Technology-Based Islamic Education: Building Inclusive, Adaptive, and Future-Ready Learning Foundations

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Abstract: Islamic education in the digital era faces new challenges and opportunities related to the integration of technology. This Research aims to explore the application of technology in Islamic education to support more inclusive and adaptive learning. This study uses a qualitative approach with a journal collection research method to review literature on the application of technology in Islamic education, focusing on moral, spiritual, and social principles. The findings show that technology, including e-learning platforms, mobile applications, and social media, can expand access to education, create more personalized learning experiences, and support flexible teaching methods. Effective implementation requires clear policies, training for educators, and attention to Islamic ethical principles. This research is expected to provide guidance for the development of more effective technology-based Islamic education strategies in the digital era.
Keywords: Adaptive Learning; Inclusive Learning; Islamic Education; Technology

Abstrak: *Pendidikan Islam di era digital menghadapi tantangan dan peluang baru terkait integrasi teknologi. Penelitian ini bertujuan untuk mengeksplorasi penerapan teknologi dalam pendidikan Islam guna mendukung pembelajaran yang lebih inklusif dan adaptif. Penelitian ini menggunakan pendekatan kualitatif dengan metode riset kumpulan jurnal untuk mengkaji literatur terkait penerapan teknologi dalam pendidikan Islam, dengan fokus pada prinsip moral, spiritual, dan sosial. Hasil penelitian menunjukkan bahwa teknologi, termasuk platform e-learning, aplikasi mobile, dan media sosial, dapat memperluas akses pendidikan, menciptakan pengalaman pembelajaran yang lebih personal, dan mendukung pengajaran yang fleksibel. Untuk implementasi yang efektif, dibutuhkan kebijakan yang jelas, pelatihan bagi pendidik, serta perhatian terhadap prinsip etika Islam. Penelitian ini diharapkan dapat memberikan panduan bagi pengembangan strategi pendidikan Islam berbasis teknologi yang lebih efektif di era digital.*
Kata Kunci: *Pembelajaran Adaptif; Pembelajaran Inklusif; Pendidikan Islam; Teknologi*

INTRODUCTION

In the rapidly evolving digital era, technology has transformed various aspects of life, including education. Islamic education, as an integral part of the global education system, is no exception to the significant impacts of this technological revolution. Alongside technological advancements, new opportunities have emerged to enhance the quality of learning and create a more inclusive and adaptive educational environment (M. I. Sholeh, 2023).

Islamic education is based on profound moral, spiritual, and social principles. Therefore, the integration of technology in Islamic education must be approached with caution to ensure that it not only leverages technological advancements but also remains true to Islamic values and teachings. Technology can serve as a highly effective tool in supporting the goals of Islamic education, such as expanding access to education, enhancing teaching methods, and strengthening student engagement (Hidayati & 'Ula, 2024).

The importance of a technology-based foundation in Islamic education lies in its ability to bridge gaps in education. When applied wisely, technology can address traditional challenges in education, such as geographic limitations and resource constraints. For instance, the use of e-learning platforms and mobile applications can facilitate access to educational materials for students in remote areas and help create a more personalized and adaptive learning experience (Fandir, 2024).

However, the integration of technology in Islamic education also faces its own challenges. The digital divide, teacher readiness, and access to infrastructure are crucial issues that need to be addressed to ensure that technology can be utilized optimally. Additionally, it is important to ensure that the use of technology aligns with Islamic ethics and values, so that the spiritual and moral aspects of education are not overlooked (Meliani et al., 2022).

Previous research entitled "Islamic Religious Education Learning Media in the Technology Era: A Systematic Literature Review", states that in the digital era accessibility and inclusiveness are absolute choices that must be considered by teachers so that every Islamic religious education learning can run according to the challenges of the times (student needs) (Huda et al., 2024). Then another study entitled "Digital Transformation in Islamic Education: Opportunities, Challenges, and Its Impact on Islamic Values", states that digital transformation

brings opportunities and challenges in improving the quality and accessibility of Islamic education (Juhairiah et al., 2024).

