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## THE IMPACT OF TRANSFORMATIONAL LEADERSHIP ON DIGITAL TRANSFORMATION TOWARDS MADRASAH REFORM AND PERFORMANCE



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### Abstract

This study investigates the pivotal role of transformational leadership in facilitating digital transformation and promoting organizational learning to drive madrasah reform and performance in madrasahs in Indonesia. The research uses a quantitative survey method, the research is limited to madrasahs in Indonesia, engages madrasah leaders, and utilizes SEM-PLS to analyse relationships among variables. The study emphasizes the critical role of transformational leadership in adapting to the digital era and fostering continuous learning, enabling effective madrasah reforms and improved performance. It shows that organizational learning supports digital initiatives, with leaders encouraging adaptation and aligning technology use with academic and religious goals. This research underscores the importance of transformational leadership and organizational learning in driving digital transformation, accelerating institutional reforms, and enhancing performance, particularly in Indonesia's madrasah sector.

**Keywords:** Transformational Leadership, Digital Transformation, Organizational Learning, Madrasah Reform, Madrasah Performance

## INTRODUCTION

The rapid advancement of technology has significantly influenced various sectors, including education. In Indonesia, Islamic educational institutions, particularly madrasahs, are facing the challenge of digital transformation as part of broader reforms aimed at improving educational quality and competitiveness. As the largest Muslim-majority country in the world, Indonesia has a unique opportunity to integrate digital solutions into its Islamic-based education system, allowing madrasahs to meet the needs of the digital era while preserving their core religious values (Sholeh, 2023).

Madrasah play a vital role in enhancing Indonesia's human resources by fostering character development alongside religious and general education. This foundation prepares students to face future academic, social, and professional challenges (Ministry of Religious Affairs, 2024). The Ministry of Religious Affairs faces challenges in improving education, including inefficient budget use, fragmented data systems, and limited monitoring of private madrasah planning. About 30% of madrasahs are underperforming, student outcomes are low, and teacher training, especially in remote areas, is inadequate. To address these issues, strategies for achieving SNP standards and developing an integrated data system are crucial (Madrasah Reform, 2024). The Ministry of Religious Affairs, in collaboration with the World Bank, is advancing madrasah reform through the Realizing Education's Promise – Madrasah Education Quality Reform (REP-MEQR) initiative. This program aims to develop a responsive, high-quality education model that prepares virtuous graduates to contribute positively to society and the nation, ensuring faith-based education remains relevant and adaptable to future needs (Madrasah Reform, 2024).

In the era of digital transformation, leaders must inspire their teams to adopt digital initiatives, encourage the use of innovative technologies, and foster effective collaboration (Chatterjee et al., 2022; Yao et al., 2023). Transformational leadership is essential for driving reform (Leithwood & Jantzi, 2006) and strengthening organizational learning (Imran et al., 2016; Aboladde, 2023). Such leaders not only navigate organizations through changes but also cultivate a culture of continuous growth and adaptability. In a fast-paced and uncertain environment, the ability to collaborate and learn collectively becomes a crucial advantage, positioning transformational leadership as vital for sustained success. This paper explores the

role of transformational leadership in facilitating digital transformation and promoting organizational learning to drive madrasah reform and performance in madrasah in Indonesia.

## **REVIEW OF LITERATURE**

### **Transformational Leadership**

Transformational leadership is defined by the ability of leaders to inspire and motivate followers to exceed their own expectations and achieve organizational goals through a shared vision (Bass, 1985). This leadership style is characterized by four key components: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration (Bass & Avolio, 1993). In the context of educational reform, transformational leadership has been shown to be a critical driver of success. Leaders who adopt transformational practices create a vision for the future, and promote professional development, all of which are essential for implementing complex reforms (Leithwood & Jantzi, 2006). In madrasahs, transformational leaders play a vital role in balancing the need for technological innovation with the preservation of Islamic values. They inspire educators to embrace new teaching methods, motivate staff to engage in continuous learning, and foster a sense of ownership over the reform process (Rahmawati et al., 2022). Several studies have demonstrated the positive relationship between transformational leadership and successful educational reform. Martin (2009) found that transformational leadership is associated with higher levels of teacher motivation, and innovation, all of which contribute to successful reform initiatives. In madrasahs, leaders who adopt this approach are better equipped to manage the challenges of digital transformation, ensuring that new technologies are integrated in ways that enhance, rather than detract from, the institution's religious mission.

