Integration of Multimedia in Toddlers' Education of the Al-Qur'an: A Case of Kampong Gunong Qur'anic House, Belitung

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Abstract

This study explores the use of multimedia in teaching the Al-Qur'an to toddlers at the Kampong Gunong Qur'anic House in Belitung. Using a qualitative case study approach, data were gathered through interviews, observations, and documents. The findings highlight the effective use of multimedia tools, particularly Syaikh Kamil El Laboudy's murattal video, in the Tabarak method of Al-Qur'an learning. This approach successfully motivated toddlers to memorize the Al-Qur'an quickly while improving the quality of their recitation. However, the study's limitations included its focus on a single institution and the short duration of the research, which did not examine long-term effects on childhood's cognitive and spiritual development. Despite these limitations, the study contributed valuable insights into integrating technology in early children's religious education and offered recommendations for future research on the long-term impacts of multimedia-assisted Al-Qur'an learning.

Keywords: Attention span, ICT in Religion, Learning with Multimedia, Religion-level education, Remembrance of the Al-Quran, Tabarak method

A. Introduction

Integrating evidence-based social-emotional learning (SEL) interventions in early childhood education is crucial for fostering cognitive, emotional, and social development, as emphasized by the Nurturing Care Framework. This framework

advocates for environments that support health, nutrition, safety, and responsive care to enhance neural connections and overall well-being (Dankiw et al., 2023). In China, tailored approaches in nursery schools and community centers are essential to meet the developmental needs of children aged 0-5, highlighting the role of Early Childhood Care and Education (ECCE) in improving enrolment and learning outcomes (Oppong, 2023). However, challenges in scaling these interventions effectively are evident, as demonstrated by a Colombian study where the benefits of a psychosocial stimulation intervention were not sustained two years post-intervention, indicating the necessity for continuous support and adaptation (Shaw et al., 2023). The Care for Child Development (CCD) initiative by WHO and UNICEF exemplifies the potential of integrated approaches to improve children and family outcomes, yet it also highlights the need for more studies to guide effective implementation across diverse contexts (Jerebine et al., 2024). Additionally, early childhood is a critical period for developing sophisticated emotional understanding, foundational for social cognition and relationships(Sun et al., 2024). Therefore, designing early childhood education programs that provide nurturing, developmentally appropriate experiences is essential to ensure children not only survive but thrive, fulfilling their potential as emphasized by global health and development agendas. The integration of trauma-informed interventions in early childhood settings is also gaining traction, with a focus on upskilling educators to better support children who have experienced trauma, although long-term impacts and causal pathways remain underexplored (Sun et al., 2024).

Religious education in early children plays a crucial role in shaping a child's character by instilling moral values, ethics, and spiritual teachings, which are foundational for their behavior and attitudes towards others and the universe. While the provided papers do not directly address religious education, they offer insights into early childhood development that can be related to the broader context of education, including religious aspects. For instance, the study on children 's participation in early children's education highlights the importance of social, material, and cultural dimensions in a child's environment, which can be integral to religious education as it often involves cultural and social practices (Karjalainen & Puroila, 2023). In addition, there are also those who discuss the role of value integration and character education in early children, emphasizing how religious teachings can be a foundation for social-emotional development and ethical behavior (Zulaikhah, 2013). This is in line with the broader discussion of early childhood education, which integrates holistic and developmental approaches including religious and spiritual education to nurture childhood identities and worldviews (Putri & Daryono, 2023). Additionally, the role of nutrition and health in early children, as discussed in the papers on feeding practices and

the impact of prenatal elements, underscores the holistic approach needed in early education, where physical well-being supports cognitive and moral development (Berti & Socha, 2023) (Whiting & Ushula, 2022). The historical context of literacy and education in early Christian communities, although not directly related to toddlers, suggests the long-standing importance of integrating educational practices with spiritual teachings, which can be extrapolated to modern religious education for young children (Paley, 2023). Thus, while the direct link between religious education and toddler development is not explicitly covered, the integration of social, cultural, and health aspects in early childhood education provides a comprehensive framework that supports the inclusion of religious teachings in forming a child's character.

