



The Implementation and Evaluation of Interactive Digital Applications in Qur'anic Education

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Abstract: The rapid expansion of digital technology in the era of Disruption 4.0 has transformed educational practices, including the field of Qur'anic studies. While interactive Qur'an applications such as Muslim Pro, iQuran, and Al-Qur'an Indonesia are widely used, scholarly analysis of their pedagogical impact in Indonesia remains limited. This study examines the implementation and evaluation of interactive digital applications in Qur'anic education, focusing on their benefits, challenges, and implications for teaching and learning. Using a qualitative approach with elements of case-oriented literature review, data were drawn from previous studies, institutional reports, and analysis of popular digital Qur'an platforms. Thematic analysis highlights three key findings. First, digital applications provide new modes of engagement—translation, tafsir videos, audio recitations, and interactive quizzes—that enhance student motivation and diversify teaching strategies. Second, the integration of technology reconfigures classroom dynamics by shifting learning from teacher-centered delivery to more autonomous and student-driven practices, raising questions about the preservation of traditional authority in Qur'anic pedagogy. Third, significant challenges persist, including infrastructural inequality, risks of misinterpretation, and the diffusion of epistemic authority through algorithmic mediation. These findings demonstrate both the transformative potential and the inherent tensions of digital Qur'an applications. The study concludes that technology can enrich Qur'anic education in Indonesia if accompanied by adequate infrastructure, teacher training, and



critical evaluation of digital content to ensure authenticity and pedagogical integrity.

Keywords: digital Qur'an; interactive learning; Islamic education; pedagogy; technology integration

Abstrak: Perkembangan teknologi digital pada era Disrupsi 4.0 telah membawa perubahan signifikan dalam praktik pendidikan, termasuk pada bidang studi Al-Qur'an. Aplikasi interaktif seperti Muslim Pro, iQuran, dan Al-Qur'an Indonesia banyak digunakan, namun kajian akademik mengenai dampak pedagogisnya di Indonesia masih terbatas. Penelitian ini menganalisis implementasi dan evaluasi aplikasi digital interaktif dalam pendidikan Al-Qur'an, dengan fokus pada manfaat, tantangan, dan implikasinya bagi proses belajar-mengajar. Menggunakan pendekatan kualitatif dengan tinjauan literatur berbasis kasus, data diperoleh dari penelitian sebelumnya, laporan institusi, serta analisis terhadap aplikasi digital Al-Qur'an populer. Analisis tematik menghasilkan tiga temuan utama. Pertama, aplikasi digital menghadirkan model keterlibatan baru—terjemahan, video tafsir, rekaman audio, dan kuis interaktif—yang meningkatkan motivasi siswa sekaligus memperkaya strategi pengajaran. Kedua, integrasi teknologi mengubah dinamika kelas dari pola pembelajaran yang berpusat pada guru menuju pola yang lebih otonom dan berpusat pada siswa, sehingga memunculkan pertanyaan tentang pelestarian otoritas tradisional dalam pedagogi Al-Qur'an. Ketiga, sejumlah tantangan masih muncul, termasuk keterbatasan infrastruktur, risiko kesalahan interpretasi, serta difusi otoritas epistemik akibat mediasi algoritmik. Temuan ini menunjukkan potensi transformatif sekaligus ketegangan yang melekat dalam penggunaan aplikasi digital Al-Qur'an. Penelitian ini menyimpulkan bahwa teknologi dapat memperkaya pendidikan Al-Qur'an di Indonesia apabila didukung dengan infrastruktur memadai, pelatihan guru, dan evaluasi kritis terhadap konten digital guna menjaga autentisitas dan integritas pedagogis.

