Development of Character-Based Islamic Religious Education Learning Technology

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Abstract

This study aims to describe the development of character-based Islamic Religious Education (PAI) learning technology at MTs NU Miftahul Huda Turen. Using a descriptive qualitative approach, data were collected through observation, in-depth interviews, and documentation. The results show that MTs NU Miftahul Huda has a strong commitment to building students' Islamic character through the integration of Ahlussunnah wal Jama'ah Islamic values into the learning process, both curricularly and culturally. Learning strategies are developed through a combination of the national curriculum and NU-an, habituation of religious activities, teacher role models, and extracurricular activities that support values such as discipline, responsibility, and tolerance. Challenges faced include limited human resources and infrastructure, especially in the use of learning technology. Nevertheless, this madrasah is able to demonstrate positive transformation, seen in the improvement of students' spiritual character and academic and non-academic achievements. This study recommends strengthening teacher capacity and developing technological infrastructure to support character learning that is adaptive to changing times.

Keywords: Islamic Religious Education, Islamic character, learning technology, integrated curriculum, MTs NU Miftahul Huda.

Introduction

Strengthening character education is currently an urgent need in Indonesia's national education system. Character development requires serious attention due to the numerous external challenges that can undermine the morals of Indonesian children (Kurniawaty et al., 2022). Education is no longer simply focused on intellectual achievement; it is also required to develop a generation with noble character, responsibility, and a strong sense of social responsibility. This aligns with the mandate of Law Number 20 of 2003 concerning the National Education System, which emphasizes that education must develop abilities and shape the character and civilization of a dignified nation (Masnu'ah et al., 2022). Therefore, character

education is not an additional element but rather the core of the entire educational process in Indonesia (Fahmi et al., 2021).

Islamic religious and moral education plays a crucial role in instilling religious values that shape children's character from an early age (Kamila, 2023). In this context, Islamic Religious Education (PAI) holds a very strategic position. Islamic Religious Education (PAI) not only conveys religious teachings cognitively but also serves as the primary means of instilling life values rooted in Islamic teachings, such as honesty, responsibility, tolerance, discipline, and empathy. Djaelani (2013b) states that religious education is a targeted effort to guide children to live according to the values of their religion (Somad, 2021). These values are highly relevant in shaping the character of students, particularly adolescents at the Madrasah Tsanawiyah (MTs) level, where students are in the process of searching for identity and are vulnerable to various negative social influences. Millennial adolescents are searching for identity and tend to crave recognition from their surroundings (Sakdiyah et al., 2020). Religious culture is born from the process of consistently instilling Islamic values in three main environments: family, school, and society. Through a power approach within the family, persuasive invitations in the school environment, and the implementation of educational norms in society, this culture not only shapes individual morals but also serves as a mechanism of social control. As a result, students grow into well-mannered individuals with character and are able to serve as role models for those around them (Rahma & Prasetyo, 2022).

However, the reality on the ground shows that the implementation of Islamic Religious Education (PAI) learning still faces various challenges. The approach used tends to be teacher-centered, with a predominance of lecture and memorization methods that do not address students' affective and psychomotor domains (Hani et al., 2023). Furthermore, the rapid development of technology and social media also shapes students' thinking and behavior (Wulandari, 2023), which in some cases contradicts the character values they are intended to instill. Many teachers become trapped in administrative routines, hindering learning innovation. As a result, Islamic Religious Education (PAI) learning is unable to fully address the challenges of the times or fulfill the essence of contextual character building (Iqbal, 2019).

However, some educational institutions demonstrate good practices in integrating character education into PAI learning as a whole (Rizal & Makmur, 2025). One interesting madrasah to study is MTs NU Miftahul Huda Turen, a private madrasah based on the Nahdlatul Ulama (NU) ideology located in Malang Regency, East Java. This madrasah is known for its commitment to developing an Islamic Religious Education (PAI) learning model that emphasizes not only academic achievement but also consistently instills character values through an integrative approach between classroom learning, habituation activities, and religious and social activities (Hamzah et al., 2025).

