

TRANSFORMING QUR'ANIC EDUCATION MANAGEMENT IN EARLY CHILDHOOD: INTEGRATING TRADITION, DIGITAL INNOVATION, AND CHILD-CENTRED LEARNING IN PAUD AL-QUR'AN

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Abstract: The rapid transformation of children's learning environments through digital technology has created new opportunities and challenges for Qur'anic education in early childhood. Traditional Qur'anic learning practices remain important for preserving religious authenticity, yet they need to respond to children's changing developmental and learning characteristics. This study aims to examine the transformation of Qur'anic education management through the integration of tradition, digital innovation, and child-centred learning at PAUD Al-Qur'an Raudlatul Muta'allimin Jember. A qualitative case study approach was employed. Data were collected through observation, semi-structured interviews, and documentation involving the principal, curriculum coordinator, teachers, and students. Data were analysed through data reduction, data display, and verification, supported by content, discourse, and interpretive analysis. The findings demonstrate that Qur'anic education management is transforming through a process of pedagogical integration rather than replacement. Traditional practices, including *talaqqi*, repetition, memorisation, teacher modelling, and direct guidance, remain the foundation of Qur'anic learning, while digital and audiovisual resources function as complementary tools to enhance engagement, multisensory experiences, and learning variation. Teachers play a central mediating role by aligning digital resources with Qur'anic objectives and children's developmental needs. The study proposes a Transformative Qur'anic Education Management perspective in which tradition serves as the normative foundation, digital innovation functions as a complementary pedagogical resource, and child-centred learning becomes the orientation of implementation. This integrated approach provides a framework for developing adaptive, ethical, and developmentally appropriate Qur'anic education while maintaining religious identity in the context of digital childhood.

Keywords: Qur'anic Education, Education Management, , Digital Innovation, Child-Centred Learning

INTRODUCTION

Early childhood Qur'anic education occupies a strategic position in shaping children's religious identity, moral dispositions, and foundational learning habits. In Indonesia, PAUD Al-Qur'an represents an educational space where Qur'anic values are introduced alongside the developmental needs of young children. However, the contemporary learning environment is changing rapidly as children increasingly encounter digital media, audiovisual content, interactive applications, and technology-mediated learning from an early age. Recent research shows that digital pedagogy has become an increasingly important component of early childhood education, with technology influencing classroom practices, teacher roles, and children's participation (Li et al., 2026a). At the same time, digital technology does not automatically produce meaningful learning because its educational value depends heavily on teacher mediation, pedagogical purpose, and developmental appropriateness (Undheim, 2022). Consequently, the central challenge is no longer whether technology should enter Qur'anic education, but how its integration can be managed without displacing tradition, teacher guidance, spiritual values, and child-centred principles. This makes the transformation of Qur'anic education management in PAUD Al-Qur'an an important issue for investigation.

Previous studies have examined several dimensions of digital and Islamic education for young children, but these studies remain relatively fragmented. Research on early childhood digital pedagogy has focused on technology integration, teachers' digital practices, children's engagement, and the conditions that influence successful implementation (Li et al., 2026a). Undheim (Undheim, 2022) further demonstrates that teachers' knowledge, beliefs, and pedagogical decisions are central to determining how digital technologies are integrated into early childhood learning. More specifically, recent research in Indonesian Islamic early childhood education has identified the use of digital media, including audiovisual materials and interactive resources, as an emerging component of religious learning (Ramadani et al., 2025). Meanwhile, emerging research on

artificial intelligence in Qur'anic education highlights opportunities for personalised learning and memorisation while also raising concerns about authenticity, accuracy, teacher dependence, and the preservation of spiritual dimensions (Almajdoub et al., 2026). Nevertheless, existing studies have predominantly examined learning methods, digital media, or technological applications separately, rather than investigating management transformation as an integrated process connecting Qur'anic tradition, digital innovation, and child-centred learning. This gap provides the rationale for the present study.