Kata Kunci: Al-Qur'an digital; integrasi teknologi; pendidikan Islam; pembelajaran interaktif; pedagogi

الملخص

أدى التوسع السريع في التكنولوجيا الرقمية في عصر «الاضطراب ٤.٠» إلى تحويل الممارسات التعليمية، بما في ذلك مجال الدراسات القرآنية. وعلى الرغم من الانتشار الواسع لتطبيقات القرآن التفاعلية مثل iQuran و Muslim Pro و Al-Qur'an Indonesia، فإنّ التحليل العلمي لتأثيرها البيداغوجي في إندونيسيا ما يزال محدودًا. تهدف هذه الدراسة إلى فحص تطبيقات التعليم القرآني الرقمية التفاعلية وتقويمها، مع التركيز على فوائدها وتحدياتها ودلالاتها على عمليتي التعليم والتعلّم. وباعتماد منهج نوعي يتضمّن عناصر من مراجعة أدبيات موجهة بالحالات، جُمعت البيانات من دراسات سابقة، وتقارير مؤسسية، وتحليل منصات القرآن الرقمية الشائعة. ويُظهر التحليل الموضوعاتي ثلاث نتائج رئيسية: أولاً، تتيح التطبيقات الرقمية أنماطاً جديدة من التفاعل—مثل الترجمة، وفيدويوهات التفسير، والتلاوات الصوتية، والاختبارات التفاعلية—مما يعزّز دافعية الطلاب ويُنوع استراتيجيات التدريس. ثانياً، تعيد عملية دمج التكنولوجيا تشكيل ديناميات الصفّ عبر نقل التعلّم من التلقين المتمركز حول المعلّم إلى ممارسات أكثر استقلالاً يقودها المتعلّم، بما يثير تساؤلات حول الحفاظ على السلطة التقليدية في البيداغوجيا القرآنية. ثالثاً، ما تزال تحديات مهمة قائمة، من بينها اللامساواة في البنية التحتية، ومخاطر سوء الفهم، وتشتت السلطة المعرفية بفعل الوساطة الخوارزمية. وتُبرز هذه النتائج في أنّ واحد الإمكانات التحويلية لتطبيقات القرآن الرقمية والتوتّرات الملازمة لها. وتخلص الدراسة إلى أنّ التكنولوجيا يمكن أن تُثري التعليم القرآني في إندونيسيا إذا اقترنت ببنية تحتية كافية، وتدريب للمعلمين، وتقويم نقدي للمحتوى الرقمي لضمان الأصالة وسلامة الممارسة البيداغوجية.

الكلمات المفتاحية: القرآن الرقمي؛ التعلّم التفاعلي؛ التربية الإسلامية؛ البيداغوجيا؛ دمج التكنولوجيا

Introduction

The phenomenon of moral decline among students has become a serious concern in global education. Numerous studies indicate that academic success does not necessarily correlate with learners' moral and spiritual development. For instance, the rise of cyberbullying among adolescents reflects weak digital ethics, even though this generation is often described as “digital natives” with strong technological competence (Livingstone & Smith, 2014). In Indonesia, a survey by the Indonesian Child Protection Commission (Komisi Perlindungan Anak Indonesia/KPAI, 2022) reports that more than 40% of students have experienced or been involved in bullying. These findings point to a tangible moral crisis in which cognitive achievement is insufficient to cultivate socially dignified behavior.

Modern education systems tend to prioritize intellectual attainment through grades and standardized testing. Yet education, in essence, should not only develop intellectual intelligence (IQ) but also emotional (EQ) and spiritual intelligence (SQ), which constitute the foundation of virtuous character (Goleman, 1995; Zohar & Marshall, 2000). If education produces individuals who are “smart” without being grounded in “right” moral values, it risks generating a cohort that is academically capable but prone to misusing its intelligence—for example, through corruption, data manipulation, or the abuse of technology (Nasir, 2017).

