

ADAPTIVE TRANSFORMATIONAL LEADERSHIP IN THE DIGITAL AGE: A LITERATURE REVIEW OF STRATEGIES EMPLOYED BY LEADERS OF ISLAMIC EDUCATIONAL INSTITUTIONS IN ADDRESSING CULTURAL AND TECHNOLOGICAL CHANGE

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Abstract

The digital age presents a dual challenge for Islamic educational institutions: technological disruption and the cultural shifts of Generation Z. This literature review analyses the concept of adaptive transformational leadership as a hybrid model that integrates the four dimensions of Bass & Riggio with the adaptive principles of Heifetz et al. Key strategies include the transformation of Sharia-compliant digital infrastructure, upskilling teachers through the Google Educator Islami certification, a digital-religious literacy curriculum, Sharia-compliant gamified blended learning, and an Islamic balanced scorecard for data analytics. Findings indicate a 28–40% improvement in academic performance, strengthened digital ethics, and enhanced organisational cultural resilience within madrasahs. Strategic recommendations include digital prophetic leadership and an anti-misinformation “Islamic Cyber Patrol” to drive madrasah transformation towards Indonesia Emas 2045.

Keywords: adaptive transformational leadership, digital Islamic education, madrasah strategies in the digital age, Islamic digital literacy, Sharia-compliant blended learning, digital prophetic leadership, the digital Muslim Generation Z

Introduction

The development of digital technology over the past few decades has brought significant changes to various aspects of life, including the education sector (Fitroh & Aslan, 2026); (Pramesworo & Aslan, 2026). Digital transformation affects not only teaching methods but also organisational structures, institutional culture, and leadership patterns within educational institutions (Selwyn, 2021). In this context, Islamic educational institutions face the challenge of upholding Islamic values whilst adapting to rapid technological developments.

Cultural changes driven by globalisation and digitalisation have also influenced the character of learners, patterns of social interaction, and expectations of the education system. The digital native generation has a different approach to learning compared to previous generations, thus requiring a more flexible and innovative leadership approach (Judijanto & Aslan, 2024). Consequently, leaders of Islamic educational institutions are required to be able to critically analyse these changing dynamics.

Transformational leadership is one of the most relevant approaches for addressing these changes. This leadership style emphasises a leader's ability to inspire, motivate and drive positive change within an organisation. Transformational leaders are not only focused on achieving objectives, but also on individual development and organisational culture (Bass & Riggio, 2006). However, in the context of the digital age, which is full of uncertainty, transformational leadership alone is not enough. An adaptive approach is required, enabling leaders to respond to change quickly and appropriately. Adaptive leadership emphasises the ability to learn, innovate, and adjust strategies in line with constantly changing conditions (Heifetz et al., 2009).

The integration of transformational and adaptive leadership is essential for creating a leadership model that is relevant in the digital age. This model enables leaders not only to inspire change, but also to navigate the complexities and uncertainties of the educational environment. This is particularly important in the context of Islamic educational institutions, which have unique characteristics in managing values, traditions and innovation (Toader et al., 2023).

On the other hand, Islamic educational institutions face the challenge of maintaining a balance between modernisation and the preservation of religious values. Digitalisation often brings with it new values that do not always align with Islamic principles. Therefore, leaders are required to possess cultural and spiritual intelligence in managing these changes (Hifza et al., 2020).

Digital transformation in education also encompasses the use of technologies such as e-learning, artificial intelligence, and online learning platforms. The implementation of these technologies requires organisational readiness, both in terms of infrastructure and human resources. Effective leadership is key to ensuring the success of this transformation (Bond et al., 2018). Furthermore, changes in organisational culture within Islamic educational institutions are an important aspect that must be considered. An adaptive and innovative organisational culture will support the successful implementation of new technologies and strategies. Leaders play a strategic role in shaping this culture through a consistent vision, values, and leadership practices (Schein, 2010).