This study therefore aims to examine how Qur'anic education management can be transformed in PAUD Al-Qur'an through the integration of tradition, digital innovation, and child-centred learning. The study moves beyond the question of whether digital technology improves Qur'anic learning outcomes and instead investigates how institutional management can orchestrate technological change while maintaining the authenticity and pedagogical integrity of Qur'anic education. This orientation is particularly important because technology integration in early childhood classrooms exists along a spectrum, ranging from teacher-directed use to more participatory and child-centred approaches (Lim & Wardrip, 2026). The study consequently focuses not simply on technology adoption, but on the managerial processes through which educational transformation is planned, implemented, mediated, and sustained.

This study argues that the transformation of Qur'anic education management in early childhood should not be understood as a replacement of traditional practices with digital technologies, but as a strategic integration of tradition, innovation, and developmental appropriateness. Traditional practices such as talaqqi, repetition, memorisation, teacher modelling, and direct spiritual guidance remain essential for maintaining Qur'anic authenticity and relational learning. At the same time, digital resources can enrich children's experiences through multisensory, interactive, and engaging learning environments when their use is pedagogically guided. The importance of teacher mediation is supported by research showing that children and teachers need to engage together

with digital technologies rather than treating technology as an independent instructional agent (Undheim, 2022). Recent research on Qur'anic education also suggests that emerging technologies, including AI, should complement rather than replace teachers because Qur'anic learning involves accuracy, ethical guidance, interpretation, and spiritual formation (Almajdoub et al., 2026). Therefore, effective management requires a balanced framework in which tradition provides the normative foundation, digital innovation expands pedagogical possibilities, and child-centred learning determines the developmental orientation of implementation. The anticipated contribution of this study is a transformative perspective on Qur'anic education management that connects Qur'anic authenticity, digital innovation, and child-centred pedagogy within PAUD Al-Qur'an.

RESEARCH METHODS

This study employed a qualitative approach with a case study design to investigate the transformation of Qur'anic education management in early childhood through the integration of tradition, digital innovation, and child-centred learning. The research was conducted at PAUD Al-Qur'an Raudlatul Muta'allimin, Jember, which was purposively selected as the material object and bounded context of the study. The selection of this site was based on its relevance to the research focus, particularly the management of Qur'anic learning for young children within an educational environment that responds to contemporary pedagogical and technological developments. The case study design was considered appropriate because it enables an in-depth examination of a contemporary educational phenomenon within its real-life institutional context (Yin, 2018).

The analysis focused on how institutional management plans, implements, coordinates, and evaluates Qur'anic education while negotiating traditional practices, digital innovation, and children's developmental needs. Thus, the research sought to understand not only what management practices were

implemented but also how and why transformation occurred within the institutional context.

Sources of Information and Data Collection. Information was obtained from purposively selected participants who possessed direct knowledge and experience of Qur'anic education management at the research site. The informants consisted of the school principal, curriculum coordinator, teachers, and students. The principal provided information concerning institutional policies, leadership, managerial decision-making, and strategic directions for Qur'anic education. The curriculum coordinator contributed information regarding curriculum planning, implementation, adaptation, and evaluation, particularly in relation to the integration of traditional and innovative learning approaches. Teachers provided pedagogical perspectives concerning classroom practices, the use of digital learning resources, child-centred strategies, and challenges encountered during implementation. Students were included to capture their experiences, participation, responses, and perceptions of Qur'anic learning activities. Data were collected through observation, semi-structured interviews, and documentation. Observation was conducted to examine authentic learning and managerial practices, teacher-student interactions, and the implementation of Qur'anic learning. Interviews explored participants' experiences and interpretations, while documentation included curriculum materials, learning plans, institutional policies, assessment records, photographs, and other relevant documents. The use of multiple sources facilitated data triangulation and strengthened the credibility of the findings (Creswell & Poth, 2018).