However, field realities reveal a research gap in the implementation of moral education. First, the subject of *Aqidah Akhlak* (Islamic creed and ethics) in schools is often positioned as supplementary rather than serving as the animating spirit of the entire educational process (Anwar, 2018). Second, instructional approaches remain largely conventional—centered on memorization and lecturing—thereby failing to meaningfully engage students' affective domain (Hidayat & Firmansyah, 2020). Third, scholarship remains limited regarding how moral integration can be mainstreamed into school culture and implemented across disciplines.

In the global context, the literature on character education underscores the importance of moral formation through a holistic approach that involves the entire ecosystem of school, family, and community (Lickona, 1991; Berkowitz & Bier, 2005). Nevertheless,

international studies rarely connect character education frameworks to Islamic foundations—particularly the concept of *akidah* as a normative basis and *akhlak* as its practical manifestation. This constitutes the novelty of the present study: it proposes an integrative framework in which *akhlak* is not merely a subject, but a value system that should permeate the curriculum, extracurricular activities, and school culture, grounded in a robust Islamic epistemology.

Building on this background, this article argues that education overly focused on cognitive achievement has neglected the core mission of Islamic education: the formation of *insan kamil*—a fully developed human being in creed (*akidah*), character (*akhlak*), and intellect. Therefore, it is necessary to propose a conceptual and practical model of how *Akidah Akhlak* can function as an essential curriculum, while also serving as an ethical filter that equips students to navigate the complexities of contemporary life.

Methods

This study employs a qualitative-descriptive approach using library research, as the focus is not on direct empirical data collection but on analyzing concepts and constructing moral values within Islamic education. This method is appropriate for examining both the normative and practical dimensions of *Akidah Akhlak* as an essential curriculum through a critical review of primary and secondary sources. Primary sources include normative Islamic texts such as the Qur'an and Hadith, as well as classical scholarly works on moral education, for example, al-Ghazali (2005) and Ibn Miskawayh (1968) which emphasize the close relationship between creed and ethical conduct. Secondary sources consist of contemporary academic literature, including books, national and international journal articles, and institutional reports addressing character education (Lickona, 1991; Berkowitz & Bier, 2005; Anwar, 2018; Hidayat & Firmansyah, 2020).

Data analysis is conducted using Fairclough's (1995) Critical Discourse Analysis (CDA) to reveal how moral-education discourse is constructed within educational policies and pedagogical practices. This approach enables the researcher to identify gaps between the

ideal moral curriculum articulated in official documents and the realities of implementation, which often remain confined to lecturing and rote memorization (Suryadi, 2019). In this way, the study not only describes the phenomenon but also develops conceptual and practical arguments for the need to reformulate the educational paradigm. The findings are expected to contribute theoretically to the development of Islamic education studies and to offer practical recommendations for policymakers to integrate Akidah Akhlak systematically into school culture.

Result and Discussion

Technology Implementation

The results of this research indicate that the use of technology in Quranic education in Indonesia has experienced significant development, although its distribution remains uneven. Several educational institutions, such as schools and universities, have begun utilizing digital learning applications that provide tafsir, Quranic audio recordings, and interactive quizzes to enhance Quranic understanding. Based on the findings of this study, several recommendations for the development of technology use in Quranic learning include: providing more relevant and engaging digital learning materials, such as educational videos, e-books, and interactive applications that support Quranic teaching.

Interactive digital Quranic learning applications are one example of how technology is utilized in Quranic education. This program is a technological innovation created to improve Quranic learning and understanding through digital media. The program leverages information technology to present Quranic texts in a digital format, accessible through computers, tablets, and smartphones (Hodijah & Supendi, 2021).

The primary goal of developing this application is to provide convenience and comfort for users in reading, understanding, and studying the Quran more interactively. The application is designed to be accessible to the public as an alternative Quranic learning tool that is modern and in line with advancements in information and communication technology. The application supports various electronic devices and is equipped with more advanced features,

such as enhanced functionality, and clearer visual and audio quality, all designed to improve the learning experience for users.