### **Digital Transformation**

Digital transformation refers to the process of integrating digital technologies into an organization's operations to improve efficiency, engagement, and outcomes. In education, this includes the adoption of online learning platforms, digital administrative systems, and the use of data to inform decision-making (Iosad, 2023). The global shift toward digital learning has reshaped educational institutions, pushing them to innovate and adopt new technologies to remain competitive and effective. In the context of madrasahs, digital

transformation is seen as a critical component of ongoing educational reform efforts. The Indonesian Ministry of Religious Affairs has emphasized the need for madrasahs to modernize their teaching and administrative practices by integrating digital tools such as e-learning platforms and electronic data management systems (Rodríguez-Abitia & Bribiesca-Correa, 2021). These tools enable madrasahs to provide a more dynamic and interactive learning environment while ensuring that religious teachings remain central to the educational experience. However, the transition to a digitally integrated system is not without challenges. Many madrasahs face infrastructure limitations, lack of teacher training, and resistance to change, particularly in rural areas. Research has shown that institutions with strong leadership and a culture that supports innovation are more successful in implementing digital transformation (Mondragon et al., 2023). Digital transformation in madrasahs not only enhances operational efficiency but also provides students with a more engaging and relevant learning experience, preparing them for future societal and economic challenges.

### **Organizational Learning**

Organizational learning as the process involving the generation and acquisition, distribution, utilization, and exchange of knowledge within an organization (García-Morales et al., 2006). They emphasized the key factors influencing organizational learning include the sharing of a common vision and the facilitation of team-based learning. García-Morales et al. (2012) expanded upon their earlier research concerning organizational learning as the mechanism through which an organization systematically enhances its collective knowledge by integrating the insights developed by individuals into the organization's established knowledge framework. AlSaied and Alkhoraif (2023) added that organizational learning is further defined as the process by which organizations effectively acquire, accumulate, and apply knowledge to enhance the quality of their products, services, and overall value delivered to customers. Cui, et al. (2022) described organizational learning as a vibrant process that boosts the efficiency of organizational operations through the augmentation of knowledge and the enhancement of organizational members' capabilities, thereby improving the dynamic capabilities and performance of businesses. Kılıç and Uludağ (2021) emphasized the process of organizational learning involves integrating the knowledge generated by individuals to expand the organization's collective repository of knowledge

## **Madrasah Reform and Performance**

Madrasah reform is a multidimensional process that involves changes in leadership, teaching practices, and institutional structures. Fullan (2009) argued that educational reforms are necessary to improve teacher performance, student outcomes, and institutional efficiency. In Indonesia, madrasah reform is part of a broader effort to modernize Islamic education, ensuring that students are equipped with the knowledge and skills they need to succeed in a rapidly changing world. Research by Kounetas et al. (2023) showed that educational reforms significantly improve institutional performance, particularly in student outcomes and operational efficiency. By implementing reforms such as updated curricula, new teaching methods, and technological integration, institutions can enhance student engagement and learning while streamlining administrative processes and optimizing resource use. These reforms, when supported by strong leadership and a clear vision, lead to more effective and agile institutions. For madrasahs, adopting such reforms through digital transformation can bridge the gap between traditional education and modern demands, ensuring both academic success and institutional sustainability.

## **The Effect of Transformational Leadership on Digital Transformation**

Schiuma et al. (2024) highlight the critical role of leadership in navigating organizations through digital transformation by reevaluating structures and processes, promoting a culture of change, and guiding individuals towards adopting new mindsets, knowledge, attitudes, and work practices aligned with digital integration. Effective digital transformation demands strong leadership coordination, considering the unique traits of all organizational members and engaging both upper and lower tiers to mobilize efforts in addressing the challenges it presents (Boccoli et al., 2021; Henseler et al., 2012; 2014). Leaders must create an environment conducive to transformation, manage resources efficiently, and align all components to achieve the desired outcomes (Sainger, 2018). Based on these arguments, the hypothesis can be formulated as follows:

H1: Transformational leadership has a positive influence on digital transformation

## **The Effect of Transformational Leadership on Organizational Learning**

The research underscores the critical link between organizational learning and transformational leadership, emphasizing the pivotal role of leadership in navigating today's

dynamic and complex business environments. It demonstrates how a commitment to organizational learning can transform organizations into knowledge-driven institutions with skilled workforces (Mohamed and Otman, 2021). Hashemi et al. (2019) found a similar connection between transformational leadership and learning organizations within an organization in Isfahan Province, aligning with findings from Garvin et al. (2008). Xie (2020) further highlights transformational leadership as a strong predictor of learning organizations, supported by Garvin et al.'s (2008) assertion that leaders' behaviors significantly influence organizational learning at all levels. Based on these insights, the hypothesis can be formulated as follows:

H2: Transformational leadership has a positive influence on organizational learning