Data Analysis. Data analysis followed the interactive analytical process of data reduction, data display, and conclusion verification proposed by Miles, Huberman, and Saldana (2014). During data reduction, interview transcripts, observation records, and documentary materials were systematically organized, coded, categorized, and selected according to their relevance to the research questions. The reduced data were then displayed through thematic categories,

matrices, and narrative descriptions to identify relationships, recurring patterns, and differences among information sources.

The verification stage involved continuously examining emerging findings, comparing evidence across participants and data collection techniques, and testing the consistency of preliminary interpretations until credible conclusions were established. To deepen the analysis, three complementary methods were employed are content analysis, discourse analysis, and interpretive analysis. Content analysis was used to identify dominant themes and patterns related to Qur'anic education management. Discourse analysis examined how participants constructed meanings concerning tradition, digital innovation, and child-centred learning. Interpretive analysis subsequently connected these empirical meanings to the broader conceptual framework of transformative Qur'anic education management. This analytical strategy enabled the study to move beyond descriptive findings toward a contextual and critical understanding of institutional transformation.

RESULTS AND DISCUSSION

The interviews with the principal, curriculum coordinator, teachers, and students revealed that the transformation of Qur'anic education management at PAUD Al-Qur'an Raudlatul Muta'allimin Jember occurs through the gradual integration of traditional Qur'anic practices, digital learning innovation, and child-centred pedagogy. The main findings are summarized in Table 1.

Table 1. Transformation Dimension at PAUD Al-Qur'an Raudlatul Muta'allimin Jember

Main Findings	Transformation Dimension
Maintains Qur'anic values while encouraging innovative learning	Tradition-Innovation

Integrates Qur'anic learning objectives with varied learning activities	Management-Curriculum
Combine memorization, <i>talaqqi</i> , repetition, stories, audio, and digital media	Tradition-Digital Innovation
Show greater engagement when learning involves songs, animation, audiovisual materials, and interactive activities	Child-Centred Learning

That traditional practices remain the foundation of Qur'anic education, while digital resources are positioned as complementary tools rather than replacements for teachers. The participants also emphasized that learning activities need to consider children's age, attention span, interests, and developmental characteristics. Thus, transformation is reflected not in abandoning traditional Qur'anic education but in reorganizing its management and delivery to accommodate contemporary learning needs.

Pattern and interpretation. The interview data demonstrate a consistent pattern of continuity combined with adaptation. The principal and curriculum coordinator emphasized institutional consistency in maintaining Qur'anic values, whereas teachers described greater flexibility in translating these values into classroom activities. This pattern suggests that transformation is initiated at the managerial level and subsequently interpreted pedagogically by teachers. Traditional methods such as *talaqqi*, repetition, modelling, and memorization continue to provide structure and authenticity, while digital media provide additional stimulation and variation. The students' responses indicate that interactive and audiovisual activities can increase attention and participation, particularly when technology is incorporated into meaningful learning experiences. Analytically, this finding indicates that digital innovation becomes educationally meaningful only when mediated by teachers and connected with established Qur'anic objectives. The transformation therefore represents a process of managed integration rather than technological replacement. The interview findings support the argument that effective Qur'anic education management

requires equilibrium between institutional religious identity, technological responsiveness, and developmental appropriateness.

Classroom observations showed that Qur'anic learning at PAUD Al-Qur'an Raudlatul Muta'allimin was implemented through a combination of teacher-guided traditional activities and more interactive learning experiences. The observed sequence generally included opening religious routines, Qur'anic recitation, teacher modelling, repetition or memorization, interactive activities, and reinforcement. Teachers were observed guiding children directly during recitation while simultaneously using songs, audio recordings, pictures, animation, or other digital resources when appropriate. Children demonstrated different levels of participation depending on the learning activity. They tended to participate more actively when activities involved movement, sound, visual stimulation, storytelling, or direct interaction. Traditional recitation activities remained more structured and teacher-directed, whereas interactive activities provided greater opportunities for children to respond, imitate, choose, and participate. The observations therefore confirm that Qur'anic learning management was not organized around a single pedagogical method. Instead, teachers combined several approaches to accommodate children's developmental characteristics while maintaining the centrality of Qur'anic content and values.