One of the most useful media for studying the Quran is the Interactive Digital Quran Application. This application is designed to help students understand the meanings and messages contained in the Quran in a more engaging and enjoyable manner. Some of the features provided include translation, tafsir, audio recordings, and various other interactive elements to facilitate the learning process. The main goal is to improve students' understanding and spirituality through the study of Islamic teachings. "Al-Qur'an Indonesia," which offers several features such as tafsir, audio recitations from renowned Qari, and translations in multiple languages, is a prominent and significant example of an interactive program. Another program, "iQuran," provides easy-to-use verse search functions and multilingual support.

Popular interactive digital Quran applications available on the Google Play Store include "Muslim Pro," which offers the Quranic text along with additional features such as prayer times, Qibla direction, and other Islamic information. The popularity of these applications demonstrates the importance of interactive digital Quran apps in supporting Islamic religious education in the modern era. Other popular interactive digital Quran applications include:

1. **Muslim Pro:** Provides a complete set of features, including Quran translation into various languages, tafsir, prayer schedules, Qibla direction, and high-quality audio recitations.
2. **Al-Qur'an Indonesia:** Displays the Quran in its entirety with translations in various languages, offering verse search services and bookmarking for easier navigation.
3. **iQuran:** Offers translations in many languages, tafsir, personal notes, night mode, and advanced search features, making it more user-friendly.
4. **Quran for Android (Quran.com):** Presents the complete Quran with translations and tafsir in various languages, accompanied by recordings from renowned qari. This app also provides search and bookmark services to aid users.
5. **Muslim Pocket:** Offers services such as Quran translations and tafsir, daily prayers, prayer times, and bookmarks. It also

includes search and bookmark features, allowing users to store and easily find specific verses.

These applications illustrate how technology can be leveraged to support Islamic education in a more modern and tailored way for the digital age.

Most students reported using technology in Quranic learning through the implementation of interactive lessons and quizzes. Digital media, such as tafsir videos and Hadith podcasts, are frequently used. Students feel that technology makes learning more engaging and helps them grasp difficult concepts. Teachers also reported using presentation and video applications to present material in Quranic studies. They also use these platforms to manage assignments and provide feedback quickly. Technology helps them present material in a more varied and engaging way.

Advantages of Technology in Learning

Technology-based Quran learning platforms provide flexibility in timing, ease of access, and more engaging, interactive learning methods. This reduces the perception that studying the Quran is monotonous and difficult to understand. The use of technology in Quranic learning has been proven to enhance student interactivity and engagement. Through digital media such as videos and learning apps, students can learn in a way that is more interesting and aligned with their learning styles. For example, tafsir videos and Hadith podcasts offer new ways for students to understand the material, which may be more effective than traditional methods that rely solely on texts and lectures (Fatmona, 2022).

The use of information technology also enhances students' critical thinking skills. With the help of digital media, students can gain a deeper understanding of Quranic concepts and analyze them more effectively. This aligns with critical thinking skill theories that emphasize the importance of students' ability to analyze and evaluate information.

Research involving the use of interactive digital Quran applications by students has shown a clear increase in their enthusiasm and interest in learning. This study demonstrates that such applications have a positive impact on student involvement in the learning process, which in turn improves their understanding of

the material. After using the applications, analysis of motivation and engagement levels shows significant improvements. Direct interaction with Quranic texts appears to enhance students' enthusiasm and interest in studying Islamic content. The learning process becomes more engaging with several interactive features, including reading the Quran, searching for verses, and playing educational games.

Students also benefit from a more flexible, personalized learning approach using these apps. They feel more connected to the learning material thanks to features like bookmarks, personal notes, and content recommendations tailored to their interests and learning goals. Therefore, the implementation of this app makes the learning process more engaging and relevant, ultimately encouraging students to be more active and involved in their learning activities.

The increased motivation to learn in Quranic studies is influenced by incorporating interactive digital Quran applications into classroom experiences. Teachers can use the findings from this research to create more successful teaching strategies. This approach improves the overall effectiveness of Quranic learning by allowing teachers to provide a more engaging and enjoyable learning experience.