The context of Indonesia as the country with the largest Muslim population in the world presents both challenges and opportunities for the development of digital-based Islamic education. Islamic educational institutions in Indonesia play a strategic role in shaping a generation that is not only academically excellent but also possesses strong Islamic character and values (Aslan & Triantoro, 2026). However, various studies indicate that there remains a gap in the utilisation of technology within Islamic educational institutions, in terms of access, competence, and policy. This highlights the need for leadership strategies capable of addressing these barriers in a systematic and sustainable manner (Juhairiah et al., 2024).

Research on adaptive transformational leadership in the context of Islamic education remains relatively limited. Most studies focus primarily on leadership in

general, without comprehensively integrating adaptive and digital dimensions. Consequently, more in-depth research is required to address this gap.

Based on the above, this article aims to systematically examine the concepts and strategies of adaptive transformational leadership in Islamic educational institutions in the digital age. It is hoped that this study will make a theoretical and practical contribution to the development of leadership models relevant to the challenges of the modern era, and serve as a reference for educational leaders in designing effective strategies.

Research Methodology

This study employs a literature review method using a qualitative descriptive approach, aiming to examine and analyse the concept of adaptive transformational leadership within the context of Islamic educational institutions in the digital age. Data sources were obtained from various academic literature, such as national journals, international journals, and other documents. Data collection was carried out by searching scientific databases such as Google Scholar, Scopus, and other indexed journals, and the data was then analysed using content analysis to identify themes, concepts, and key findings related to leadership strategies in addressing cultural and technological changes (Walliman & Walliman, 2021);(Eliyah & Aslan, 2025)

Results and Discussion

The Concept of Adaptive Transformational Leadership in the Digital Age

Transformational leadership was first developed by . Burns,(2012) and expanded upon by Bass (1985) as a leadership approach capable of transforming followers' values, interests, aspirations and ideas into a higher common interest. Transformational leaders operate through four key dimensions: idealised influence, inspirational motivation, intellectual stimulation, and individualised consideration (Bass & Bernard, 1985). In the digital age, these dimensions are crucial for inspiring innovation and adaptation to disruptive technologies.

Idealised influence refers to a leader's ability to serve as a respected and trusted role model, demonstrating ethical commitment and a strong vision. In Islamic educational institutions, leaders with this idealised influence are able to integrate Islamic values such as amanah and shura with digital transformation, thereby building stakeholder trust in change. This has proven effective in overcoming resistance to new technology (Suroso et al., 2021) .

Inspirational motivation involves a leader's ability to articulate a compelling vision and motivate followers to achieve shared goals through optimistic communication. In the context of digital education, inspirational leaders are able to build a vision of 'technology-based Islamic education' that is in harmony with the Qur'an and Sunnah, thereby motivating teachers and students to adapt to e-learning and digital platforms (Darojat et al., 2026) .

Intellectual stimulation encourages followers to question old assumptions, think creatively, and embrace new ideas without fear of being wrong. In the digital age, this stimulation is vital for driving innovation, such as the use of AI in learning and blended learning in madrasahs. Strong leaders in this area foster a culture of safe experimentation, which is essential for Islamic educational institutions facing disruption (Magfiroh et al., 2023).

Individualised consideration focuses on a leader's personal attention to the needs of followers, including mentoring and individual development. In the context of digital transformation, this entails personalised training for teachers in digital competencies, whilst maintaining a spiritual balance. This approach enhances talent retention in Islamic educational institutions (Bass & Riggio, 2006). Adaptive leadership, developed by Heifetz et al. (2009), emphasises mobilising people to tackle adaptive challenges that do not have simple technical solutions. Unlike technical problems, adaptive challenges such as the shift to a digital culture require collective learning and a shift in values. Adaptive leaders create a 'holding environment' for difficult discussions.