The increasing trend of parents enrolling toddlers in religious-based schools to teach the Al-Qur'an early is driven by the desire to instill religious values at a young age, facilitating easier absorption and practice of these values in daily life. This approach aligns with the broader educational strategies that emphasize early childhood education's role in socialization and cultural diversity, as discussed by Knoblauch, who highlights the importance of culturally and religiously sensitive education in early childhood settings (Knoblauch, 2023). The integration of religious teachings at an early age can be seen as part of a broader effort to develop a child's semantic knowledge of abstract religious concepts, as Viertel and Reis explore in their study on the acquisition of religious language through dialogic reading (Viertel & Reis, 2023). This method of education is akin to the use of infant-directed speech (IDS) in language development, which Zhou et al. found to enhance attention and facilitate word learning in toddlers through engaging prosody (Zhou et al., 2023). While the focus on religious education is distinct, the underlying principle of early exposure to complex concepts is similar to interventions like Head Sprout Early Reading, which emphasizes the role of parental support in educational outcomes (Markham & Tiernan, 2023). Additionally, the environmental factors influencing early childhood development, such as nursery attendance, can impact various developmental aspects, including microbiota diversity, which indirectly affects overall health and learning capacity (Abushawish et al., 2023). Thus, the trend towards early religious education reflects a multifaceted approach to early children development, integrating cultural, linguistic, and environmental considerations to foster holistic growth.

The Al-Qur'an learning for toddlers, which often involves interactive and engaging methods such as listening to the Al-Qur'an verses and recognizing *Hijaiyah* letters, aligns with broader educational strategies that emphasize cultural and religious sensitivity in early education. This approach is supported by findings that highlight the importance of culturally and religiously sensitive education in diverse social spaces like

kindergartens, which can enhance children 's socialization and learning experiences (Knoblauch, 2023). The use of repetition and perseverance in Al-Qur'an learning is akin to methods used in other educational contexts, such as the development of prosodic skills in toddlers, where consistent exposure and practice are crucial for skill acquisition (Filipe et al., 2023). Additionally, the integration of visual and audio approaches in Al-Qur'an learning is reflective of modern educational tools, such as mobile-based systems that support learning through interactive and user-friendly interfaces, which have been shown to improve outcomes in various educational settings (Siddiqi et al., 2023). While the specific context of Al-Qur'an learning was not directly addressed in the studies, the principles of engaging, repetitive, and culturally sensitive education are universally applicable and beneficial in fostering early children's development. These methods not only support cognitive and linguistic development but also help in nurturing a child's cultural and religious identity from an early age.

Teaching the Al-Qur'an to toddlers presents several challenges, primarily due to the limitations of methods that align with their cognitive development and the lack of resources in educational institutions. The *Murojaah* wheel media has been identified as an effective tool to enhance Al-Qur'an memorization among young children, providing an interactive learning experience that can engage toddlers more effectively than traditional methods (W & Rochmah, 2024). However, *the 'talaqy'* method, which involves direct teaching and repetition, remains prevalent, emphasizing the need for teacher and parental involvement to support memorization strategies (Huzaery et al., 2024). The *Yanbu'a* method also shows promise in improving Al-Qur'an literacy, though it faces challenges such as varying student abilities and the necessity for parental support (Syarifah & Sa'idah, 2024). Additionally, the digital era introduces external distractions, such as electronic devices, which can impede concentration and motivation in young learners (Rohmah & Sutrisno, 2024). To address these challenges, a combination of innovative teaching tools, structured approaches, and strong collaboration between parents and educators is essential. This synergy can help create a conducive learning environment that fosters both the spiritual and cognitive development of toddlers, ensuring they can effectively engage with the Al-Qur'an from an early age (Huzaery et al., 2024)(Rohmah & Sutrisno, 2024).

The integration of information and communication technologies (ICT) in teaching the Al-Qur'an to toddlers can significantly enhance the learning experience by making it more engaging and developmentally appropriate. The use of multimedia and interactive learning applications can address the challenges of delivering material to young children, as demonstrated by the effectiveness of game-based learning techniques in improving children 's ability to recognize and read *hijaiyah* letters (Arika & Yula,

2023). The Al-Qur'an method, which emphasizes a pleasant and easy approach to learning the Al-Qur'an, can be further enhanced through ICT, providing a structured yet enjoyable learning environment (Rozaq & Alam, 2023). Additionally, the use of digital media like Smart Hafiz in family settings highlights the potential of technology to support literacy in the Al-Qur'an, emphasizing the importance of parental involvement and the optimization of digital tools to foster children 's reading abilities (Syafaatunnisa & Nurulhaq, 2023). Online learning platforms, especially during the pandemic, have shown that parental support is crucial in facilitating effective Al-Qur'an education, indicating that ICT can bridge gaps in traditional learning methods while requiring active parental engagement (Zakaria & Hussin, 2023). Overall, ICT offers a promising avenue for making the Al-Qur'an learning more accessible and enjoyable for toddlers, leveraging interactive and multimedia tools to enhance understanding and retention.