This research offers novelty by emphasizing the importance of technology integration in Islamic education to create an inclusive and adaptive learning environment. In contrast to previous studies that highlight accessibility and inclusivity as absolute choices in learning Islamic education in the digital era, this research specifically examines the implementation strategies of technology integration in Islamic education and how to overcome the challenges of its adoption. The study highlights the importance of improving technological infrastructure, training and professional development for teachers and education managers, provision of relevant Islamic digital content, and technology-based curriculum approaches.

This research aims to explore the theoretical and practical underpinnings of integrating technology into Islamic education. The focus is on understanding how technology can be used effectively to create learning that is inclusive and responsive to the needs of diverse students. The research aims to map examples of successful technology implementation and understand the constraints and opportunities that arise in its application. The research is expected to generate strategic recommendations and evidence-based policies that can support Islamic education in meeting the challenges of the digital era (Luo, 2011).

RESEARCH METHOS

This study uses a qualitative approach with a journal research method to explore and analyze the foundations of technology-based Islamic education in the context of inclusive and adaptive learning. Through an in-depth review of relevant academic journals, this research aims to identify and understand how technology can be applied in Islamic education to create a more inclusive and adaptive learning environment. By analyzing findings and theories from existing literature, this research provides a comprehensive insight into the effectiveness of technology in improving the quality and accessibility of Islamic education in the digital age (Pahleviannur et al., 2023).

RESEARCH RESULT AND DISCUSSION

Research Result

The results of this study reveal that technology integration in Islamic education requires strengthening infrastructure as the main basis. Equitable access to technological devices and internet networks is an important factor in creating an inclusive learning environment. Without adequate infrastructure support, efforts to adopt technology in Islamic education will face significant obstacles. Therefore, investment in the development of technological infrastructure in Islamic education institutions should be a priority, especially in areas that are not yet optimally covered by digital facilities.

The research also highlights the importance of training and professional development for teachers as well as education managers. Teachers as the spearhead of the learning process need to be equipped with technical and pedagogical skills to utilize technology effectively. The results show that continuous, practice-based and relevant training in the context of Islamic education can improve teachers' ability to develop innovative technology-based learning materials. In addition, education managers also need competency development to be able to manage changes caused by digitalization in the educational environment.

In the context of curriculum, this research found that technology-based approaches should be designed to support adaptive learning and be relevant to students' needs. Providing appropriate Islamic digital content, both in substance and delivery method, is one solution to ensure Islamic values can be properly internalized through digital media. In addition, the technology-based curriculum must also be flexible and responsive to changing times, allowing students to learn at their own pace and ability. The findings provide concrete guidelines for developing more effective strategies for implementing technology in Islamic education, which are not only inclusive but also adaptive to the needs of the digital age.

Discussion

A. Definition of the Foundation of Islamic Education

The foundation of Islamic education refers to the principles that serve as the basis for establishing systems, goals, and methods of education grounded in Islamic teachings. Islamic education is rooted in the Qur'an and Hadith as primary sources, along with the thoughts of scholars who have developed concepts of education that align with Islamic values. This foundation encompasses philosophical, theological, moral, and social aspects that guide the educational process in shaping individuals with Islamic character (Sari et al., 2024).

Islamic education is a process designed to shape individuals who have faith in Allah, possess noble character, are knowledgeable, and are capable of dedicating their lives to the welfare of society and the community. Islamic education encompasses the development of all aspects of human life, including intellectual, spiritual, physical, and social dimensions (Lubna, 2020). Specifically, the fundamental goals of Islamic education include:

1. Formation of noble character: Islamic education aims to instill good qualities such as honesty, patience, humility, and sincerity, all derived from the teachings of the Qur'an and Hadith.

2. Enhancement of religious and worldly knowledge: Islamic education integrates religious knowledge with general knowledge, creating individuals who are not only intellectually sharp but also possess a deep understanding of their faith.

3. Devotion to Allah and society: The primary goal of Islamic education is to produce individuals who can dedicate themselves to worshiping Allah and contribute positively to society.

4. Development of Islamic character: This education aims to shape individuals with a personality that aligns with Islamic teachings, enabling them to serve as role models for others (Djollong & Fitriani, 2017).

Islamic education is based on several fundamental principles derived from Islamic teachings, including:

1. Principle of Tawhid (Faith in Allah): All aspects of Islamic education center on the concept of tawhid, which is the belief in and oneness of Allah in all actions and intentions. This is the fundamental foundation that guides the goals and processes of education.