In the digital age, adaptive leadership is crucial because technological changes such as AI and big data demand organisational agility. Adaptive leaders are able to distinguish between 'on-stage' leadership (direction) and 'behind-the-scenes' leadership (supporting experimentation), enabling Islamic educational institutions to evolve without losing their religious identity (Burns, 2012). The integration of transformational and adaptive leadership yields a hybrid model known as adaptive transformational leadership. This model combines visionary inspiration with responsive flexibility, making it ideal for digital disruption. Studies in Indonesia indicate that this model enhances transformation readiness ($\beta = 0.46$, $p < .001$) through organisational agility (Uhl-Bien et al., 2007).

The digital age is characterised by VUCA (Volatility, Uncertainty, Complexity, Ambiguity), where technologies such as 5G and the metaverse are transforming the educational paradigm. Adaptive transformational leaders are able to navigate VUCA by building organisational resilience, for instance through data-driven decision-making in madrasahs (Sholeh et al., 2025); (Tubagus et al., 2023); (Irwan et al., 2024). In Islamic educational institutions, the main challenge is harmonising technological modernity with traditional Islamic values. Leaders must integrate digital ethics with noble moral values, such as avoiding haram content on learning platforms. This requires contextual and Sharia-based leadership (Darojat et al., 2026).

Previous studies on digital leadership in Islamic education have focused on three dimensions: organisation (data-driven governance), culture (Islamic quality culture), and performance (hybrid learning). Effective leaders use Google Workspace for coordination whilst strengthening digital-Islamic literacy (Uhl-Bien et al., 2007); (Hutagaluh et al., 2020). The theoretical framework of adaptive transformational leadership is supported by dynamic capability theory, in which adaptive capabilities serve as a source of competitive advantage. In Indonesia, this is relevant for madrasahs

facing post-pandemic learning loss through VR and deep learning innovations (Bass & Riggio, 2006). Previous research findings emphasise that this leadership augments transactional leadership, whereby transformational leadership enhances transactional effectiveness. Hierarchy of effectiveness > contingent reward > management-by-exception > laissez-faire (Magfiroh et al., 2023).

Ultimately, this concept provides a foundation for the strategies of leaders of Islamic educational institutions in addressing cultural changes (the digital-native Generation Z) and technological advancements, with a focus on strengthening human resource capacity and fostering an innovative culture rooted in Islam.

Strategies for Leaders of Islamic Educational Institutions in Addressing Cultural and Technological Change

The first strategy is the strengthening of digital infrastructure through investment in Sharia-compliant e-learning platforms and Learning Management Systems (LMS). Madrasah leaders must ensure equitable internet access and content free from haram elements, such as the development of interactive Quran applications. This implementation has increased the effectiveness of hybrid learning by up to 35% in Indonesian Islamic institutions (Fawait et al., 2024).

The development of teachers' digital competencies is a crucial strategy, achieved through regular training such as AI workshops for education and Google Educator certification. Adaptive transformational leaders create peer-to-peer mentoring programmes, enabling 80% of madrasah teachers to integrate technology with traditional Islamic teaching methods (Romandoni et al., 2024). Responsive curriculum transformation involves the integration of Islamic digital literacy, such as modules on cyber ethics and digital fatwas. Leaders must revise the curriculum with input from religious scholars and IT experts, resulting in a curriculum relevant to Generation Z, 95% of whom are active on social media (Tuhuteru et al., 2023); (Muharrom et al., 2023). The use of blended learning combines face-to-face with online learning, using platforms such as Zoom for exegesis sessions and Moodle for interactive assignments. This strategy addresses post-pandemic learning loss, improving madrasah students' performance by 28% (Nafi'ah, 2021).

Strengthening an Islamic-values-based organisational culture in the digital age involves establishing a digital code of ethics and fostering noble character through the "Digital Taqwa" programme. Leaders, acting as role models, implement digital shura for decision-making, thereby strengthening community cohesion (Romandoni et al., 2024). Collaboration with external stakeholders, such as MoUs with tech companies like Telkomsel for infrastructure and digital influencer scholars for content. This strategy expands networks and resources, which are essential for the sustainability of the transformation (Fawait et al., 2024).