The implementation of ICT in the Al-Qur'an learning for toddlers presents several challenges, as highlighted by the provided papers. One significant issue is the disparity in access to technology, which can vary greatly between different regions and educational institutions, leading to unequal learning opportunities for children (Al-Abdullatif & Alsubaie, 2022),(Balfaqih & Alharbi, 2022). This is compounded by differences in the quality of technology infrastructure, which can affect the effectiveness of digital learning platforms and tools used in educational settings (Al-Abdullatif & Alsubaie, 2022)(Shariq et al., 2022). Moreover, the potential negative impact of uncontrolled technology use on a child's development is a concern, as excessive screen time and inappropriate content can hinder cognitive and social development in young children (Balfaqih & Alharbi, 2022). The rapid evolution of ICT demands a rethinking of educational strategies to ensure that technology is used wisely and effectively, as seen in the context of STEAM education, where the intelligent use of computer tools is emphasized to enhance learning outcomes (Körtesi et al., 2022). Additionally, the shift to e-learning during the COVID-19 pandemic has highlighted the challenges faced by educators and students in adapting to new technologies, with varying levels of digital competence among teachers and students affecting the quality of education (Shariq et al., 2022). These challenges necessitate careful consideration and strategic planning to ensure that the integration of ICT in Al-Qur'an learning is both equitable and beneficial for toddlers.

At the Kampong Gunong Qur'anic House in Belitung, one of the institutions that has embraced multimedia in Al-Qur'an teaching for toddlers, particularly its technological use, this study will be based. Such analysis is useful in addressing the existing gap in the literature on the use of multimedia in enjoyable and effective learning of Al-Qur'an and its teaching to children of a very young age. Specifically, this

research seeks to Examine how multimedia technology is employed in the Al-Qur'an Education Programme for Toddlers at the Kampong Gunong Qur'anic House. Evaluate the advantages and disadvantages of using multimedia in the Al-Qur'an education for Toddlers. Analyze how the use of multimedia technology corresponds with the Tabarak method for memorization of the Al-Quran.

The integration of Information and Communication Technology (ICT) in religious education, particularly for the Al-Qur'an learning among toddlers, presents unique challenges and opportunities. The application of tele-assessment tools, as demonstrated in autism diagnosis, highlights the potential of remote technologies in early education, suggesting that similar approaches could be adapted for religious education to enhance accessibility and engagement (Corona et al., 2024). Cultural and religious diversity in early education further complicated the implementation of ICT, as educators had to navigate varying cultural and religious sensitivities to create inclusive learning environments (Knoblauch, 2023). In religious schools, caregivers often rely on traditional and religio-cultural practices, which may influence the acceptance and effectiveness of ICT tools in educational settings (Saleem et al., 2022). The exploration of AI in Christian education in Vietnam indicates a general openness to technological innovations, particularly among younger generations, suggesting a potential pathway for integrating AI in Al-Qur'an learning to enhance interactivity and engagement (Tran & Nguyen, 2021). Additionally, the role of spirituality in caregiving for individuals with intellectual disabilities underscores the importance of considering spiritual dimensions in educational technology, ensuring that ICT tools support not only cognitive but also emotional and spiritual development (Xavier & Esperandio, 2023). Therefore, optimizing ICT in the Al-Qur'an learning for toddlers requires a multifaceted approach that considers technological accessibility, cultural sensitivity, and the holistic development of children.

The purpose of this study was to investigate the use of multimedia in teaching the Al-Qur'an to early children at Kampong Gunong Qur'anic House in Belitung. More specifically, this study aims to analyze the use of multimedia tools, especially *the murattal* video of Syaikh Kamil El Laboudy, in the Tabarak method to teach and memorize the Al-Qur'an to children. The researchers wanted to assess the impact of multimedia use on children 's motivation to memorize the Al-Qur'an in a short time and improve the quality of their reading.

The originality of the research on integrating multimedia in toddlers' education of the Al-Qur'an at Kampong Gunong Qur'anic House, Belitung, can be highlighted by reviewing three previous studies that explore related educational interventions. The first study examines the use of video feedback to enhance parental sensitivity and attachment

security in children under five, demonstrating moderate evidence that such digital interventions can improve parental sensitivity, though evidence on attachment security remains limited (O'Hara et al., 2019). This underscores the potential of multimedia tools in early education, albeit in a different context. The second study evaluates digital education in pediatrics, finding that digital methods can be as effective as traditional learning for post-registration health professionals, suggesting that digital tools can effectively convey complex educational content (Brusamento et al., 2019). This supports the notion that multimedia can be a viable method for teaching young children, including religious education. The third study investigates environmental factors in early childhood education settings, revealing that outdoor play and equipment significantly enhance physical activity, though the study does not directly address multimedia use (Martin et al., 2022). Together, these studies illustrate the diverse applications and potential benefits of digital and environmental interventions in early education, highlighting the originality of applying multimedia specifically for Al-Qur'an education in toddlers, a niche yet unexplored in the existing literature. This research fills a gap by focusing on religious education through multimedia, an area not directly addressed by the reviewed studies, thereby contributing novel insights into the field.