2. Principle of Ethics: High moral and ethical values are an essential part of Islamic education. The educational process must be able to cultivate good and noble character while steering clear of bad behavior.

3. Principle of Balance (Tawazun): Islamic education seeks to achieve a balance between spiritual and material needs, as well as between worldly and eternal matters. Education aims not only for academic achievement but also for holistic personal development.

4. Principle of Justice (Adil): In Islamic education, treatment of each individual must be fair and non-discriminatory, providing equal opportunities for everyone to develop their potential.

5. Principle of Freedom of Thought (Ijtihad): Islamic education encourages students to think critically, explore knowledge, and solve problems based on religious foundations and sound reasoning (S. Sholeh, 2016).

The Importance of Philosophical, Sociological, and Theological Foundations in Islamic Education:

1. Philosophical Foundation: The philosophy of Islamic education is rooted in the concept of tawhid, which explains that education aims to shape individuals who recognize and serve Allah. Education focuses not only on material achievements but also on the holistic development of humans with a close relationship to the Creator.

2. Sociological Foundation: Islamic education has a responsibility to build a harmonious and just society. Education is not only for the individual but also for the welfare of the community as a whole. In this context, Islamic education emphasizes the social role of humans as khalifah on earth, responsible for upholding justice, welfare, and peace.

3. Theological Foundation: The theological foundation of Islamic education refers to the relationship between humans and Allah, as well as the responsibilities of humans as beings entrusted by Him. Education is directed towards fostering faith, piety, and submission to Allah's laws, along with an awareness of the afterlife as the ultimate goal (Marhamah & Abdullah, 2020).

Overall, the foundations of Islamic education play a crucial role in creating a comprehensive educational system that not only advances intellectual aspects but also shapes the character of individuals in accordance with Islamic teachings.

B. The Role of Technology in Islamic Education

The Influence of Technology on the Transformation of Education, Especially in Islamic Educational Environments. Technology has significantly transformed the way Islamic education is delivered and accessed. Previously, Islamic education relied heavily on traditional methods such as teaching in mosques, madrasahs, and pesantren. Today, technology facilitates global access to Islamic knowledge. It has enabled the teaching and learning process to become more flexible, interactive, and measurable, reaching a broader range of students, including those who may have previously found it difficult to access formal education (Ilham, 2020).

The influence of technology in Islamic education includes:

1. Global and Inclusive Access: Students from various geographical locations can learn from the best Islamic teachers or educational institutions in the world without needing to be physically present.

2. Enrichment of Learning Resources: Through technology, Islamic learning materials have become more diverse, ranging from texts and audio to videos, enriching the learning experience.

3. Increased Interactivity: Technology enables teaching to be more interactive with various multimedia tools, making it more engaging and easier for students to understand.

4. Efficiency in Education Management: Technology also supports the management of Islamic education, including aspects of administration, classroom management, and evaluation of the learning process (Salsabila, 2019).

Relevant Tools and Platforms for Technology in Islamic Education:

1. E-Learning (Online Learning): E-learning platforms such as Moodle, Google Classroom, and Edmodo have become essential tools in Islamic education, allowing students to attend classes remotely. E-learning provides flexibility in terms of time and place, enabling more independent learning.

2. Mobile Apps for Islamic Learning: Mobile applications like Ayat, Quran.com, Muslim Pro, and various Quran memorization apps offer direct access to religious materials, tafsir, and a variety of Islamic learning resources. These apps make it easier for learners to access the Quran, hadith, daily prayers, and other Islamic educational content anytime and anywhere.

3. Social Media: Social media platforms like YouTube, Instagram, and Facebook are widely used by scholars, ustaz, and Islamic educational institutions to disseminate lectures, studies, and informal religious education. This provides broad reach and connects with diverse audiences, especially the younger generation.

4. Podcasts and Video Streaming: Many podcast and video streaming platforms such as Spotify and YouTube are used to access Islamic content, including lectures, academic discussions, and religious lessons. This offers flexibility for students to learn while engaging in other activities.