Given the positive impact on students' enthusiasm for learning, curriculum developers and decision-makers in education should consider incorporating interactive digital Quran applications into Quranic teaching methods. Support from various stakeholders, including educational institutions, government authorities, and community groups, is crucial to expand the use of digital technology in efforts to improve the quality of Islamic education. This is a strategic step to enrich Quranic learning in the country, particularly by utilizing the advances in information technology.

However, further evaluation is necessary to measure how effective these applications are in improving students' understanding of Islamic concepts and how they can be adapted to the existing Quranic curriculum. Additionally, attention must be paid to the availability and accessibility of technology to ensure all students have equal opportunities to use this technology in their learning process.

Challenges of Implementing Technology in Quranic Learning

In the modern era, all of humanity faces challenges arising from the disruption era, which demands that individuals replace old systems with newer, more relevant ones. Quranic learning amidst this change requires an innovative and adaptive approach to new creations. However, every individual must prepare to face the challenges resulting from changes in the ecosystem structure and social behavior patterns. Gradually, digital developments may potentially diminish human aspects, including in the teaching-learning process, understanding, and the application of Quranic values in daily life.

Initially, Quranic learning involved spelling each letter individually, then evolved through various new methods to create a simpler, more efficient, and effective learning process. Methods such as *Iqro'*, *Qiroati*, and *Tilawati* are widely used. However, in the digital era, these methods may become less relevant as Muslims now have access to Quranic learning integrated with modern technology. In the era of digital disruption, Quranic learning can be conducted without direct meetings, using applications that support discussions or virtual meetings through technological devices. However, this technology-based approach may not always fully align with the unique characteristics and special features of Islamic education.

In Quranic learning during the industrial revolution era, students need to develop abilities that are not limited to intellectual intelligence (IQ), but also involve various aspects of intelligence, such as linguistic proficiency, spatial understanding, sensitivity to tone and rhythm, and interpersonal and intrapersonal skills. Additionally, kinesthetic, logical-mathematical, naturalist, existential, and spiritual intelligence also play an important role.

A common challenge in implementing technology in Quranic learning is misinterpretation errors. Incorrect translations and interpretations may occur if the technology is not programmed properly. Over-reliance on devices can reduce the ability to memorize and deeply understand the Quran, while a lack of direct interaction with teachers may hinder the learning process. Moreover, the quality of digital Quranic content can vary and may not always be accurate. Data security issues, such as the risk of personal data leakage, also present concerns (Hidayat, 2020).

The main challenges in implementing digital technology in Quranic studies include limited infrastructure, restricted access to technology in conservative environments, and difficulties in integrating technology with traditional Islamic values. Inadequate infrastructure, such as unstable internet connections and limited digital devices, poses significant obstacles in the learning process (Yahya, 2024). According to Davis (1989), the acceptance and use of technology are heavily influenced by perceptions of its ease of use and perceived benefits. One major challenge is ensuring the availability of adequate infrastructure, including stable internet and appropriate hardware, especially in Islamic educational institutions. According to Rogers' Diffusion of Innovations Theory, infrastructure availability is a key factor in technology adoption. Lack of access can hinder the integration of digital technology in Islamic education. Solutions include increased investment in infrastructure and subsidies for students from economically disadvantaged backgrounds.

Technological infrastructure limitations also affect teachers' ability to implement technology-based learning. The lack of digital devices, such as computers and tablets, and limited technical support make it difficult for teachers to integrate technology into the learning process. As a result, the potential of digital technology to enhance the effectiveness and interactivity of learning has not been fully realized. To address this issue, a collaborative effort between the government, educational institutions, and the private sector is needed to improve technological infrastructure, especially in remote areas, ensuring that all students have equal access to quality education (Surachman et al., 2024).