### **The Effect of Organizational Learning on Digital Transformation**

Digital transformation presents both a strategic challenge and a learning opportunity in executive education (Vries et al., 2020). Studies by Weyer et al. (2015) and Fatorachian and Kazemi (2018) demonstrate that digital integration enables vertical, horizontal, and end-to-end engineering of organizational systems, improving information flow across operations. Other research suggests that organizational learning supports the development of digital competencies within organizations (Vial, 2019; Marx et al., 2021; Calvini et al., 2009). Sousa-Zomer et al. (2020) emphasize that learning is a core component of digital transformation, reflected in digital expertise, digital intensity, and an interactive environment that boosts operational performance. Based on these insights, the hypothesis can be formulated as follows:

H3: Organizational learning has a positive influence on digital transformation

### **The Effect of Digital Transformational on Madrasah Reform**

Digital technology is now an essential component of modern education, breaking traditional time and space barriers and enriching the teaching and learning experience (Selwyn & Facer, 2014). The link between digital transformation and education reform is evident in several aspects. Digital technologies enhance access to education by bridging geographical gaps; for instance, online platforms provide high-quality resources to students in remote areas (Anderson & Simpson, 2020). They also improve administrative efficiency through tools like School Information Management Systems (SIMS), offering real-time,

data-driven insights to support strategic reform decisions (Dwivedi et al., 2021). Furthermore, digital transformation drives innovation in teaching by enabling the use of virtual simulations and gamified content to engage students and enhance learning outcomes (Zhao, 2019). Based on these insights, the hypothesis can be formulated as follows:

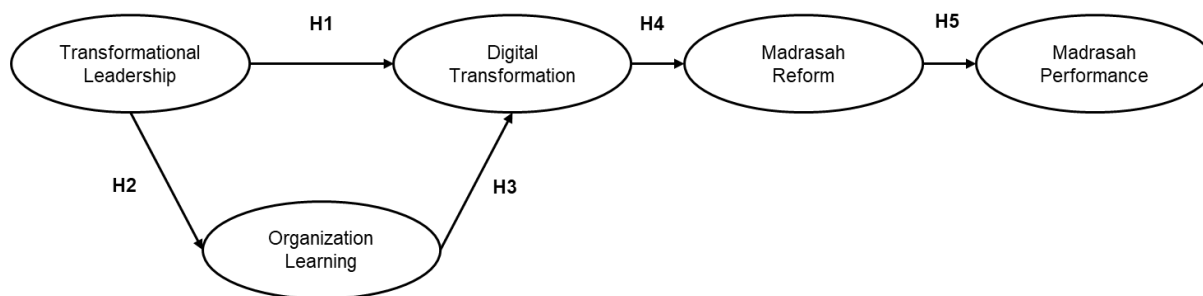
H4: Digital Transformation has a positive influence on madrasah reform

### **The Effect of Madrasah Reform on Madrasah Performance**

Improving student performance is a central objective of educational reform efforts worldwide (Addonizio & Kearney, 2012; Coburn et al., 2016; Kalenze, 2014). Educational reforms act as a catalyst for transforming institutions, driving significant changes at their core (Kounetas et al., 2023). Eyles et al. (2016) provide empirical evidence showing that converting disadvantaged schools into academies in England positively impacts student outcomes. Similarly, Pradl et al. (2001) observed that schools in the New York Network for School Renewal (NYNSR) benefit from additional funding for innovative programs, staff and parent support, new resources like books and computers, tailored professional development for teachers, and a modernized curriculum. Based on these insights, the hypothesis can be formulated as follows:

H5: Madrasah reform has a positive influence on madrasah performance

Based on the explanation above, the selection of the research model to be conducted is shown in Figure 1.



**Figure 1.**  
**Research Model**

## **RESEARCH METHOD**

This study employs quantitative research methods to gain an understanding of the relationships between transformational leadership, digital transformation, organizational

learning, madrasah reform, and madrasah performance. Quantitative data were collected through structured surveys distributed to madrasah leaders, across Indonesia. The population for this study consists of madrasah institutions across Indonesia, including both public and private madrasah. A total of 219 respondents were targeted for the survey, ensuring proportional representation from different regions of Indonesia.

Primary data were collected through a structured questionnaire that included a Likert scale (1 = strongly disagree, 6 = strongly agree) to measure respondents' perceptions of digital transformation, transformational leadership, madrasah reform, and madrasah performance. Quantitative data were analyzed using descriptive statistics to summarize the data and Structural Equation Modelling to test the research hypotheses.

## RESULTS AND DISCUSSION

To test research hypotheses, SEM PLS was performed. The results for direct relationships are shown in Table 1.