5. Collaborative Platforms: Collaborative tools like Google Docs and Microsoft Teams facilitate discussions among students and teachers in Islamic educational environments. They can share notes, assignments, and viewpoints in real-time, strengthening collaboration in learning (Ansyah, 2022).

Integration of Technology in Islamic-Based Teaching and Assessment Methods:

1. Teaching Methods: Technology allows for the integration of traditional teaching methods with modern innovations. For instance, the memorization of the Quran, which is often done face-to-face, can now be supported by apps that help students repeat their memorization, correct their recitation using voice technology, and receive immediate feedback. E-learning enables teachers to deliver content systematically, using dynamic visual, audio, and text aids..

2. Gamification: Gamification, or the application of game elements in the learning process, has also been integrated into Islamic education through apps that provide quizzes, challenges, and rewards for specific achievements. This enhances student motivation in learning religious knowledge.

3. Evaluation and Testing: Technology facilitates quicker and more accurate assessments through online platforms. Tests can be taken remotely, and students can receive immediate results. Some platforms can even adjust questions based on the difficulty level faced by students, providing a more adaptive evaluation.

4. Data Usage for Personalized Learning: In the context of technology-based learning, data from student interactions with learning systems can be analyzed to provide more personalized education. For example, artificial intelligence (AI) can assist teachers in analyzing student progress, identifying areas where students struggle, and suggesting learning methods that better meet their needs.

5. Technology-Based Islamic Curriculum Development: Technology is also used to develop a more structured and competency-based Islamic education curriculum. A technology-based curriculum can integrate Islamic lessons with contemporary contexts and digital tools, making the content more relevant to current developments (Hassan et al., 2023).

Through these various tools and methods, technology plays a significant role in enhancing the effectiveness and efficiency of Islamic education, making it more inclusive, flexible, and capable of adapting to contemporary developments.

C. Inclusive Learning in Technology-Based Islamic Education

Inclusivity in education means ensuring that every individual, regardless of social, economic, or physical background, has equal access to quality education. From an Islamic perspective, inclusivity reflects the principles of justice and equality taught in the Quran and Hadith. In the context of Islamic education, inclusivity means that all students, regardless of physical abilities, special needs, economic status, or geographical location, have the same right to receive an education that imparts Islamic values as well as general knowledge (Utomo et al., 2024).

Islam teaches that every individual is a creation of Allah with equal rights to develop their potential. Therefore, inclusive Islamic education aims not only to provide learning opportunities for the majority but also to include those who are often marginalized, such as students with disabilities or from remote communities. This principle aligns with the teachings of the Quran, which emphasizes the importance of knowledge for everyone, without discrimination (Mirrota, 2024).

Technology has opened up many opportunities to enhance access to Islamic education more broadly and equitably. Here are some ways technology enables inclusivity in Islamic education:

1. Distance Learning (E-Learning) for Students in Remote Areas: Technology enables students living far from formal educational institutions to access education through e-learning platforms. Previously, they may have struggled to obtain quality education due to limited facilities. However, with internet connectivity, students from remote areas can attend online classes, access learning materials, and even interact with teachers from various parts of the world.

2. Learning Apps for Students with Special Needs: Students with special needs, such as those who are visually impaired, hearing impaired, or have other disabilities, can benefit from specially designed applications. For example, Quran apps with audio features allow visually impaired students to learn the Quran easily, while written text and visuals help hearing-impaired students understand Islamic teachings. Such technology ensures that students of varying abilities can learn in ways that best suit their needs.

3. Virtual and Hybrid Classes for Diverse Social Classes: Technology reduces the need for expensive physical infrastructure, such as school buildings. This allows students from various economic backgrounds to access the same education as their peers through virtual or hybrid classes. They do not need to pay for transportation or accommodation to attend classes at specific educational institutions, as they can learn from home.

4. Access to a Wide Range of Free Educational Resources: Many Islamic educational apps and platforms provide free content that anyone can access. These resources include e-books, lectures, educational videos, and scholarly discussions that students from various social backgrounds can utilize. Platforms like YouTube or Islamic educational websites offer access to resources that may not be available in formal schools.

5. Training for Teachers to Address Diverse Student Needs: Technology also facilitates training for teachers to better handle classrooms composed of students with diverse needs. Online training enables teachers from around the world to learn about inclusive teaching strategies without having to leave their workplaces. (Hajri, 2023).