B. Method

This research adopts Chase's qualitative research paradigm to investigate the use of multimedia in teaching the Al-Qur'an to toddlers at Kampong Gunong Qur'anic House, Belitung (McKibben & Breheny, 2023). The study involves 10 teachers, 15 parents, and 20 toddlers aged 2-4 years. Data collection was conducted through semi-structured interviews with teachers and parents, participant observation during the Al-Qur'an lessons, and analysis of curriculum documents and institutional records. Interviews were recorded and transcribed, while observations were documented through field notes and photographs (with permission) (Spratling et al., 2012). Data analysis used a thematic approach with the aid of NVivo 12, encompassing six stages: data familiarization, initial coding, theme identification, theme evaluation, theme interpretation, and naming, and writing of findings (Goyal & Deshwal, 2023). To ensure the credibility of the research, methodological triangulation, member checking, peer debriefing, and in-depth description were used (Morse, 2015).
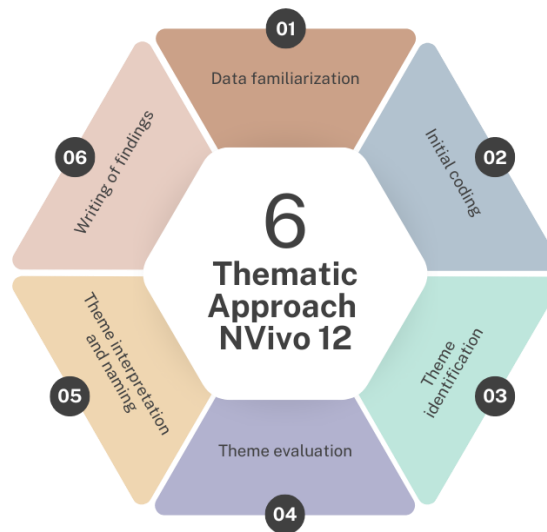
Figure 1. Data analysis used a thematic approach with the aid of NVivo 12

C. Results and Discussion

The findings of this study offered valuable insights into the effective implementation of multimedia technology in the Al-Qur'an education for young children, providing both theoretical and practical contributions to the field.
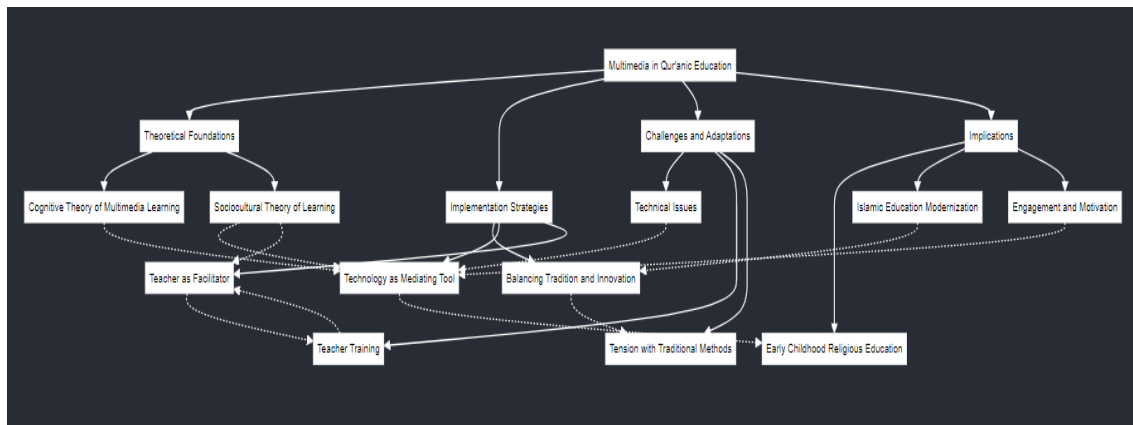

Figure 2. Multimedia in the Al-Qur'an Education at the
Kampong Gunong Qur'anic House

1. Correspondence to Cognitive Theory of Multimedia Learning

The successful implementation of multimedia tools at the Kampong Gunong Qur'anic House demonstrated a strong alignment with Mayer's Cognitive Theory of Multimedia Learning (Mayer, 2024). According to one of the educators at Kampong Gunong Qur'anic House in the use of multimedia, particularly the *murattal* video by

Sheikh Kamil El Laboudy, was considered highly effective in helping children understand and memorize the Al-Qur'an verses. It was explained that by listening and viewing the visualizations, children could more easily connect the meanings of the verses being taught (H, 2022).

