

## **RESOLUTION FOR THE DEVELOPMENT OF CONTEMPORARY ISLAMIC BOARDING SCHOOLS IN RESPONDING TO THE CHALLENGES OF THE DIGITAL ERA**

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**Abstract:** Islamic boarding schools (*pondok pesantren*), as educational institutions that have played a significant role in the history of education in Indonesia, are currently facing various challenges arising from the rapid development of the digital era. Advances in information technology, cultural globalization, changing communication patterns, and the increasing demand for 21st-century competencies require pesantren to adapt while maintaining the Islamic values that form their identity. This article aims to analyze the challenges faced by contemporary pesantren and to formulate development strategies that can be implemented to address these challenges. The study employs a library research method by examining various literature related to pesantren education and digital transformation. The findings indicate that the development of pesantren requires the integration of digital technology into learning processes, the enhancement of digital literacy, the strengthening of curricula that combine Islamic studies with modern sciences, the improvement of human resource quality, the reinforcement of religious moderation, and the development of technology-based economic independence. Furthermore, a culture of research and innovation needs to be fostered to enhance the competitiveness of pesantren. Sustainable transformation will enable pesantren to remain relevant, excellent, and competitive in the future.

**Keywords:** Islamic Boarding School (*Pondok Pesantren*); Digital Era; Islamic Education Transformation; Digital Literacy; Pesantren Development.

## 1. INTRODUCTION

Islamic boarding schools (*pondok pesantren*) are the oldest Islamic educational institutions in Indonesia and have played a significant role in the transmission of knowledge, character building, and the development of the socio-religious life of society. The existence of pesantren serves not only as centers of Islamic education but also as institutions that contribute to the formation of the nation's cultural and moral identity. Throughout their historical development, pesantren have demonstrated a remarkable ability to adapt to social changes without abandoning the fundamental values that constitute the foundation of their existence (Azra, 2019).

In the digital era, pesantren face increasingly complex challenges. The rapid development of information and communication technology has transformed nearly every aspect of human life, including educational systems. Digitalization offers numerous opportunities for improving learning processes, expanding access to information, and broadening scholarly networks. However, it also presents challenges, such as the spread of unverified information, moral degradation resulting from uncontrolled use of digital media, and the emergence of various religious ideologies disseminated through cyberspace (Mastuhu, 1994).

These changes require pesantren to undergo transformation in order to maintain their relevance and existence within the dynamics of modern society. Pesantren can no longer focus solely on teaching classical Islamic texts (*kitab kuning*) and traditional Islamic sciences. They must also develop digital literacy, utilize educational technologies, and equip students with knowledge and skills relevant to the demands of the twenty-first century. According to Azyumardi Azra, the modernization of Islamic education is an inevitable necessity to enhance the quality of Muslim human resources, enabling them to compete in a globalized society while preserving their Islamic identity (Azra, 2012).

Another challenge faced by pesantren is technological disruption, which has significantly influenced the learning patterns of younger generations. The emergence of artificial intelligence (AI),

social media, and various digital platforms has transformed the way students acquire information and knowledge. This situation requires pesantren not only to become consumers of technology but also to utilize it as an instrument for education, religious propagation (*da'wah*), and community empowerment. Therefore, strengthening digital literacy has become an unavoidable necessity in the development of contemporary pesantren (Qomar, 2005).

According to Abuddin Nata (2020), beyond technological aspects, pesantren are also expected to reinforce their role as institutions for character formation and guardians of religious moderation. Amid increasing social polarization and the spread of extremist religious ideologies in digital spaces, pesantren bear a strategic responsibility to instill moderate, tolerant, and *rahmatan lil-'alamin* (a mercy to all creation) Islamic values (Nata, 2020). This role becomes increasingly important considering that pesantren have long been recognized as institutions capable of integrating religious education with national values and local wisdom.

In this context, a comprehensive development resolution for Islamic boarding schools is required to address the challenges of the digital era effectively. Such a resolution should include the integration of technology into learning processes, the enhancement of human resource capacities, the development of adaptive curricula, the promotion of technology-based economic independence, and the strengthening of research and innovation cultures. These efforts are expected to transform pesantren into Islamic educational institutions that not only preserve classical scholarly traditions but also adapt to contemporary developments and contribute to the advancement of modern civilization.

Based on the foregoing discussion, this article aims to analyze the various challenges faced by contemporary Islamic boarding schools in the digital era and to formulate development strategies and resolutions that can be implemented to enhance the competitiveness and relevance of pesantren in responding to ongoing social and technological transformations.