Pattern and interpretation. The observation data reveal a clear pattern of pedagogical blending between structured religious instruction and child-centred learning. Teacher-led recitation remained important because young children require modelling, repetition, and immediate correction when learning Qur'anic pronunciation and memorization. However, teachers appeared to recognize that prolonged reliance on repetitive activities could reduce children's attention and participation. Consequently, songs, movement, visual materials, stories, and digital media were incorporated to create variation and sustain engagement. This pattern can be interpreted as evidence of managerial transformation at the classroom level, where teachers function as mediators between tradition and innovation. Digital technology was not observed as an independent instructional

system; rather, it was embedded within teacher-designed activities and used selectively according to learning objectives. The findings suggest that child-centred Qur'anic education does not necessarily require abandoning teacher authority or traditional methods. Instead, it involves restructuring the learning environment so that children remain active participants while teachers continue to provide religious, pedagogical, and emotional guidance. Thus, transformation occurs through pedagogical adaptation within a stable Qur'anic framework.

Documentary analysis provided additional evidence concerning the institutional management of Qur'anic education. The documents examined included curriculum and learning plans, schedules of Qur'anic activities, learning materials, assessment records, photographs of classroom activities, and examples of digital or audiovisual learning resources. These documents generally demonstrated that Qur'anic learning was incorporated into the regular educational program rather than being treated as an isolated supplementary activity. Learning plans showed the inclusion of Qur'anic competencies alongside developmental objectives, while photographs and learning materials indicated the use of varied instructional resources. Assessment-related documents provided evidence that teachers monitored children's progress in recitation, memorization, participation, and learning behaviour. The documentary evidence also showed that traditional Qur'anic practices remained visible through recitation, memorization, repetition, and teacher modelling. At the same time, the presence of visual, audiovisual, and interactive resources indicated an emerging orientation toward digital and multisensory learning. Collectively, these documents substantiate the institutional dimension of the transformation identified through interviews and observations.

Pattern and interpretation. The documentary evidence reveals a pattern of institutional alignment between continuity and innovation. The curriculum and learning documents indicate that Qur'anic education remains anchored in established religious objectives, while photographs and instructional materials demonstrate increasing variation in how those objectives are delivered. The

convergence between documentary, interview, and observation data strengthens the interpretation that transformation is occurring at several interconnected levels: institutional planning, curriculum implementation, classroom pedagogy, and student engagement. Importantly, the documentation does not suggest that digital innovation has replaced traditional Qur'anic learning. Instead, digital and interactive resources appear to function as supporting instruments within a broader educational framework. This finding reinforces the interpretation that transformation in PAUD Al-Qur'an is primarily a management process of integration, requiring institutional direction, curriculum coordination, teacher competence, and sensitivity to children's developmental needs. The combined evidence therefore suggests that a transformative model of Qur'anic education management should preserve tradition as its normative foundation, employ digital innovation selectively as a pedagogical resource, and place children's active participation and developmental needs at the centre of implementation.

Discussion

The interview findings imply that transforming Qur'anic education management should be understood as managed pedagogical integration rather than replacement of tradition by technology. The interviews indicate that *talaqqi*, repetition, memorisation, teacher modelling, and direct spiritual guidance remain functional because they preserve Qur'anic authenticity and relational learning, while digital resources provide additional opportunities for audiovisual stimulation, engagement, and differentiated experiences. This interpretation is consistent with recent studies showing that digital technology in early childhood education becomes meaningful when teachers deliberately embed it within pedagogical objectives and children's interests (Lim & Wardrip, 2026; Undheim, 2022).

Recent Islamic early-childhood research likewise demonstrates that *murottal*, Islamic stories, animation, and interactive applications can function as structured scaffolds when mediated through teacher guidance. Evidence concerning parental

mediation and digital-media quality further indicates that context and mediation matter more than technology exposure alone. Thus, the interviews suggest that the principal managerial function is to establish a balanced ecosystem in which tradition provides normative direction, technology provides pedagogical affordances, and children's developmental needs determine implementation.