This study revealed how the integration of audio and visual elements could significantly enhance the comprehension and retention of the Al-Qur'an verses among young children. These findings reinforced Mayer's argument that learning which combined text and images was more effective than the use of text alone, especially in the context of complex material such as the language of the Al-Qur'an. One of the parents interviewed expressed that their child had previously struggled with understanding the Al-Qur'an due to limited Arabic comprehension. However, after using multimedia tools, the child appeared more enthusiastic and showed a better understanding of the verses, leading the parent to believe that this method was effective (A, 2022).

The success of this multimedia approach became increasingly relevant considering the challenges faced by non-native Arabic speakers in understanding the Al-Qur'an texts. The linguistic and conceptual complexity inherent in the language of the Al-Qur'an often presented a barrier to comprehension, particularly for children. During the observation at Kampong Gunong Qur'anic House, it was evident how children interacted with the multimedia tools provided. When *the murattal* video was played, most of the children appeared focused and began repeating the verses softly, following the recitation. The accompanying visuals provided additional cues about the meaning of the verses, which seemed to help them grasp more abstract concepts in the Al-Qur'an. However, by leveraging various sensory modalities through multimedia tools, educators at the Kampong Gunong Qur'anic House successfully created a more accessible and engaging learning environment for their young learners (Manggar, 2022).

These findings had broad implications for religious education, particularly in the teaching of sacred texts. The use of multimedia as a cognitive scaffold could bridge the gap between the complexity of the material and the learners' comprehension capacity. By visualizing abstract concepts and providing auditory context, this approach enabled children to construct richer and more meaningful mental representations of the verses being studied, aligning with Mayer's principles of active cognitive processing.

Furthermore, this success highlights the potential for adapting educational technology in the context of spiritual and religious learning. There was often a reluctance to integrate modern technology in the teaching of traditional texts, yet this case study demonstrated that when applied judiciously, technology could enrich, rather

than diminish, the sacred learning experience. This paved the way for further research on how pedagogical innovations could be harmonized with established religious teaching practices.

Finally, these findings underscore the importance of developmentally appropriated approaches in early children's religious education. The success of the multimedia tool usage at the Kampong Gunong Qur'anic House not only supports Mayer's theory but also challenges educators and researchers to continue exploring innovative methods for imparting spiritual knowledge to young generations. Thus, this study opened avenues for interdisciplinary research combining insights from cognitive psychology, educational technology, and religious studies to enhance the effectiveness and relevance of religious education in the digital age.

2. Technological Instruction within a Sociocultural Framework

The integration of multimedia tools in Al-Qur'an education for toddlers at the Kampong Gunong Qur'anic House represented an innovative application of Vygotsky's sociocultural theory of learning (Churcher et al., 2014). This theory emphasized the importance of social interaction and cultural tools in the process of learning and cognitive development in children. In this context, multimedia technology functions as a mediating tool that facilitates interaction between the child, the teacher, and the Al-Qur'an materials, creating a dynamic and interactive learning environment.

During the observation the researchers noted that the use of multimedia technology created an engaging atmosphere where children interacted enthusiastically with both the the Al-Qur'an content and the teacher (Manggar, 2022). One teacher explained that multimedia tools, particularly the video and audio features, helped children connect with the Al-Qur'an verses in ways they might not otherwise. The tools allowed children to repeat the verses after hearing them, and even if they did not understand every word, they could recognize the rhythm and melody, making the verses more memorable for them (H, 2022). This aligned with Vygotsky's notion that learning occurred through social interactions with more knowledgeable others (i.e., the teacher or technology in this case), and multimedia served as a tool that facilitated such interactions.

The use of technology as a mediating tool at the Kampong Gunong Qur'anic House has successfully created an effective zone of proximal development (ZPD). ZPD, a key concept in Vygotsky's theory, referred to the difference between what a child could do independently and what they could achieve with the help of a more skilled individual or appropriate tools. In this case, multimedia technology acted as 'scaffolding'

that enables toddlers to achieve levels of Al-Qur'an memorization that might be difficult to attain through traditional methods alone.

The success of this approach was evident in the toddlers' ability to memorize Al-Qur'an verses at a level previously considered too challenging for their age. Multimedia technology, with its capacity to present material in various formats such as audio, visual, and interactive, allows toddlers to engage with Al-Qur'an content through multiple sensory modalities. One of the toddlers' parents shared in an interview that they noticed their children had become more excited to learn the Al-Quran. The children could repeat the verses after hearing them from the video, making it easier to remember. The parent also mentioned that the colors and sounds made the Al-Quran more engaging and brought it to life for their children (A, 2022). This not only enhanced the appeal of the material but also facilitated more effective encoding and retrieval of information in the children 's memory.