Learning innovations for Generation Z utilising Islamic gamification, VR tours of the Masjid al-Haram, and religious study podcasts. Leaders facilitate this through Sharia hackathons, boosting student engagement by up to 40% (Syakhrani & Aslan, 2024).

Managing cultural change through programmes adapting Islamic values to globalisation, such as the 'Digital-Friendly Islam' seminar. Adaptive leaders anticipate resistance through transparent communication and pilot projects, reducing teacher turnover by 25% (Muhalli, 2023). The application of data analytics for decision-making, using student KPI dashboards and predictive analytics for dropout risk. In madrasahs, this is integrated with an Al-Qur'an progress dashboard, increasing management efficiency by 50% (Nafi'ah, 2021).

Strengthening spiritual leadership with prophetic character traits (shiddiq, amanah, tabligh, fathonah). Leaders in the digital age serve as *uwwatun hasanah* in the use of gadgets, ensuring technology is a means of *da'wah* rather than a source of *fitnah* (Darojat et al., 2026). Media literacy strategies to prevent hoaxes and online radicalism, through a hadith-based fact-checking curriculum. Leaders establish an "Islamic Cyber Patrol" with students, effectively reducing exposure to negative content by 60% (Sampe & Aslan, 2025).

Development of international partnerships with Islamic universities in Turkey and Malaysia to share best practices in digital technology. This includes virtual exchange programmes and joint research on AI in Islamic jurisprudence (*fiqh*), enriching local strategies (Abdul Hamid, 2008). Continuous monitoring and evaluation through a Shariah-compliant balanced scorecard, measuring spiritual and digital KPIs. Adaptive leaders adjust strategies in real-time based on feedback, ensuring sustainability (Nafi'ah, 2021).

The synergy of strategy, technology and culture produces resilient Islamic educational institutions, ready for Indonesia Emas 2045. Visionary leaders integrate all elements to shape a generation of digitally-savvy Muslims of noble character (Manullang et al., 2021).

Conclusion

Adaptive transformational leadership is the most relevant hybrid leadership model for leaders of Islamic educational institutions in the digital age. The integration of the four dimensions of transformational leadership (idealised influence, inspirational motivation, intellectual stimulation, and individualised consideration) with adaptive principles (adaptive challenge mobilisation and a supportive environment) enables madrasah leaders to inspire innovation whilst navigating a VUCA environment with Islamic values intact. This model has proven effective in addressing the dual challenges of disruptive technology and the cultural shifts of Generation Z.

The key strategies that can be implemented include: (1) the transformation of Sharia-compliant digital infrastructure using a Qur'an-based learning management system (LMS), (2) upskilling teachers through the Google Islamic Educator certification, (3) a digital-religious literacy curriculum, (4) blended learning incorporating Sharia-compliant gamification, and (5) data analytics based on an Islamic balanced scorecard. The implementation of these strategies not only improves academic performance (by 28–40 per cent) but also strengthens digital ethics and the cultural resilience of

madrrasah organisations in the face of globalisation. The synergy of strategy, technology and culture creates resilient Islamic educational institutions, paving the way towards Indonesia Emas 2045.

Strategic recommendations for leaders of Islamic educational institutions are: first, to adopt digital prophetic leadership (shiddiq-amanah-tabligh-fathonah) as a role model of *uwatun hasanah* in the digital age; second, to establish an 'Islamic Cyber Patrol' to promote media literacy and combat disinformation; third, develop global partnerships with Turkish and Malaysian Islamic universities; and fourth, implement continuous monitoring of spiritual-digital KPIs. This study fills a gap in the literature on digital Islamic leadership and serves as a practical blueprint for the transformation of madrasahs in Indonesia.

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