The underlying reason for this integration pattern lies in the structural relationship among institutional leadership, teacher mediation, technological competence, and child development. Qur'anic education cannot be transformed simply by introducing digital devices because its objectives involve cognitive learning as well as moral, spiritual, emotional, and relational formation. Consequently, institutional leaders must establish boundaries regarding what technology is used for, while teachers determine how technology is translated into meaningful learning experiences. Research on preschool education demonstrates that teachers' beliefs influence their acceptance and implementation of digital technologies, indicating that technological transformation is partly dependent on teachers' perceptions of educational value and usefulness (Hoareau et al., 2021). Moreover, evidence on teacher-child interaction demonstrates that the quality of interaction contributes to young children's cognitive and social-emotional development (Grosse et al., 2022). Therefore, the interview pattern can be interpreted as the product of an underlying management-pedagogy-technology structure, in which transformation becomes effective when organizational decisions, teacher competence, technological affordances, and developmental appropriateness operate coherently.

The causal structure underlying the observed hybrid pedagogy is associated with the developmental characteristics of young children and the mediating role of teachers. Young children learn through repetition, imitation, movement, sensory experience, social interaction, and play; therefore, Qur'anic instruction that relies exclusively on repetitive activities may provide necessary structure but may not consistently sustain children's active participation. Conversely, unrestricted digital exposure may encourage passive consumption and reduce

opportunities for interpersonal interaction. Research on digital technology in early childhood emphasizes that technology should be embedded within meaningful pedagogical contexts rather than treated as an independent learning mechanism (Undheim, 2022). Similarly, research on digital reading encounters demonstrates that teacher-guided digital activities can generate different forms of embodied and affective engagement among young children, highlighting the importance of pedagogical mediation (Hermansson & Olin-Scheller, 2022).

Furthermore, empirical research shows that teacher-child interaction quality is associated with important aspects of young children's development, including working memory and social-emotional behaviour (Sulistyningtyas et al., 2024). The observed pattern therefore reflects a mediated transformation mechanism: children's developmental needs create demand for varied learning experiences, teachers interpret these needs pedagogically, and technology becomes one resource for realizing the resulting strategy. Digital innovation should consequently be evaluated according to its contribution to engagement, meaning-making, interaction, and Qur'anic learning rather than its technological sophistication alone.

Taken together, the interview and observation findings indicate that transformation in Qur'anic education management is produced through a multi-level relationship between institutional direction and classroom enactment. At the institutional level, leadership and curriculum management establish the parameters within which digital innovation can be introduced, while at the classroom level, teachers translate these parameters into concrete learning experiences. This relationship is particularly important in early childhood settings because technological integration is influenced by teachers' beliefs, confidence, and understanding of children's developmental needs (Hoareau et al., 2021). The quality of teacher-child interaction further determines whether technological activities remain relational and developmentally meaningful.

In addition, (Grosse et al., 2022) digital learning experiences can involve embodied, emotional, and collaborative forms of engagement when teachers

intentionally structure children's interaction with digital content (Hermansson & Olin-Scheller, 2022). Thus, the evidence suggests that the transformation of Qur'anic education should be conceptualised not as technology adoption, but as institutionally guided pedagogical transformation. Within PAUD Al-Qur'an, this means that tradition provides continuity and religious identity, teachers provide mediation and interpretation, digital technology provides additional pedagogical affordances, and children's developmental needs determine the appropriateness of implementation.