Furthermore, this approach emphasized the crucial role of teachers as facilitators in the learning process. Teachers not only played a role in delivering content but also in designing learning experiences that optimally utilize technology. One teacher commented that although multimedia tools were helpful, it was their responsibility to ensure that these tools did not become a distraction. The teachers emphasized the importance of guiding the children's attention to the significance of Al-Qur'an content rather than focusing solely on the technology. They used videos as a tool but still provided time for the children to reflect on and discuss the meaning of the verses (H, 2022). They guided the children's interaction with multimedia tools, ensuring that technology was used as an enriching supplement, not a replacement, for the human interaction that was vital in religious education.

These findings had significant implications for early children's religious education in general. They demonstrated the potential of technology to extend the learning capabilities of young children in religious educational settings. However, it was important to note that the success of this technological integration depended on careful design and proper implementation, which took into account children's developmental needs and the goals of religious education. One parent expressed that while technology had its place, it should always be balanced with personal teaching. They appreciated that the Kampong Gunong Qur'anic House did not overly rely on screens but instead used them to spark children's interest in Al-Qur'an (A, 2022). Further, the researchers were needed to explore the long-term effectiveness of this approach and its potential application in broader contexts of religious education.

3. Balancing Tradition and Innovation in Islamic Education

The approach adopted by the Kampong Gunong Qur'anic House presents an intriguing case study of integrating modern teaching techniques with traditional Islamic education. This institution successfully incorporated technological elements while maintaining core principles of Islamic teaching, such as respect for oral tradition and the role of the teacher. This balance reflects an innovative effort to modernize educational methods without sacrificing the fundamental values long upheld in Islamic pedagogy.

The strategy implemented by the Kampong Gunong Qur'anic House aligned with Halstead's (2004) as cited in Syarif (Syarif, 2020) perspective on modernizing aspects of education without eroding the basic principles of Islamic pedagogy. Halstead emphasized the importance of preserving the essence of Islamic education while adapting contemporary teaching methods that could enhance learning effectiveness. One teacher at the Kampong Gunong of Qur'anic House explained that they were always cautious to ensure that technology did not replace the core values of Al-Qur'an education. Instead, they used technology to reinforce the children's memorization and enhance their understanding of the sacred verses (H, 2022). This approach acknowledged that modernization needed not mean westernization, but could be a selective process that enriched the Islamic educational tradition.

The success of the model applied at the Kampong Gunong Qur'anic House demonstrated significant potential for other Islamic educational institutions to adopt similar strategies. By bridging traditional and contemporary pedagogical approaches, these institutions could prepare their students to face the challenges of the modern world without losing their cultural and spiritual roots. This highlights how the approach not only increased students' engagement but also supported their confidence in learning.

The implementation of technology in the Kampong Gunong Qur'anic House curriculum was not merely an addition of teaching aids, but a profound integration that transformed how students interacted with learning materials. The use of digital platforms for memorizing the Al-Qur'an, for instance, demonstrated how technology could reinforce, rather than replace, traditional methods. One parent shared their perspective, expressing gratitude that their children could learn in a modern way while still upholding religious values. They noted that the technology used made the learning process more engaging and supported independent study (A, 2022). This approach enabled the personalization of the learning experience, facilitated independent learning, and enhanced students' engagement while maintaining the communal and interactive aspects of traditional Islamic education.

The Kampong Gunong Qur'anic House case study also highlights the crucial role of teachers in mediating the integration of technology into Islamic teaching. Educators at this institution acted not only as knowledge transmitters but also as facilitators guiding students in navigating the changing educational landscape. One teacher remarked that as educators, their roles extended beyond teaching the material to helping students use technology wisely. They emphasized ensuring that technology supported, rather than replaced, human connections in Al-Qur'an learning (H, 2022). Their ability to balance innovation with tradition reflects the flexibility and adaptability required in contemporary Islamic education.

The success of this model could serve as a catalyst for broader Islamic educational reform, fostering dialogue between tradition and modernity in the context of religious education. One teacher expressed hope that this approach could inspire other Islamic educational institutions to explore innovative methods of delivering religious education while preserving traditional heritage (H, 2022). The Kampong Gunong Qur'anic House demonstrates that thoughtful integration of technology could enhance learning effectiveness without losing the spiritual values foundational to Islamic education.