Therefore, steps need to be taken, including educational institutions investing in better infrastructure, providing subsidies to students from low-income backgrounds, and fostering collaboration between the government, educational institutions, and the private sector.

Discussion

The advancement of information technology has brought various innovations in the field of education, including the

emergence of numerous media and applications that enable educators to create more engaging and contextual learning experiences. By using these media and applications, teachers can more creatively integrate technology into their lesson plans, making the material more interactive and providing meaningful challenges for students (Alfaizinun & Lilawati, 2023). Additionally, information technology opens broader access to educational resources, supports the implementation of distance learning, and creates a learning environment that is more flexible and responsive to the individual needs of students (Nisa & Waqfin, 2023).

The transformation of Quranic education through technology allows students to learn in a way that is more accessible, enjoyable, and relevant to the times. However, to effectively integrate educational technology, adequate infrastructure support is required, as well as the selection of quality applications and platforms to ensure that Islamic teachings are preserved accurately. Educational technology has the potential to expand access for Indonesians to study the Quran, particularly in areas that are difficult to reach with religious instruction. However, it is essential to ensure that this technology-based Quranic education maintains the quality, authenticity, and accuracy of Islamic teachings.

In a study conducted by Olan et al. (2019), the implementation of a digital Quran application over three sessions with 10 students who were addicted to mobile phones showed positive results in Quranic reading learning. Students who were previously addicted to gadgets expressed that they enjoyed using the application. The application helped them become more mindful in managing their time between leisure activities and more beneficial activities, such as reading the Quran. Previously, many students admitted they had difficulty utilizing their free time and tended to choose playing games on their phones, especially due to the urge to win the game. As a result, they became addicted and had difficulty focusing, even during Quranic reading lessons at school.

The results of the observations and interviews showed that almost all students liked the application. Student engagement increased gradually, starting with only a few students being active in the first session, the majority active in the second session, until all students were actively engaged in the third session. Interviews also revealed that through personal and group approaches during the

three sessions, as well as variations in reading and understanding the verses, students felt that the use of the digital Quran application helped them delve deeper into Islamic teachings. They also expressed a desire to change, preferring to use their phones for reading the Quran.

After using the digital Quran application to practice Quranic reading during the learning process, students showed significant improvement in their activities during each session. Activities such as listening, paying attention, asking questions, and practicing Quranic reading developed rapidly. Additionally, students' ability to read the Quran using this application also improved substantially. This proves that the digital Quran application can effectively enhance students' Quranic reading skills. The improvement was supported by the students' ability to follow the lessons well, reinforced through a habituation approach using the demonstration method. This method enabled students to participate optimally, both individually and in groups.

Conclusion

Advancements in information technology have opened new opportunities in education, including in Qur'anic education. The integration of technology through digital media and applications can enhance the learning experience, making it more engaging, interactive, and relevant to contemporary developments. The use of digital Qur'an applications, especially for students addicted to mobile phones, has proven effective in helping them manage their time wisely between leisure and productive activities, such as reading the Qur'an. Research indicates that this application not only increases student engagement in learning but also significantly improves their Qur'an reading skills.

The application of technology in Qur'anic education can expand access to learning in areas that are difficult to reach, but the quality, authenticity, and accuracy of Islamic teachings must still be maintained. With adequate infrastructure support and the selection of appropriate applications, technology-based Qur'anic education can enrich the learning experience and support the achievement of better religious education goals. Therefore, technology can be a

highly beneficial tool in supporting more flexible and effective Qur'anic education, if it is implemented wisely and cautiously.