The evidence indicates that teachers function as the central strategic actors connecting Qur'anic tradition, digital innovation, and child-centred learning. Their strategies can be summarized as follows:

Table 2. Strategic Practices for Transforming Qur'anic Education at PAUD Al-Qur'an Raudlatul Muta'allimin Jember

Strategic Practice	Function	Transformative Contribution
<i>Talaqqi</i> and teacher modelling	Ensures accurate recitation and transmission	Preserves Qur'anic authenticity
Repetition and memorisation	Strengthens retention	Maintains traditional learning continuity
Songs and movement	Sustains attention and participation	Makes Qur'anic learning developmentally appropriate
Animation, audio, and visual media	Provides multisensory stimulation	Introduces digital innovation
Storytelling and discussion	Connects Qur'anic content with meaning	Supports comprehension and reflection
Guided digital activities	Prevents passive technology consumption	Positions teachers as mediators
Individual encouragement	Responds to different abilities	Strengthens child-centred learning

The significance of these strategies is supported by international literature emphasizing that teachers should critically select and mediate digital technologies rather than simply increase their use. Teacher preparation and digital competence are also repeatedly identified as important conditions for meaningful technology integration. Recent Qur'anic education research similarly argues that technology and AI should support, rather than replace, teachers because teachers remain responsible for accuracy, ethical guidance, and spiritual meaning. Thus, the strategic practices observed in this study suggest that teacher mediation is the operational mechanism through which transformative Qur'anic education management becomes possible.

The documentary evidence provides an institutional explanation for why the observed transformation can occur: managerial transformation becomes sustainable when pedagogical innovation is embedded within planning, curriculum, learning resources, assessment, and institutional documentation. Learning plans and curriculum materials provide formal direction, while photographs, instructional resources, and assessment records demonstrate how that direction is translated into practice. This alignment is important because digital transformation can easily become fragmented when technological activities are introduced without clear curriculum objectives, teacher preparation, and institutional support. Recent research on kindergarten technology integration indicates that teachers' understandings, experiences, and perceptions significantly shape how educational technologies are incorporated into classroom practice (Genç & Göğüş, 2026).

Similarly, (Schriever, 2021) demonstrates that teachers actively manage changing professional roles in relation to digital technologies, with professional agency, pedagogical practices, professional identity, and relationships with families emerging as interconnected dimensions of technology integration. At the institutional level, digital transformation also depends on facilitating conditions, including digital infrastructure, administrative commitment, and sustainable policies that enable teachers to implement technology meaningfully. Moreover,

research on early childhood digital pedagogy emphasizes that technology integration is most meaningful when teachers, children, and technologies operate within deliberate pedagogical arrangements rather than when digital tools are introduced as isolated innovations (Li et al., 2026). In the Qur'anic education context, this institutional alignment is particularly significant because technological innovation must remain compatible with religious authenticity, ethical formation, and pedagogical intentionality. Therefore, the documentary evidence supports a Transformative Qur'anic Education Management framework in which policy, curriculum, teacher agency, technology, assessment, and child-centred learning operate as an integrated institutional system.

CONCLUSION

This study concludes that transforming Qur'anic education management in early childhood should not be understood as replacing traditional Qur'anic practices with digital technology, but as strategically integrating Qur'anic tradition, digital innovation, and child-centred learning within a coherent management system. Findings from interviews, observations, and documentation at PAUD Al-Qur'an Raudlatul Muta'allimin Jember indicate that *talaqqi*, repetition, memorisation, teacher modelling, and direct guidance remain essential for maintaining Qur'anic authenticity, spiritual values, and teacher-child relationships, while digital and audiovisual resources can enrich learning through multisensory, interactive, and engaging experiences. The findings further demonstrate that teachers serve as critical mediators who determine how technology is selected, contextualised, and connected to children's developmental needs and Qur'anic learning objectives. At the institutional level, sustainable transformation requires alignment among leadership, curriculum planning, teacher competence, learning resources, assessment, and classroom practices. Therefore, this study contributes the perspective of Transformative Qur'anic Education Management, in which tradition functions as the normative

foundation, digital innovation serves as a complementary pedagogical resource, and child-centred learning becomes the primary orientation for implementation. This integrated approach offers a practical and theoretical direction for developing adaptive, ethical, and developmentally appropriate Qur'anic education in PAUD Al-Qur'an while preserving its religious identity amid the changing landscape of digital childhood.

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