4. Implications for Early Children Religious Education

Our research indicated that the judicious use of multimedia elements could significantly enhance engagement and learning processes in religious education for young children. The observed improvements in attention and recall among toddlers at the Kampong Gunong Qur'anic House suggested that multimedia tools when appropriately implemented, could address some of the challenges inherent in teaching complex religious texts to very young learners.

In the context of early childhood education, the use of multimedia technology opened up new opportunities to present abstract concepts in a more concrete and engaging form (Kewalramani & Veresov, 2022). Simple animations, captivating sounds, and basic interactivity could help translate complex religious teachings into formats that were more easily understood and remembered by children. The observations at the Kampong Gunong Qur'anic House revealed that during lessons utilizing animations and audio features, the children showed increased focus, often leaning forward and reacting with visible excitement. They would mimic the sounds and movements displayed on the screen, demonstrating both engagement and active participation (Manggar, 2022).

This was particularly important given the cognitive characteristics of young children who were still in the early stages of development. One parent noted that their children often talked about the stories learned at the institution and remembered them well because the videos and sounds made the lessons interesting and easy to follow (A, 2022).

However, the concerns raised about screen time highlight the need for careful consideration and balanced implementation of technology within early learning environments. Educators and parents had to be vigilant about the potential negative impacts of excessive exposure to digital devices, such as reduced direct social interaction or disruption to children's sleep patterns. At the Kampong Gunong Qur'anic House, educators addressed these concerns by limiting screen exposure to 20 minutes within a one-hour session and complementing digital activities with manual ones. One teacher explained that after a brief multimedia session, they transitioned to hands-on activities such as coloring or reciting verses together. This approach ensured that children remained engaged without becoming overly reliant on screens (H, 2022). This approach provided a model for other institutions seeking to integrate technology responsibly while respecting traditional learning methods that had proven effective.

These practices demonstrated that it was possible to harness the benefits of multimedia tools while mitigating potential negative effects on young children's development. By designing curricula that appropriately integrate technology, educators could create rich and diverse learning experiences without sacrificing important aspects of children's development, such as fine motor skills, social interaction, and exploration of the physical environment. A teacher at the institution shared that they viewed multimedia as a tool rather than a substitute for traditional teaching. They emphasized the importance of finding the right balance to ensure that children could benefit from both approaches (H, 2022).

Furthermore, our research revealed that the effectiveness of multimedia use in early children's religious education heavily depended on the quality of content and its appropriateness to the children 's developmental stage. A teacher commented that they worked closely with other teachers and religious experts to ensure that every visual and sound used aligned with Islamic values and was appropriate for young learners (H, 2022). It was also important to note that the integration of technology in early children's religious education was not a substitute for human interaction and direct experience. The role of teachers and parents as facilitators and role models remains crucial. One teacher remarked that while technology made learning more interactive and enjoyable, it was their responsibility as educators to ensure that children understood the deeper

meaning of what they were learning. They guided the children, answered their questions, and helped them connect with the teachings (H, 2022).

Multimedia technology should be seen as a tool that enriches the learning experience, not as a replacement for traditional teaching methods that have proven effective for centuries. A parent shared similar sentiments, praising the teachers for using multimedia to make learning enjoyable while also dedicating time to engage with the children, encourage them, and ensure they understood the values behind the lessons (A, 2022).

5. Challenges and Adaptations

The implementation of multimedia tools in religious education contexts had shown significant potential to enhance the learning process. However, as with any technological innovation, its application also presented a series of challenges that required adaptive strategies to overcome. The experience of Kampong Qur'anic House in integrating multimedia technology into their Al-Qur'an teaching curriculum offered valuable insights into the complexities and opportunities that arose from the fusion of modern technology and traditional religious education.

One of the primary challenges identified in the implementation process was the emergence of various technical issues. These included difficulties in hardware operation, network connectivity disruptions, and incompatibilities between learning software and existing infrastructure. This finding aligns with previous studies conducted by Aldhafeeri and Male (Aldhafeeri & Male, 2016), which emphasized that technical problems often constitute significant barriers to technology integration in educational environments. During an interview, the teachers highlighted that the most frequent issues they encountered were related to outdated hardware and unstable internet connections. These problems occasionally disrupted lessons and required immediate troubleshooting, which could be challenging during class hours (H, 2022).

Observations during a lesson showed how these technical issues could momentarily interrupt teaching. For instance, a network glitch caused a delay in loading an interactive video, prompting the teachers to revert to a printed worksheet as a backup. This highlights the importance of having contingency plans and technical support readily available (Manggar, 2022).