Based on this phenomenon, this study aims to examine in depth how the Islamic Religious Education (PAI) learning process at MTs NU Miftahul Huda Turen is implemented and to what extent the approach used effectively shapes students' character. The focus of the research covers material content, pedagogical strategies, the role of teachers, and the influence of the madrasah environment on the internalization of character values in students' daily lives.

This research is theoretically significant because it contributes to the development of a character-based PAI learning model that emphasizes not only cognitive aspects but also affects students' affective and behavioral dimensions. From a practical perspective, the results of this study can serve as a reference for teachers, madrasah principals, and educational policymakers in designing and implementing Islamic Religious Education (PAI) learning that is more contextual, humanistic, and impactful on character formation. In other words, this study not only provides conceptual understanding but also provides a more comprehensive understanding.

Literature Review

Education is not solely oriented toward achieving intellectual intelligence, but also directed toward developing students' noble character (Supriyadi et al., 2020). In this context, Islamic Religious Education (PAI) plays a strategic role as the foundation for shaping students' personalities and morality (Puteri, 2025). Philosophically, education is based on holistic human development, encompassing the physical, spiritual, intellectual, and spiritual dimensions, enabling them to live meaningful, responsible lives and contribute positively to society. Islamic educational philosophy emphasizes that the primary goal of education is the formation of a perfect human being, a complete human being who is not only intellectually intelligent but also possesses spiritual depth, emotional maturity, and social responsibility. This view aligns with the thinking of figures such as Al-Ghazali and Ibn Khaldun, who emphasized that the essence of education lies in fostering morality and submission to Allah SWT (Minarti, 2022).

Normatively, the importance of character education in the national education system is emphasized in Law Number 20 of 2003 concerning the National Education System, which states that education aims to shape individuals who are faithful, pious, and possess noble morals, as well as responsible citizens (Halid, 2024). Further affirmation comes through Presidential Regulation Number 87 of 2017 concerning the Strengthening of Character Education (PPK), which positions schools as centers for the internalization of religious values, nationalism, independence, mutual cooperation, and integrity (Rahmadani & Al Hamdany, 2023). In this regard, madrasahs (Islamic schools) have a distinct advantage because the integration of Islamic values is inherent in the curriculum structure and daily learning practices, particularly through Islamic Religious Education (PAI) lessons (Ermiyanto & Fadriati, 2023).

Islamic Religious Education (PAI), as an integral part of the national education system, plays a central role in shaping students who are not only knowledgeable about religion but also able to practice Islamic teachings in real life (Nurhaliza, 2024). The scope of Islamic Religious Education (PAI) encompasses not only cognitive aspects such as monotheism, fiqh (Islamic jurisprudence), morals, history, and the Qur'an and Hadith, but also fostering attitudes and behaviors in accordance with Islamic values. Therefore, the urgency of Islamic Religious Education (PAI) is increasingly relevant amidst the moral crisis and value degradation, as it bridges the need for a balanced education that encompasses intellectual, spiritual, and emotional intelligence. In a pluralistic and religious society like Indonesia, Islamic Religious

Education (PAI) also serves as a means of strengthening tolerance, moderate religious identity, and social integrity in students (Az Zahra et al., 2025).

The primary goal of Islamic Religious Education (PAI) is to shape students into holistic, faithful, and pious Muslims with noble behavior (Zalsabella P et al., 2023). In practice, Islamic Religious Education (PAI) serves various strategic functions: a transformative function to change mindsets and behaviors (Hawna et al., 2024), a preventive function as a bulwark against negative environmental influences, a constructive function in shaping character through the cultivation of positive attitudes (Dendha Syouqina, 2022), and an integrative function in uniting spiritual and intellectual aspects. With a holistic and contextual approach, Islamic Religious Education (PAI) learning is an effective means of shaping a young generation that not only understands Islamic teachings but also embodies its values in their daily actions (Hasnah, 2022).

