. There is resistance to change from the old ways of teaching.
Barriers to Innovation Implementation	to	12	The lack of professional support makes it hard to adopt new methods. We do not have enough resources for innovation. The school infrastructure does not support the use of the latest technology. There is a general fear of failure that impedes innovation. Our environmental limitations constitute a significant barrier to change.

### **3.2. Promoting Educational Transformation Through Progressive Leadership and a Supportive School Culture: Synergy, Challenges, and Innovation Strategies**

The research findings indicate that progressive leadership is crucial in successfully adopting and implementing innovative learning strategies in the school environment. This success is not only dependent on the role of the principal but also involves cooperation among senior teachers and other educational staff to create an atmosphere that supports innovation. In contrast, schools with a more conservative cultural orientation tied to old traditions find accepting and implementing change challenging. The main barriers identified include fear of failure, challenges adapting to rapidly evolving technology, lack of support for professional development, and limitations in resources and infrastructure.

This study underscores the importance of leadership that supports innovation and a school culture that is adaptive to change as key to effective educational transformation. Increased student engagement and effective literacy instruction indicate that teachers require support in the form of knowledge and skills to create a conducive learning environment (Lin, 2022; Olmedo-Torre et al., 2021). These findings affirm that a progressive learning environment promoted by school leadership is critical in applying innovative and student-centered learning strategies (Jones, 2021; Lin, 2022; Olmedo-Torre et al., 2021).

In the context of using technology and online learning methods, the research results add that the effectiveness of these learning tools also depends on a school culture that supports innovation. This strengthens the argument that innovative educational initiatives must be accompanied by a school environment that encourages exploration and adaptation (Androutsos &

Brinia, 2019; Corujo-Vélez, Barragán-Sánchez, Hervás-Gómez, & Palacios-Rodríguez, 2021; Gamage, Jeyachandran, Dehideniya, Lambert, & Rennie, 2023).

The study concludes that the transition towards innovative learning methods requires more than just introducing new technology or learning strategies; it necessitates a school culture that supports innovation and change. These results provide new insights into how schools can design and implement effective, innovative learning strategies by considering the cultural factors of the school organization (Amtu et al., 2020; Oberle et al., 2021; Sánchez-Serrano et al., 2021).

Focusing on the aspect of school culture challenges traditional views that often neglect this dimension in discussions about educational innovation. Progressive leadership and a school culture supportive of change are about administrative management and inspiring and facilitating an environment conducive to learning, growth, and development.

This research highlights the importance of school culture and leadership in supporting innovation and offers directions for developing more inclusive and holistic education policies and practices. It shows that efforts to enhance education must go beyond technical and pedagogical aspects, incorporating the development of a school culture that supports change and innovation. This means that professional development programs for teachers and school leadership need to include elements supporting cultural adaptation and implementing practical and innovative learning strategies.

However, the study also acknowledges its limitations, including restrictions on the generalization of findings due to the focus on specific contexts and the methodological approach used. Therefore, future research is advised to employ a more diverse approach to validate and expand the understanding of the dynamics between school culture, leadership, and the implementation of educational innovations.

#### 4. Conclusion

This research highlights the importance of progressive leadership and school culture adaptation in addressing the challenges of the fourth industrial revolution, particularly in the transition from traditional learning methods to more innovative and adaptive strategies. Through qualitative and ethnographic approaches, the study identifies that an environment supportive of innovation, led by innovative leadership and involving all elements of the school, can enhance student engagement and effectively leverage educational technology. Conversely, conservative school culture and resistance to change are identified as significant barriers, with resource limitations and infrastructure support as additional obstacles.

The findings assert that effective educational transformation requires more than just introducing technology or new strategies; it also necessitates changing norms, values, and practices that support innovation and change. This challenges conventional views that often overlook the influence of school culture in educational innovation discussions, indicating that the success of innovative learning methods depends on the synergy between inspirational leadership and adaptive school culture. Educational policies and programs, therefore, should be designed to build leadership capacity and nurture a school culture that supports exploration and adaptation.

This study provides valuable insights for policymakers, educational practitioners, and school leaders on the importance of considering cultural and leadership factors in designing and implementing innovative learning strategies for the future. Recommendations for future research include using more diverse approaches to expand understanding the dynamics between school culture, leadership, and educational innovation to prepare students with the skills required for success in the 21st century. This emphasizes the need for a holistic and inclusive approach in education, which focuses on technical and

pedagogical aspects and considers the development of a school culture that supports innovation and change.

## Declarations

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### *Data availability statement*

The datasets generated during and analyzed during the current study are available from the corresponding author upon reasonable request.

### *Declaration of Interest's statement*

The authors declare that they have no known competing financial interests or personal relationships that could have influenced the work reported in this paper.

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