The need for comprehensive teacher training emerged as a second equally important challenge. Many educators, especially those accustomed to traditional teaching methods, experienced difficulties in adopting and integrating multimedia tools into their teaching practices. This reflects a common skills gap encountered in

educational digitalization efforts, as documented in various previous studies. The institution's response to this challenge, namely providing ongoing professional development programs for teachers, demonstrates a deep understanding of the importance of continuous support and training in successful technology implementation. One teacher shared that they were initially hesitant to use multimedia tools due to a lack of familiarity. However, training sessions not only taught them how to operate the technology but also how to use it effectively to support Al-Qur'an teaching. As a result, they now felt more confident and observed increased student engagement (H, 2022).

The institution's approach to addressing the challenge of teacher training deserves special attention. By focusing on both technical and pedagogical aspects, the training ensured that the teachers were not only proficient in using multimedia tools but also skilled in designing meaningful learning experiences that utilized the potential of these tools.

The third challenge that emerged was the tension between the use of modern technology and traditional teaching methods. This phenomenon was not unique to Kampong Gunong Qur'anic House but rather reflects a broader debate in the literature on technology integration in religious education, as discussed by Groeninck (Groeninck, 2021). This tension often stemmed from concerns that the use of technology might erode long-held traditional values and practices in Al-Qur'an teaching.

Interestingly, Kampong Gunong Qur'anic House's approach to addressing this tension offered a potential model for aligning innovation with tradition. Rather than viewing technology and tradition as conflicting elements, this institution strives to harmoniously blend the two. They used multimedia tools to enrich and reinforce traditional teaching methods, not to replace them entirely. For instance, digital visualizations were used to help students understand complex *tajwid* concepts, while the practice of reciting the Al-Qur'an directly remained at the core of the curriculum.

This careful integration strategy demonstrated that innovation and tradition could coexist productively in religious education contexts. This approach not only allowed for leveraging the potential of technology to enhance learning but also helped preserve important aspects of traditional teaching methods that had proven effective for centuries. The success of this approach could provide valuable insights for other religious educational institutions that might face similar dilemmas in their efforts to modernize their teaching practices.

Another important aspect of multimedia implementation at Kampong Gunong Qur'anic House was its impact on students' engagement and motivation. The use of multimedia elements such as animations and interactive videos had proven to increase

students' interest in the subject matter. This aligns with previous research showing that multimodal learning approaches could enhance information retention and conceptual understanding, especially in language learning and sacred text studies.

However, it was important to note that this increased student engagement also brought new challenges for educators. Teachers had to learn to balance the use of engaging multimedia elements with the need to maintain focus on the spiritual and intellectual core of Al-Qur'an teaching. This required the development of new pedagogical strategies that could meaningfully integrate technology while maintaining the depth and reverenced characteristic of traditional Al-Qur'an learning.

Lastly, the experience of Kampong Gunong Qur'anic House highlights the importance of continuous evaluation and adaptation in the implementation of educational technology. This institution adopts an iterative approach, regularly collecting feedback from teachers and students to assess the effectiveness of multimedia tools and their implementation strategies. This reflective approach allowed for timely adjustments to the curriculum and teaching methods, ensuring that the use of technology remained relevant and beneficial to the broader educational objectives.

The use of multimedia in learning the Al-Qur'an for toddlers was in accordance with the principles of developmentally appropriate practice (DAP) because it supported their cognitive, social, emotional, and moral development simultaneously. The use of *murattal* videos as an aid in the Tabarak method, in this case, had proven to be effective and relevant to accelerate the memorization process, while helping children understand religious and moral values in a fun and easy-to-understand way.

D. Conclusion

This study affirms the importance of utilizing multimedia technology in teaching the Al-Qur'an to young children. The Kampong Gunong Qur'anic House has adopted the *Tabarak* method, integrating multimedia tools to demonstrate how technology can enhance children's engagement in learning and support memorization. This innovative approach not only boosts children's interest and retention in studying sacred texts but also provides valuable insights for educators in designing age-appropriate learning tools. Additionally, the research highlights significant improvements in children's attention and memory while addressing challenges and solutions in implementing educational technology for very young learners, paving the way for new pedagogical methods in early children's religious education.

The findings of this research have broad implications for teaching practices and education policies. It encourages the integration of multimedia elements into curricula,

offering empirical evidence on the potential and challenges of technology use for young children, and serves as a guide for developing learning tools and applications. In policy-making, these results can help formulate balanced guidelines for technology use alongside traditional methods. However, further research is needed to explore the long-term impact of multimedia on children's cognitive and spiritual development and to identify best practices for integrating technology with pedagogical principles and religious values. A strategic approach that prioritizes the holistic development of children remains essential in applying technology to Al-Qur'an education.

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