Bibliography

- Agustian, N., & Salsabila, U. H. (2021). Peran teknologi pendidikan dalam pembelajaran. *Islamika*, 3(1), 123-133.
- Alfaizinun, C. N., & Lilawati, E. (2023). Penerapan Pembelajaran Pendidikan Agama Islam Berbasis Higher Order Thinking Skill (HOTS) di SMA Negeri Jogoroto. *ISLAMIKA*, 5(4), 1551-1565.
- Fatmona, R. (2022). Penggunaan Teknologi Informasi dalam Pembelajaran Al-Qur'an Hadits Studi Kasus di Kelas IXA MTsN 1 Kepulauan Sula. *Al-Mizan: Jurnal Kajian Hukum dan Ekonomi*, 167-180.
- Hakim, L. N., Zulfikar, E., & Kher, A. (2024). Belajar Al-Qur'an Di Era Disrupsi: Peluang, Tantangan Dan Solusi. *Jurnal Semiotika-Q: Kajian Ilmu al-Quran dan Tafsir*, 4(2), 522-534.
- Hidayat, S. (2020). Al-Qur'an dan Tantangan Society 5.0. *SALIHA: Jurnal Pendidikan & Agama Islam*, 3(2), 1-24.
- Hodijah, S., & Supendi, D. (2021). Pengaruh Aktivitas Menghafal Al-Qur'an Terhadap Kecerdasaan Spiritual Peserta Didik Kelas X di MA Al-Huda Jatiluhur. *Paedagogie: Jurnal Pendidikan dan studi Islam*, 2(02), 77-93.
- Khasanah, M. (2024). Tantangan Penerapan Teknologi Digital dalam Pendidikan Islam: Memanfaatkan Inovasi untuk Meningkatkan Mutu Pembelajaran. *Leader: Jurnal Manajemen Pendidikan Islam*, 2(2), 282-289.
- Nisa, U. K., & Waqfin, M. S. I. (2023). Strategi Perencanaan Pembelajaran PAI Berbasis IT untuk Meningkatkan Minat

- Belajar Siswa Madrasah Tsanawiyah Al-Hikmah Janti Jogoroto. *ISLAMIKA*, 5(4), 1455-1468.
- Nurillahwaty, E. (2022, December). Peran Teknologi dalam Dunia Pendidikan. In *Seminar Nasional Program Pascasarjana Universitas Pgris Palembang* (Vol. 1, pp. 81-85).
- Nurkholis & Susanto, A. B. (2024). Penggunaan Aplikasi Al Qur'an Digital Dalam Pembelajaran Pada Mata Pelajaran Qur'an Hadist. *ISLAM EDU: Jurnal Ilmiah Pendidikan Agama Islam*, 2(01), 14-26.
- Olan, O., Idi, A., Zainuri, A., & Sandi, A. (2019). Implementasi Aplikasi Al-Qur'an Digital Pada Siswa Kecanduan Gadget. *Nazhruna: Jurnal Pendidikan Islam*, 2(3), 330-349.
- Safaruddin, M. (2024). INTEGRASI TEKNOLOGI DALAM PENGAJARANAL-QUR'AN: PELUANG DAN TANTANGAN DI SDIT HARAPAN BUNDA MANADO. *transformasi*, 6(1), 27-44.
- Sugiyono (2019). Metode Penelitian Kuantitatif, Kualitatif, dan R&D. Bandung : Alfabeta.*
- Surachman, A., Putri, D. E., & Nugroho, A. (2024). Transformasi Pendidikan di Era Digital Tantangan dan Peluang. *Journal of International Multidisciplinary Research*, 2(2), 52-63.
- Wafi, M. B. F., Ilhami, N., & Taufiqurohman, T. (2022). Transformasi Perilaku Beragama Masyarakat Muslim Kontemporer: Fenomena Al-Qur'an di Era Digital. *IN RIGHT: Jurnal Agama dan Hak Azazi Manusia*, 11(1), 39-54.
- Yasmansyah, Y., & Zakir, S. (2022). Arah Baru Pendidikan Agama Islam Di Era Digitalisasi. *Jurnal Kajian Ilmu Pendidikan (JKIP)*, 3(1), 1-10.
- Yin, R. K. (2018). Case study research and applications: Design and

methods (Sixth edition). SAGE.