

## CHALLENGES OF IMPLEMENTING DIGITAL TECHNOLOGY IN ISLAMIC EDUCATION: UTILIZING INNOVATION TO IMPROVE THE QUALITY OF LEARNING

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### ABSTRACT

*This research aims to identify challenges in implementing digital technology in the context of Islamic education and to explore how innovation can be used to improve the quality of learning. The research method used is a descriptive qualitative study based on literature study and using content analysis. Library research (Library Research) is consistent with the problems discussed in operational procedures, collecting, reading, studying, analyzing, interpreting and determining conclusions from data information that is in accordance with the discussion. The research results show that the main challenges in implementing digital technology in Islamic education include the availability of adequate infrastructure, the right curriculum approach, and the integration of Islamic values with technological content. On the other hand, innovations such as the development of educational applications based on Islamic values and intensive training for teachers can increase the effectiveness of digital learning in the context of Islamic education. These findings provide an important contribution to the development of educational strategies that are in accordance with Islamic values and make optimal use of digital technology.*

**Keywords :** *Challenges, Digital Technology, Islamic Education.*

### A. Introduction

Digital technology will continue to develop. In the future, the development of this technology will be influenced by three things, namely digital transition, network convergence, and digital infrastructure. Network convergence is the efficiency and effectiveness of communication networks that can be used such as telephone, video and communications both at home and in companies. As the need for network

convergence increases, technology will change towards this need (Danuri, 2019).

Islamic education as an integral part of the global education system cannot be separated from the influence of digital technology which is increasingly developing rapidly. This technological development provides both challenges and opportunities for the implementation of learning in Islamic educational institutions. In the current context of globalization and digital transformation, the use of digital technology has become a necessity to improve the quality of learning and prepare a generation of Muslims who are competent and relevant in the modern era, (Nudin, 2020).

Various digital technology innovations, such as online learning applications, e-learning, augmented reality (AR), and virtual reality (VR), offer great potential to change conventional learning paradigms to become more dynamic, interactive, and affordable. However, its implementation is not without challenges. Factors such as the availability of adequate technological infrastructure, limited accessibility, and challenges in integrating Islamic values in a technological context also need to be taken seriously.

Technological developments, especially information and communication technology, offer various roles of technology in improving the quality of education. The teaching technique carried out by a teacher using information technology media is a teaching system that utilizes computer hardware and software in the learning system that will be provided.

The rapid development of technology has brought major changes in areas of life, including education. The development of digital technology has influenced changes in the education system, where the previous education system only focused on books and was fixated on rote

memorization which was too monotonous. So learning looks boring for students. Learning is mostly teacher-centered. Today's learning can utilize technology so that students' senses can be used holistically, learning can accommodate students' various learning abilities so that learning outcomes will also improve (Ambarwati et al., 2022) .

In the literature review, various studies have highlighted the benefits and challenges of implementing digital technology in the context of Islamic education. These studies suggest that digital technology can expand access to Islamic learning, improve the quality of teaching and learning, and better prepare the young generation of Muslims to face the complexity of global challenges.

It is hoped that this research can provide practical guidance for Islamic educational institutions in utilizing technological innovation to increase the effectiveness of learning and ensure that Islamic values are maintained in the educational process which continues to develop.

Thus, this article aims to investigate the various challenges faced in implementing digital technology in Islamic education, reviewing relevant literature, and exploring the important benefits of integrating digital technology in an effort to improve the quality of learning in Islamic educational institutions..

## **B. Method**

The method used in this research is library research or library study. This research aims to explore and analyze various literature, scientific articles, books, research reports and other related documents that are relevant to the challenges of implementing digital technology in Islamic education, especially in the context of utilizing innovation to improve the quality of learning .

Library research is a study used to collect information and data with the help of various kinds of materials available in libraries such as documents, books, magazines, historical stories, etc. (Mardalis : 1999 ). Literature research is a theoretical study, references and other scientific literature related to culture, values and norms that develop in the social situation being studied, (Sari, 2020) .

The steps taken in this research were scope identification, data collection, source selection, data analysis, interpretation and conclusions. This type of library study has been widely implemented into educational research. Even though library research was not fully carried out as stated previously, the sources used were limited to data obtained from analysis of books or journals that were suitable to be used as references (Sari & Asmendri, 2020)

The validity of the data in this library research study is checked by considering strict inclusion criteria in literature selection, including accuracy of information, relevance to the research topic, as well as the methodology or analytical approach used in each source selected.

Data analysis was carried out by identifying main themes, trends and significant findings from the literature that had been collected. This approach involves the synthesis of information from various sources to provide a comprehensive picture of the challenges and solutions in the application of digital technology in Islamic education..