From an Islamic perspective, character education is at the heart of the entire educational process. Abdulooh Munir (2010) based on the hadith states, "The Prophet Muhammad himself emphasized that the mission of the apostleship is to perfect human morals (Narrated by Ahmad), indicating that moral and ethical education is the main indicator of the perfection of faith (Hidayatun et al., 2023). Therefore, in Islamic education, character formation cannot be separated from the learning process itself. This process is carried out through role models, habituation, advice, and strengthening spiritual awareness, involving all educational environments: home, school, and community (Shodiq & Kuswanto, 2024).

Islamic character values such as honesty, trustworthiness, responsibility, tolerance, patience, compassion, and justice are essential foundations in the formation of the Muslim personality (Nuralimah et al., 2025). These values are not only important in the individual's relationship with God (hablum minallah) but also in social relationships (hablum minannas) and concern for the environment. Noble morals in Islam are a reflection of authentic faith, as emphasized in The Qur'an (QS. Al-Qalam: 4) states that the Prophet Muhammad possessed noble morals. These values are interconnected and form a system that shapes a complete character from an Islamic perspective (Pasaribu et al., 2025).

Research on the implementation of character education in Islamic Religious Education (PAI) has become a major focus in developing the overall quality of students. Raja Marzuni and Romelah (2022) in their study entitled "Implementation of Character Education in Islamic Religious Education at SMA Negeri 1 Pulau Tiga-Natuna" revealed that character values such as religiosity, national spirit, and responsibility are fundamental elements that must be instilled through PAI learning. This study highlights the role of schools as strategic cultural centers in shaping student character, through an integrated school culture approach in learning planning and implementation. Using qualitative descriptive methods, this study emphasizes the importance of strengthening character values as a response to the character crisis currently affecting various aspects of national life (Marzuni & Romelah, 2023).

A similar study was conducted by Abdul Halim, Sumianti, and Nur Syahirah Azrein in their study entitled "Implementation of Character-Based Islamic Religious Education Development at SDN 12/X Pemusiran, East Tanjung Jabung Regency." This study also

employed a descriptive qualitative approach through observation, interviews, and documentation with teachers and students as research subjects. The results indicate that the implementation of character-based Islamic education has been optimally implemented through the integration of character values into the learning process. Strategies used include fostering religious practices through hands-on practice, instilling good manners toward teachers and parents, and fostering positive social behaviors such as mutual respect and avoiding bullying. Islamic Religious Education teachers serve as role models through a model-based approach and a variety of learning methods, such as lectures, discussions, and demonstrations (Halim & Sumianti, Azrein, 2024).

These two studies emphasize the urgency of strengthening character in religious education as a primary foundation for addressing the challenges of modern education. At both primary and secondary levels, character education is not only a necessity but also a fundamental strategy for developing a generation with noble character and high integrity.

Research Method

This research uses a descriptive qualitative approach. According to Creswell (Safrudin et al., 2023), this approach is suitable for exploring in-depth how the Islamic Religious Education (PAI) learning process is implemented at MTs NU Miftahul Huda Turen, particularly in relation to strengthening student character. With this approach, researchers sought to understand the meaning, values, and direct experiences of the educational actors at the madrasah. The research location was MTs NU Miftahul Huda Turen, a private madrasah based on Nahdlatul Ulama (NU) and located in Malang Regency, East Java. This madrasah was selected purposively because it is known to be active in developing PAI learning integrated with student character development. The subjects in this study included Islamic Religious Education teachers, students, and the madrasah principal. These three groups were chosen because they are directly involved in the learning process and management of character education within the madrasah.