Technology plays a crucial role in enhancing equal learning opportunities in Islamic education in several ways:

1. Elimination of Geographical and Physical Barriers: With online platforms, students are no longer limited by geographic location or the need for physical transportation to learn. Technology allows students

anywhere, whether in big cities or remote areas, to have equal access to Islamic education. Previously, access to quality Islamic educational institutions may have been restricted to certain regions, but now technology brings together students from various places on a single platform.

2. Provision of Learning Materials in Various Formats: Technology enables learning materials to be provided in different formats, such as text, audio, and video. This facilitates equal access to educational content for students with special needs or different learning styles. For instance, hearing-impaired students can access materials in text or videos with subtitles, while those who prefer auditory learning can listen to lectures or Quran recitations.

3. More Personal and Adaptive Learning: Technology allows for more personalized and adaptive learning, where content and teaching methods can be tailored to individual student needs. For example, AI-based e-learning systems can analyze student progress and provide materials or assignments suited to their level of understanding. This ensures that every student has the opportunity to develop at their own pace and ability, without comparing themselves to others.

4. Access to Learning Beyond Formal Hours: Technology enables students to learn anytime, not just during formal school hours. For those with time constraints, such as working children or those with family responsibilities, technology offers flexibility in learning. They can access lessons and educational materials outside of school hours whenever they have time.

5. Collaborative Platforms to Enhance Participation from Diverse Backgrounds: Online platforms also facilitate collaboration among students from various social, economic, and geographical backgrounds. They can interact with one another, share experiences, and learn in an inclusive environment that promotes equality and cooperation, in line with Islamic values (Hajri, 2023).

With technology, Islamic education becomes more inclusive and equitable, providing every individual with the opportunity to learn and grow according to their potential, without physical, economic, or social barriers. Technology also serves as an essential tool for disseminating Islamic values more broadly and evenly to the entire community.

D. Adaptive Learning in Islamic Education

Adaptive learning is an educational method in which the curriculum, teaching strategies, and assessments are tailored to the needs, abilities, and potential of individual students. In the context of Islamic education, adaptive

learning means that the teaching materials and approaches can be adjusted in the most effective way for each student. The main principle of adaptive learning is recognizing that each student has different learning styles, paces, and needs, so the methods applied must also be flexible and responsive (Widada, 2014).

Adaptive learning in Islamic education can include:

1. Adjustment of Memorization Methods: For example, visual learners can be supported with diagrams or charts to understand the tafsir of the Quran, while auditory learners may benefit more from listening.
2. Flexibility in Learning Materials: The curriculum can be tailored for students with special needs or different learning abilities, allowing them to achieve the same outcomes through various pathways (Nor et al., 2024).

With adaptive learning, Islamic education can be more responsive to the characteristics and potential of individual students, providing a more personalized and meaningful learning experience (Desi et al., 2024).

Artificial intelligence (AI) has played a crucial role in creating more personalized and effective adaptive learning in various educational institutions, including Islamic education. Here are some ways AI can be utilized in adaptive learning:

1. Analysis of Student Progress: AI can analyze student learning progress in real-time, such as quiz results, tests, or other learning activities. Based on this analysis, AI can provide immediate feedback and recommend learning materials suited to each student's abilities. For example, if a student is struggling with tajwid, AI can suggest additional practice or provide simpler guidance.
2. Content Personalization: AI can customize learning content according to the preferences or needs of students. This may involve adjusting the level of difficulty, the format of delivery (text, audio, video), or the types of exercises that best suit the student. In Islamic education, for instance, students who prefer auditory learning can be provided with audio-based lectures, teachings, or Quran memorization.
3. Learning at Student's Pace: AI enables learning that can adapt to the speed of individual students. Those who grasp the material quickly can move on to the next level without having to wait, while students who need more time can receive additional practice or explanations before progressing to the next concept.
4. More Targeted Teaching: AI can assist teachers in gaining a deeper understanding of student needs. Through data analysis, teachers can identify which areas are most challenging for students and design more targeted teaching strategies. This is particularly useful in Islamic

education, especially for complex subjects like Quranic tafsir or fiqh law (Tanjung & Suteki, 2024).

