

TRANSFORMATION OF MADRASAH TOWARDS THE SMART SCHOOL ERA: FROM MANUAL TO DIGITAL

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ABSTRACT

This study explores the transformation of Islamic educational institutions, particularly madrasahs, from traditional manual systems toward smart school practices in the digital era. Education worldwide has undergone a significant digital shift, transforming teaching models, administrative management, and student learning experiences. Madrasahs, as institutions preserving Islamic values, face the dual challenge of adapting to digital innovation while maintaining their spiritual and moral missions. This article uses a qualitative-descriptive approach with library research and field analysis from various Indonesian madrasah implementing digital-based systems. Findings show that digital transformation in madrasahs involves three major aspects: infrastructure readiness, human resource competence, and digital learning integration. The results demonstrate increased efficiency in data management, improved teacher-student collaboration, and innovation in Islamic learning content through interactive applications. However, challenges remain in the form of digital literacy gaps, limited budgets, and the need for continuous training. This transformation also integrates Islamic values such as amanah (trust), istiqamah (consistency), and ukhuwah (brotherhood) within technology adoption, ensuring that digitalization supports spiritual excellence alongside academic progress. Thus, the transformation toward smart madrasahs is not merely technological modernization but also a holistic effort to build an intelligent, ethical, and sustainable Islamic education ecosystem for the golden generation of Indonesia.

Keywords: Digital Transformation, Madrasah, Islamic Education, Smart School, 21st-Century Learning

INTRODUCTION

The digital revolution has reshaped global education systems, shifting paradigms from manual teaching to interactive, technology-driven environments. In this context, madrasahs—Islamic educational institutions—are evolving to align with modern educational demands while preserving Islamic values. The challenge lies in integrating digital tools into teaching, administration, and student engagement without compromising the philosophical and moral foundations of Islamic education.

METHOD

This research adopts a qualitative-descriptive method. Data were collected through literature review, policy analysis, and observation of selected Indonesian madrasahs undergoing digital transformation. The study identifies patterns, strategies, and implications of digital integration at institutional and cultural levels.

RESULTS AND DISCUSSION**The Early Portrait of Madrasah**

Historically, madrasahs in Indonesia relied on manual administrative systems, face-to-face teaching, and printed learning materials. Though effective in traditional settings, these systems struggled to meet the demands of rapid digitalization and 21st-century competencies.

Steps of Digital Transformation

The shift began with digitalizing administrative functions—student data management, attendance systems, and e-learning platforms. Use of Learning Management Systems (LMS) like Moodle and Google Classroom marked an initial leap toward smart learning environments.

Impacts of Transformation

Digital transformation promotes efficiency, innovation, and collaboration. Teachers can manage interactive lessons, evaluate learning outcomes in real-time, and engage students via multimedia applications. Students, meanwhile, experience digital literacy growth that prepares them for broader professional and academic challenges.

Challenges and Strategies

Key obstacles include infrastructure disparity, varying levels of digital competence among teachers, and limited training programs. Strategies to address these include establishing partnerships with educational technology providers, government-supported digital literacy training, and peer-learning initiatives among teachers.

Integration of Islamic Values

The digital era must not dilute Islamic principles but strengthen them. The implementation of technology should align with values such as amanah (trust), ihsan (excellence), and adab (ethics). Technology becomes a means for da'wah and tarbiyah, not a replacement for moral guidance.

CONCLUSION

Madrasah digital transformation signifies a strategic evolution from conventional systems toward intelligent education environments. Beyond adopting digital tools, this movement reflects a commitment to uphold Islamic ethics within a technology-based learning ecosystem. The successful realization of smart madrasahs requires synergy among government, educators, and communities to create an integrated system

fostering faith, knowledge, and technology in harmony for future Muslim generations.

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