To collect data, three main techniques were used: observation, in-depth interviews, and documentation. Observations were conducted to directly observe the dynamics of learning in the classroom and religious activities outside the classroom. In-depth interviews were used to explore the views, experiences, and strategies of teachers, madrasah principals, and students regarding Islamic Religious Education (PAI) learning and the character values they foster. Documentation was conducted to explore supporting documents such as syllabi, lesson plans (RPP), madrasah work programs, and documentation of religious and character-based activities. The collected data were then analyzed using the interactive model by Miles and Huberman, which includes three main stages: data reduction, data presentation, and conclusion drawing/verification (Safrudin et al., 2023). This process was carried out continuously from the beginning of data collection until the end of the study, to obtain a comprehensive and in-depth understanding. To ensure the validity of the data, researchers triangulated sources and techniques. Source triangulation was conducted by comparing information from various subjects (teachers, students, and madrasah principals), while technical triangulation was

conducted by combining the results of observations, interviews, and documentation to strengthen the validity of the findings.

Result and Discussion

Islamic religious education is a crucial foundation for shaping a child's religious culture and character. Religion provides direction in life and shapes noble morals, while also preventing various social problems. The instillation of these values needs to be carried out in an integrated manner across three environments: the family as the primary role model, the school as a learning reinforcement, and the community as a place for the application of values supported by religious leaders. The synergy of these three is crucial for optimal educational outcomes (Rahma & Prasetyo, 2022).

Religious education is closely related to character education, which is often a key topic in society because it concerns the formation of a person's morals and ethics. Essentially, this education instills life values that shape personality and help individuals interact positively with others (Kulsum & Muhid, 2022). Internalizing Islamic character education in schools aims to shape students into complete individuals, or insan kamil, individuals who are perfect in knowledge, manners, and morals. This process fosters and strengthens the positive potential within students, enabling them to grow into individuals of noble character (Handika et al., 2022). Furthermore, this education prepares the younger generation to be able to behave and act based on Islamic values in their daily lives, while also providing answers to the various moral challenges that arise in the modern era.

MTs NU Miftahul Huda Turen is the first Islamic secondary school, established on December 5, 1969. This madrasah pioneered Islamic-based secondary education in Turen District, as at that time there were no formal Islamic educational institutions under the auspices of LP Ma'arif Nahdlatul Ulama. In its early days, learning took place in the same building as MI Hidayatul Falah Pagedangan, reflecting the limited resources that had to be faced from the outset.

The birth of this madrasah was inseparable from the role of community leaders, one of whom was Mr. H. Mu'tarom, who at the time served as the Village Head of Pagedangan. He had a strong commitment to Islamic education and was the initiator of its establishment. The founding of MTs NU Miftahul Huda was motivated by the desire to establish a secondary education institution based on Ahlussunnah wal Jama'ah Islam, as part of Nahdlatul Ulama's cultural outreach and the development of a young generation with Islamic character.

This madrasah has undergone significant development over time. Initially named MTs Nahdliyatul Falah, with an initial enrollment of 70 students. In its early days, the MTs did not have a National Student Registration (NPSN) and had to participate in end-of-year activities with other madrasahs in Paiton. However, on September 17, 1973, the institution officially changed its name to MTs NU Miftahul Huda. Formal legal recognition began with the receipt of an official registered charter on August 29, 1983, followed by accreditation on September 28, 1986, and official recognition on January 29, 1995. The institution's quality continued to

improve until it achieved A-level accreditation in 2013. Currently, MTs NU Miftahul Huda has over 400 students divided into five study groups at each grade level.

The initial challenges faced by the madrasa were not insignificant. A shortage of teaching staff, who were not fully qualified in their field of study (non-linear), posed a significant obstacle. Furthermore, limited physical facilities meant that the learning process had to be shared with an Islamic elementary school (MI). The institution then moved into a building owned by Pagedangan village, which is still used for teaching and learning activities. Institutionally, MTs NU Miftahul Huda upholds the vision of "To establish a high-achieving madrasah with Islamic character based on the principles of Ahlussunnah wal Jama'ah An Nahdliyah." This vision is translated into its mission and daily practices through the implementation of NU practices within the madrasah. Activities such as tahlil (recitation of the Quran), manaqib (recitation of the Quran), istighosah (recitation of the Quran), khotmil (recitation of the Qur'an), and dhuha prayer (Duha prayer) are part of a daily routine that not only strengthens students' spirituality but also instills traditional Islamic values contextualized with local culture. The instilled Islamic and NU values are not only part of religious activities but are also integrated into classroom learning, including extracurricular programs such as Pagar Nusa (Nusa Feast).