### **C. Results And Discussion**

#### **Challenges in Implementing Digital Technology**

Technological progress which is developing very rapidly has indirectly influenced all aspects of human life, both in the fields of politics, economics, culture, even in the field of education. Technological

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progress is something that we cannot avoid in modern times like today, because The more advanced science is, the more advanced technological development will be (Akbar & Noviani, 2019)

The main challenges faced in implementing digital technology in Islamic education are limited infrastructure, limited accessibility of technology in a conservative environment, and challenges in integrating technology with traditional Islamic values. Inadequate infrastructure such as unstable internet connections and lack of access to digital devices are significant obstacles in implementing digital technology in the learning process, (Yahya, 2024) , Davis (1989) states that the acceptance and use of technology is influenced by factors such as perceptions about the ease of use and usefulness of the technology. The first challenge is the availability of adequate technological infrastructure, including stable internet access and adequate hardware in Islamic educational institutions. According to the Diffusion of Innovations theory by Rogers, the availability of infrastructure is a key factor in technology adoption. Lack of access can hinder the adoption of digital technology in Islamic education. Solutions include investment in better infrastructure and subsidies for students from low economic backgrounds (Pradana, 2015)

Limited technological infrastructure also affects teachers' ability to implement technology-based learning. The lack of digital devices such as computers and tablets, as well as the lack of technical support, makes it difficult for teachers to integrate technology in the learning process. As a result, the potential of digital technology to increase the effectiveness and interactivity of learning cannot be realized properly. To overcome this problem, collaborative efforts are needed between the government, educational institutions and the private sector to improve technological infrastructure in remote areas, so that all students have equal access to

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quality education (Surachman et al., 2024) .

In this way, what must be done is that educational institutions can invest in better infrastructure. Furthermore, providing subsidies for students from low economic backgrounds, and collaboration between the government, educational institutions and the private sector.

Furthermore, the challenge faced in implementing digital technology in Islamic education is the right curriculum approach, we must create a curriculum that combines digital technology with traditional subjects effectively and relevantly. According to Constructivist Learning Theory , effective learning builds knowledge based on experience and interaction with the environment. Curricula that integrate technology should be designed to stimulate students' critical thinking, collaboration, and creativity. This requires deep thinking about how technology can be used to enrich and enhance the learning experience, (Masgumelar, 2021) .

From the challenges above, we can develop a technology-based curriculum that is in line with Islamic values, train teachers in integrating digital technology in learning, and provide quality and easily accessible digital learning resources.

Apart from appropriate infrastructure and curriculum, it must also be ensured that the digital technology used and the content delivered is in accordance with Islamic values and ethical principles. Effective learning considers social context and cultural values. In the context of Islamic education, technology must be selected and used with attention to sensitivity to Islamic religious and ethical values. What must be done to face these challenges is to choose and use technology that is in accordance with Islamic values, develop digital educational content that contains Islamic values and implement strict data security protocols to protect student privacy.

By overcoming these challenges, the application of digital technology

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in Islamic education can be optimized to improve the quality of learning and produce the nation's next generation who are knowledgeable and have noble character.

#### Innovative Application Of Digital Technology In Islamic Education

The following are several innovations in the application of digital technology in Islamic education:

##### E-Learning

E-learning is one of the biggest innovations in education, including Islamic education. Platforms such as Google Classroom, Moodle, and Edmodo can be used by Islamic educational institutions to provide teaching materials, assignments, and exams online. This allows students to study anywhere and at any time, and provides flexibility in the learning process.

##### Mobile application

Many mobile applications have been developed specifically for Islamic education. For example, an application that provides a digital Al-Quran with translation and interpretation, a daily prayer application, and an Arabic learning application. This application helps students to learn and memorize in an easier and interactive way.

##### Use of multimedia

An example of using multimedia in learning is: Learning videos are an effective tool for conveying lesson material in a more interesting way. Videos can be used to explain religious concepts, Islamic history, stories of the prophets, and so on. Platforms such as YouTube have become a major source for Islamic educational video content.

##### Virtual Reality (VR) and Augmented Reality (AR)

VR and AR offer exciting new ways to learn about Islamic history and culture. For example, students can use VR to make virtual "visits" to historical Islamic sites such as Mecca, Medina, or Al-Aqsa. This provides a

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deep and immersive experience that is difficult to achieve with traditional methods. AR can be used to create interactive simulations that help students understand certain concepts. For example, interactive simulations for learning how to pray, ablution or Hajj. This allows students to learn in a practical and hands-on way .

#### Collaborative Learning

An example of collaborative learning is an online discussion forum which allows students to interact and discuss religious topics. This could be a forum within an e-learning platform or social media managed by an educational institution. This discussion helps students to share knowledge and views with each other.

#### School Administration Management

An example of innovation in school administration management is the School Management Information System (SIMS) which can be used to manage student data, lesson schedules, grades and attendance. This makes it easier to manage school administration and ensures all information is available quickly and accurately. Furthermore, digital technology allows better communication between schools and parents. For example, through a mobile application or web portal, parents can monitor their child's academic progress, get information about school activities, and communicate with teachers.

### D. Conclusion

The application of digital technology in Islamic education has many opportunities to improve the quality of learning. By overcoming challenges and utilizing available innovations, Islamic education can produce the nation's next generation who are knowledgeable and have noble character.

The challenges in implementing digital technology are limited infrastructure, an appropriate curriculum approach, and the integration of Islamic values with technological content. And several innovations in the application of digital technology in Islamic education are, E-Learning, mobile applications, the use of multimedia, virtual reality (VR) and Augmented Reality (AR), collaborative learning and school administration management.

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