**Table 1.**  
**The Results for Direct Relationships**

Hypothesis	Path Coefficient	t-Value	Conclusion
H1 Transformational Leadership -> Digital Transformation	0.612*	9.084	Supported
H2 Transformational Leadership -> Organizational Learning	0.754*	19.869	Supported
H3 Organizational Learning -> Digital Transformation	0.418*	4.538	Supported
H4 Digital Transformation -> Madrasah Reform	0.653*	12.673	Supported
H5 Madrasah Reform -> Madrasah Performance	0.498*	8.023	Supported

\*  $p < 0.05$

According to the results, both transformational leadership were positively related to digital transformation ( $\beta = 0.612$ ,  $p < 0.05$ ) and organizational learning ( $\beta = 0.754$ ,  $p < 0.05$ ). Therefore, H1 and H2 were supported. Moreover, organizational learning was found positively associated with digital transformation ( $\beta = 0.418$ ,  $p < 0.05$ ), digital transformation

was found positively associated madrasah reform ( $\beta = 0.653$ ,  $p < 0.05$ ), and madrasah reform was found positively associated madrasah performance ( $\beta = 0.498$ ,  $p < 0.05$ ). Therefore, H3, H4, and H5 were supported.

This research explores the role of transformational leadership as a key enabler of digital transformation and organizational learning, emphasizing its impact on madrasah reform and performance. The findings contribute to the existing body of knowledge by offering new insights into the interplay between leadership, digital transformation, and organizational learning, particularly in the context of educational institutions.

Research indicates a positive relationship between transformational leadership and digital transformation. Schiuma et al. (2024) emphasize the vital role of leadership in guiding organizations through digital transformation by reassessing existing structures, fostering a culture of change, and steering individuals towards adopting new mindsets, knowledge, attitudes, and practices aligned with digital integration.

This study highlights the effective role of transformational leadership in promoting organizational learning within madrasah. Mohamed and Otman (2021) emphasize the strong connection between transformational leadership and organizational learning, underscoring its importance in navigating today's dynamic and complex educational environments. Through a focus on organizational learning, transformational leaders can transform institutions into knowledge-driven organizations with highly skilled educators. This dedication to ongoing learning ensures that teachers remain up to date with the latest knowledge and techniques, which is crucial for fostering educational progress.

Studies show a positive correlation between organizational learning and digital transformation in educational settings. Vries et al. (2020) describe digital transformation as both a strategic challenge and a learning opportunity in executive education. Research by Weyer et al. (2015) and Fatorachian and Kazemi (2018) highlights how digital integration facilitates vertical, horizontal, and end-to-end engineering of organizational systems, enhancing information flow across operations. Furthermore, other studies suggest that organizational learning plays a crucial role in supporting the adoption of digital competencies within organizations (Vial, 2019; Marx et al., 2021; Calvini et al., 2009).

This study highlights the pivotal role of digital transformation in advancing madrasah reform. Digital technology has become an integral part of modern education, breaking traditional time and space barriers and enriching the teaching and learning experience (Selwyn & Facer, 2014). It fosters a more inclusive and flexible educational environment, creating opportunities for learners regardless of their location or circumstances.

Studies highlight a strong connection between educational reforms and improved educational performance. Reforms act as a catalyst for transforming institutions, driving fundamental changes to their core (Kounetas et al., 2023). They play a crucial role in reshaping the educational framework, resulting in notable advancements across various aspects of institutional performance. These initiatives focus on elevating the overall quality of education by employing holistic strategies, including curriculum enhancements, innovative teaching approaches, refined assessment methods, and targeted professional development for educators (Herman et al., 1999).

## **CONCLUSION**

This research highlights the critical role of transformational leadership in driving digital transformation and promoting organizational learning in educational institutions. Transformational leaders play a key role in envisioning change, motivating stakeholders, and coordinating efforts to adopt technological advancements and modern teaching methods. These aspects are fundamental for achieving impactful madrasah reform, enabling the implementation of innovative practices, adaptive strategies, and data-driven decision-making. By focusing on technology integration and fostering continuous improvement, transformational leadership has the potential to elevate madrasah performance and educational outcomes, establishing itself as a cornerstone for shaping the future of education in the digital age.

This research provides valuable theoretical insights into the role of digital transformation within the context of madrasahs. It highlights that digital transformation extends beyond technological changes, serving as a vital enabler of transformational leadership and organizational learning—both crucial for driving effective madrasah reform. The findings indicate that as madrasah integrate digital tools and strategies, leaders are better

equipped to inspire and manage change, cultivating a culture of continuous learning and improvement. This process can significantly enhance madrasah performance, aligning educational practices with modern standards and expectations.

This study focuses on transformational leadership as the sole driver of digital transformation and organizational learning, overlooking factors like policies, resources, and stakeholder engagement, limiting its applicability across diverse contexts. It is also restricted to madrasah in Indonesia and relies on leaders' perceptions, which may be subjective. Future research should adopt a broader approach, including stakeholders and qualitative methods like interviews and case studies, as well as objective and longitudinal data, to capture a more comprehensive understanding of educational reform and its sustainability.

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