The madrasah's organizational structure has evolved over time. Initially, it was managed by the founding family, but now its management is more open, involving various groups through a selection process. The heads of madrasas from time to time include: Mr. Iskan Abdul Latif, Mr. H. Ali Hasan from Pagedangan, Mr. Samsul Hadi from Sanan, Mr. Muhammad Siswanto, and currently held by Mr. Usman Dzikri from Pagedangan.

Currently, MTs NU Miftahul Huda has a total of 54 employees, consisting of 31 teachers, 11 administrative staff, 7 extracurricular coaches, 3 talent counselors, and 2 Quran teachers. The recruitment process for teaching and administrative staff is carried out by considering educational backgrounds aligned with the field of study, as well as NU-based backgrounds. The selection process is open, consisting of academic tests and interviews, to ensure competency and a alignment between the vision of the institution and prospective educators.

Islamic religious instruction at MTs NU Miftahul Huda Turen is implemented using an integrated approach, combining the national curriculum with madrasah-specific content. The madrasah implements two curricula simultaneously: the 2013 Curriculum and the Merdeka Curriculum, combined with the Aswaja An Nahdliyah teachings as the madrasah's Islamic identity. These two curricula enable the integration of general and religious studies, both structurally through formal subjects and culturally through the instillation of Islamic values within the school environment. Because this madrasah is under the Ministry of Religious Affairs, several religious subjects are integrated with Islamic cultural activities, such as the morning activities routinely held before classes begin.

Strengthening Islamic character in the learning process is not only carried out through classroom theory, but also through the development of attitudes and behaviors that reflect noble character. Every day, students are invited to participate in morning devotional activities such

as tahlil (recitation of the Quran), manaqib (recitation of the Quran), istighosah (recitation of the Quran), khotmil (recitation of the Quran), and dhuha prayer. These activities serve as an important foundation for building students' spiritual character and fostering consistent religious habits. Throughout the learning process, teachers act as both educators and role models, not only delivering material but also instilling moral and religious values through daily interactions.

Table 1. Schedule of Learning and Habitual Activities (Ubudiyah)

Hari	Waktu Belajar	Pembiasaan	Ubudiyah
Senin	06.30-13.00	Sholat Dhuha	Upacara Bendera
Selasa	06.30-13.00	Sholat Dhuha	Manaqib
Rabu	06.30-13.00	Sholat Dhuha	Istighosah
Kamis	06.30-13.00	Sholat Dhuha	Qotmil Qur'an
Jum'at	06.30-11.00	Sholat Dhuha	Tahlil
Sabtu	06.30-13.00	Sholat Dhuha	Pramuka

Table 2 Subjects taught at Mts NU Miftahul Huda

Mata Pelajaran Wajib Nasional	Muatan Lokal	Muatan Lokal Madrasah
Pendidikan Pancasila Kewarganegaraan (PPKn)	Seni Budaya	Ke-NU-an (Aswaja dan Kemasyarakatan)
Matematika	PJOK	Bahasa Arab Tambahan / Tahsin dan Tahfidz Qur'an
IPA	Prakarya	Amaliyah Nahdliyah (praktik ibadah sesuai tradisi NU)
IPS	Bahasa Daerah	
Informatika / TIK		
Literasi 1. Bahasa Indonesia 2. Bahasa Inggris 3. Bahasa Arab		
Pendidikan Agama Islam dan Budi Pekerti 1. Al-Qur'an Hadits 2. Akidah Akhlak 3. Fiqih 4. Sejarah Kebudayaan Islam (SKI)		

The strategy for implementing character education in schools includes integrating values into subjects, instilling positive values in the school environment, providing role models and training, and creating a school culture that supports character. Furthermore, learning is integrated with student character development through school management and extracurricular activities. Character education, such as in Civics (PKN), is not taught separately but is integrated into every subject (Risa et al., 2021).