With the assistance of AI, learning becomes more personalized, interactive, and flexible, making it more effective in meeting the individual needs of students in Islamic educational institutions (Mustafa et al., 2024).

Traditional teaching methods in Islamic education, such as Quran memorization, hadith studies, and fiqh, can now be adapted with modern technology to create a more effective and efficient learning experience (Idawati & Hanifudin, 2024). Here are some examples of how traditional teaching methods can be integrated with modern technology:

1. Quran Memorization with Apps: Quran memorization is an essential classical learning method in Islamic education. Modern technology, such as Quran memorization apps, has simplified this process. Apps like Ayat, Quran Companion, or Memorize Quran for Kids provide features to help students review their memorization, track progress, and even correct reading mistakes using voice recognition technology. This creates a more interactive and flexible memorization experience, allowing students to practice whenever and wherever they choose.

2. Teaching Tajwid with AI: Teaching tajwid, the rules of Quran recitation, can now be supported by AI-based voice recognition technology. Apps like Tarteel help students read the Quran and receive instant feedback on mistakes in pronunciation or application of tajwid rules. This enables students to learn independently with technology that accurately detects reading errors.

3. Virtual Classes for Tafsir and Hadith: Teaching tafsir and hadith, which was previously conducted in face-to-face classroom settings, can now take place through virtual classes. Platforms like Zoom, Microsoft Teams, or Google Meet allow for direct interaction between teachers and students, including discussions, Q&A sessions, and tafsir presentations. This technology also fosters collaborative learning among students, even when they are in different locations.

4. E-Learning and Video Lessons for Fiqh: Fiqh education, which requires a deep understanding of Islamic laws, can now be accessed through e-learning platforms that provide video lessons, quizzes, and online discussions. This makes it easier for students to grasp complex concepts through visual explanations and examples of fiqh applications in everyday life.

5. Gamification in Islamic Education: Gamification technology, which involves incorporating game elements into learning, can be adapted for Islamic education materials. For instance, Quran memorization can be turned into an interactive challenge within an app that offers rewards

and achievements when students reach specific memorization targets. This increases student motivation while still adhering to traditional teaching methods (Hobir, 2023).

The adaptation of modern technology in classical Islamic teaching methods creates a more dynamic and adaptive learning experience, allowing Islamic education to remain relevant and effective in the digital age.

E. Strategies for Implementing Technology to Achieve Inclusive and Adaptive Learning

To achieve inclusive and adaptive learning through technology in Islamic education, comprehensive policies and strategic measures are necessary (Nisa & Aimah, 2024). Here are some strategies that can be implemented:

1. Development of Technology Infrastructure in Islamic Schools and Madrasahs: Governments and Islamic educational institutions need to invest in developing technology infrastructure. This includes providing reliable internet access, hardware (such as computers, tablets, or mobile devices), and technology systems that support online learning in Islamic schools. Adequate infrastructure development is a crucial first step to ensure that all students can engage in technology-based learning.

2. Teacher Training for Technology Literacy: One of the keys to successfully implementing technology in education is teacher readiness. Therefore, specialized training for teachers in digital literacy and the use of technology in teaching is essential. Teachers should be equipped with knowledge about relevant technological tools, how to integrate them into teaching, and how to use technology to create more inclusive and adaptive learning environments. This also includes skills in using e-learning platforms, educational apps, and digital assessment tools.

3. Development of Technology-Based Curriculum: The Islamic education curriculum should be adapted to integrate technology, both in terms of content and teaching methods. Technology-based learning, such as e-learning, the use of digital media, and technology-based evaluation methods, should be incorporated into the curriculum. The curriculum also needs to be designed flexibly, allowing for adjustments to materials based on students' needs and learning styles. In the context of Islam, educational materials like tajwid, Quran memorization, and fiqh studies can be adapted to be more interactive and easily accessible digitally.

4. Creation of Islamic-Based Online Learning Platforms: To support inclusive and adaptive learning, dedicated online learning platforms designed specifically to meet the needs of Islamic education are necessary. These platforms should include interactive learning materials, Quran memorization modules, tafsir studies, and digital fiqh

discussions. They should also provide resources for students with special needs, such as audio or video learning materials for the visually or hearing impaired.