The strategy for developing character-based learning at MTs NU Miftahul Huda is implemented comprehensively. The school creates a conducive environment for the development of character values by involving the entire madrasah community and the entire community. Character formation stems not only from lesson content but also from the example set by teachers and staff, as well as from collective habits. In addition to religious activities, character development is also carried out through extracurricular activities such as Hadrah Al Banjari, Qiro'ah, Pagar Nusa, Scouting, and Esports. These activities are designed not only to foster interests and talents but also to cultivate discipline, cooperation, responsibility, and sportsmanship. The coaches and extracurricular mentors who assist students are also certified, ensuring a professional development process.

The character values integrated into the learning process reflect the fundamental principles of Islam. Religious values are instilled through routine worship and religious activities that foster students' closeness to God. Discipline is evident in students' regular morning routines, punctuality in class, and adherence to madrasah rules. Responsibility is fostered through assignments that demand independence and caring, both in learning and social activities. Meanwhile, the values of tolerance and mutual cooperation are honed through student interactions in group and extracurricular activities. Furthermore, the value of achievement also receives significant attention. This is evidenced by student achievements in various competitions, such as winning the 2023 Arabic Language Olympiad national championship, winning the district-level electrical engineering competition, and winning the overall championship in the KKM-level Porseni (Sports and Arts Competition) with 18 trophies.

Support for character education also comes from the completeness of facilities and infrastructure. Classrooms are equipped with projectors, an SNI-compliant library, science and computer laboratories with adequate teaching aids, and a hall that can accommodate over 300 students. The school continues to develop these facilities, including plans to complete the science and computer laboratories in the near future. Furthermore, good relations with the surrounding community contribute to strengthening student character. Many students come from the surrounding area, demonstrating the school's widespread trust. The school committee actively solicits the input of parents from various regions. Community input and input are then taken into consideration in developing school programs and policies.

Going forward, MTs NU Miftahul Huda hopes to continue growing, both in terms of teacher quality, student numbers, and learning facilities and models. The school is committed to adapting to the needs of the times, including facing the challenges of the digital era and scientific advancements. However, challenges remain, particularly in maintaining the relevance of learning to changing times without losing its identity as an Ahlussunnah wal Jama'ah madrasah. With strong commitment and support from various parties, the madrasah strives to remain an institution that excels in achievement and character.

In the process of developing its learning, MTs NU Miftahul Huda Turen faces various challenges that reflect the dynamic realities of changing times. One of the main challenges is how the madrasah can adapt its learning system to developments in science and technology, without abandoning the Islamic identity that has become a strong foundation for the institution.

The introduction of the Independent Curriculum and the demands of technology integration require teachers to be more creative and innovative. However, the readiness of human resources, especially teachers, remains a challenge. Not all educators have academic backgrounds aligned with the subjects they teach, impacting learning optimization, particularly in areas requiring mastery of methodologies and contextual approaches.

In addition to human resource challenges, limited facilities and infrastructure, such as incomplete science and computer laboratories, also present obstacles to supporting active learning based on 21st-century skills. Amidst these limitations, the madrasah is working to address these challenges with various strategic solutions. One such approach is implementing a strict teacher recruitment system that takes into account academic background, pedagogical skills, and commitment to the values of Ahlussunnah wal Jama'ah. The madrasah also established partnerships with Nahdlatul Ulama (NU) organizations such as LP Ma'arif and the PKPNU community to improve teacher capacity through training and professional mentoring. Furthermore, the madrasah has begun digitalizing its administration and service systems as a concrete step in facing the era of educational technology. Efforts to improve facilities, such as equipping laboratories and providing ICT equipment, are also part of its future development plan.

Although challenges have not completely disappeared, the positive impact of the learning development has begun to be felt, particularly in changes in student behavior and character. The practice of religious activities such as tahlil (religious prayer), dhuha prayer, and istighosah (religious reflection) has not only become routine but has also internalized spiritual values and discipline in students' daily lives. Students have demonstrated increased responsibility, independence, and concern for their social environment. Furthermore, the madrasah has recorded various impressive student achievements. Several students have won the national Arabic Language Olympiad, won the district-level electrical engineering competition, and won the overall championship in the KKM-level Porseni (Sports and Arts Competition). These achievements reflect the growing self-confidence and abilities of students, which balance academic and non-academic aspects.

Another positive change is evident in the increased participation of students in community-based socio-religious activities, such as the Islamic outreach program (istighosah keliling) and other NU programs. This demonstrates that the learning process not only fosters knowledge but also strengthens students' social bonds and collective piety. Values such as tolerance, mutual cooperation, and empathy are beginning to influence student interactions both in learning activities and outside of the classroom. With a spirit of continuous development and self-improvement, MTs NU Miftahul Huda demonstrates a strong commitment to becoming a madrasah that adapts to the times, while remaining steadfast in Islamic values and national character.

Research by Marzuni and Romelah (2022) and Halim et al. emphasizes the importance of character education in Islamic Religious Education (PAI) learning, particularly through conventional approaches such as role models, habituation, and internalization of values through direct interaction. However, neither study explored the role of technology in reinforcing these values.

This research aims to fill this gap by developing PAI learning technology that is not only informative but also educational and character-building. Based on constructivist theory (Vygotsky) (Kusumaningpuri & Fauziati, 2021) and character education (Lickona) (Hikmasari et al., 2021), technology can be utilized as an interactive medium capable of comprehensively addressing students' cognitive, affective, and psychomotor aspects.

Experience at MTs NU Miftahul Huda Turen demonstrates that developing digital media that integrates Aswaja values can strengthen the character learning process. Through habituation videos, value quizzes, and digital thematic modules, technology plays a role not only as a tool, but as a bridge to instill morals in a context that is more relevant to today's generation.

Conclusion

The development of character-based Islamic Religious Education learning technology at MTs NU Miftahul Huda Turen demonstrates that character education can be harmoniously integrated into learning, both through curriculum approaches and through the inculcation of religious values in students' daily lives. This madrasah combines the 2013 Curriculum and the Merdeka Curriculum with the teachings of Ahlussunnah wal Jama'ah, thus establishing a learning system that not only imparts knowledge but also strengthens morals, spirituality, and Islamic traditions contextualized with local culture.

Despite facing various challenges, such as a limited number of teachers with linear academic backgrounds and suboptimal technology-based learning facilities, MTs NU Miftahul Huda continues to innovate. Strengthening student character is evident through daily worship activities, teacher role models, and student involvement in extracurricular and socio-religious activities. This has resulted in the development of religious attitudes, discipline, responsibility, and student achievement in both academic and non-academic fields. Thus, it can be concluded that the development of character-based Islamic Religious Education (PAI) learning technology at MTs NU Miftahul Huda Turen not only met the challenges of the times but also successfully maintained the Islamic identity and traditions of Islamic boarding schools, which are the soul of madrasah education. Moving forward, strengthening teacher capacity and ICT facilities is a strategic step that must be continuously pursued to ensure this madrasah becomes more adaptive and superior in shaping a generation with knowledge, morals, and Islamic character.

Declaration of conflicting interest

The authors declare that there is no potential conflict of interest with respect to the research, authorship, and/or publication of this article. This article was written solely for academic and educational purposes, without any financial, commercial, or personal influence that could be perceived as affecting the impartiality of the research..

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