5. Encouraging the Use of Technology for Evaluation and Feedback: The implementation of technology in Islamic education should extend beyond learning to include evaluation and feedback processes. Technology can be used to conduct more efficient and targeted assessments through online evaluation systems. Teachers can utilize learning data analysis to understand each student's individual progress and provide personalized feedback. This supports the creation of more adaptive learning environments.

6. Access to Education for Students in Remote Areas or with Special Needs: Technology has the potential to bridge the educational access gap, especially for students living in remote areas or with special needs. Inclusive strategies can be implemented by providing technological support for these students, such as access to digital materials, virtual classes, or specially designed devices. Inclusive education ensures that no student is left behind and that every individual has an equal opportunity to learn.

To effectively implement these strategies, collaboration among various stakeholders is crucial. Here are some forms of collaboration that can support a more inclusive and adaptive Islamic education:

1. Collaboration Between Government and Islamic Educational Institutions: The government should play an active role in providing policy support and funding for Islamic educational institutions that wish to adopt technology. This includes subsidies for technology infrastructure, teacher training, and the development of online learning platforms aligned with Islamic values. The government also needs to promote regulations that facilitate the use of technology in education, including student data protection and digital content standards.

2. Collaboration with Technology Developers: Technology developers can play a significant role in creating digital tools that meet the needs of Islamic education. Collaborations with developers may include the creation of Quran memorization apps, interactive learning platforms, and AI-based assessment systems that assist in personalizing learning. Developers can also partner with educational institutions to create technology solutions that can be used in madrasahs or Islamic schools at all levels.

3. Partnerships with Educational and Philanthropic Organizations: Non-governmental organizations and philanthropic institutions can support the implementation of technology in Islamic education through grant

programs, funding, or training initiatives. They can help provide educational access for underprivileged students or those in remote areas. These organizations can also offer scholarships or technological tools to schools in need.

4. Inter-Institutional Educational Collaboration: Islamic schools and madrasahs can collaborate to share technological resources, including learning platforms, digital educational materials, and best practices in technology usage. This collaboration allows for a collective improvement in educational quality while expanding access to quality education across various regions.

5. Development of Ethical Technology Policies in Islamic Education: In addition to technical development, this collaboration should also include the creation of ethical guidelines governing the use of technology in Islamic education. This ensures that technology is used wisely and in accordance with Islamic principles. These guidelines may encompass oversight of content, student data protection, and ethical conduct in digital interactions (Nopridarti, 2023).

With strong collaboration between the government, educational institutions, and technology developers, along with the implementation of appropriate policies, technology-based Islamic education can become more inclusive and adaptive, addressing modern challenges without compromising Islamic values (Diniati, 2024).

CONCLUSION AND IMPLICATION

Conclusion

This research highlights that technology has significant potential to enhance Islamic education by creating a more inclusive and adaptive learning environment. The integration of technology, such as e-learning platforms, mobile applications, and social media, can expand access to education and tailor the learning experience to meet individual student needs. The theoretical foundations of Islamic education relevant to technology indicate that moral, spiritual, and social principles can still be upheld even with the application of technology. However, to optimize the benefits of technology in Islamic education, careful and planned implementation is necessary. Key challenges include the digital divide, teacher readiness, and the need for clear policies and adequate training for educators.

Implication

The research findings on "The Foundation of Technology-Based Islamic Education: Towards Inclusive and Adaptive Learning" indicate that the application of technology in Islamic education has a significant impact on

achieving more inclusive and responsive educational goals. By integrating technology, Islamic educational institutions can overcome geographical and social barriers, providing broader access for students from diverse backgrounds. This not only enriches the learning experience but also ensures that the education provided can be tailored to the individual needs and abilities of students. The implications of this research also highlight the necessity for the development of flexible curricula and training for educators to effectively utilize technology, thereby creating a more adaptive learning environment. Additionally, these findings can encourage policymakers to formulate strategies that support the integration of technology in Islamic education, ensuring that Islamic values are preserved while addressing modern challenges. Consequently, this research provides a strong foundation for the development of more inclusive and adaptive Islamic education in the digital age.

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