## 2. METHOD

### a. Research Method

This study employs a qualitative approach using a library research method. This method is conducted through the exploration, collection, review, and analysis of various written sources relevant to the focus of the study. The selection of library research is based on the need to gain a comprehensive understanding of concepts and theories concerning the development of contemporary Islamic boarding schools (*pondok pesantren*) in responding to the challenges of the digital era through various scholarly references, including books, journal articles, previous research findings, and policy documents related to Islamic education and digital transformation (Zed, 2018).

The research data are derived from both primary and secondary sources. Primary sources consist of key literature discussing *pesantren* education, the modernization of Islamic education, and the institutional transformation of *pesantren*. Meanwhile, secondary sources include scientific journals, conference proceedings, research reports, as well as regulations and official documents related to the development of *pesantren* in the digital age (Sugiyono, 2021).

### b. Research Approach

According to Lexy J. Moleong (2018), this study utilizes a descriptive-analytical approach. The descriptive approach is employed to portray the current condition of contemporary Islamic boarding schools and the various challenges arising from the rapid advancement of digital technology. The analytical approach, on the other hand, is used to examine and evaluate strategies that can be implemented to improve educational quality, governance effectiveness, and the competitiveness of *pesantren* amid the continuous development of information and communication technologies (Moleong, 2018).

### c. Data Collection Technique

Data collection was conducted through documentation studies by reviewing various literature relevant to the research topic. This process involved the identification, inventory, and critical examination of sources discussing pesantren, educational digitalization, digital literacy, religious moderation, and innovation in Islamic education. The collected data were subsequently categorized according to specific themes based on the requirements of the analysis (Bungin, 2015).

#### **d. Data Analysis Technique**

Data analysis was carried out using content analysis, a method aimed at understanding, interpreting, and classifying information obtained from various library sources. The stages of analysis included data reduction, data presentation, interpretation of findings, and conclusion drawing. Through these stages, the study seeks to provide a comprehensive understanding of development strategies for contemporary Islamic boarding schools that maintain Islamic values while simultaneously adapting to the demands and dynamics of the digital era (Sukmadinata, 2017).

### 3. RESULTS

#### a. Challenges of Contemporary Islamic Boarding Schools in the Digital Era

According to Abuddin Nata (2020), the advancement of information and communication technology has created significant transformations in various aspects of life, including the educational sector. The digital era is characterized by the rapid development of the internet, social media, artificial intelligence (AI), and various digital platforms that enable people to access information quickly and easily. These changes have had a broad impact on educational systems, including Islamic boarding schools (*pondok pesantren*), which have long played an important role in shaping the character, morality, and intellectual capacity of the Muslim community. In responding to this reality, pesantren are required to adapt to contemporary developments without neglecting the Islamic values and traditions that constitute their identity and primary strength (Nata, 2020).

One of the major challenges faced by pesantren in the digital era is the overwhelming amount of information circulating through the internet and social media. Easy access to various information sources provides opportunities for students (*santri*) to broaden their knowledge in both Islamic studies and general sciences. However, the digital sphere has also become a medium for disseminating information that is not always accurate or accountable. Fake news (hoaxes), hate speech, disinformation, and content promoting radical and intolerant ideologies constitute serious challenges that must be anticipated. Therefore, strengthening digital literacy has become a fundamental necessity to equip santri with the ability to analyze, evaluate, and verify information critically before accepting or disseminating it (Nata, 2020).

Technological changes have also affected patterns of social interaction within society. The emergence of social media and various digital communication applications has shifted much human interaction from physical spaces to virtual environments. This condition has influenced life within pesantren, which have traditionally been characterized by communal values, deliberation (*musyawarah*), mutual cooperation (*gotong royong*), and respect for

religious leaders (*kiai*) and teachers. If not managed properly, excessive use of technology may encourage individualistic tendencies and reduce the intensity of social relationships among members of the pesantren community. Therefore, a balanced approach is required between the utilization of digital technology and the preservation of the social values that distinguish pesantren education (Dhofier, 2011).

Furthermore, globalization and the development of the modern labor market demand improvements in the quality of human resources produced by pesantren. In the era of the Fourth Industrial Revolution (Industry 4.0) and Society 5.0, graduates are expected not only to possess religious knowledge but also to demonstrate critical thinking, communication skills, creativity, collaboration, and technological competence. This situation requires pesantren to innovate in curriculum development, teaching methods, and educational systems in order to produce competitive graduates without sacrificing their religious character. The modernization of Islamic education therefore becomes an important step in ensuring that pesantren remain capable of responding to the evolving needs of society (Azra, 2012).

Another challenge is the increasingly open digital space as an arena for the dissemination of diverse religious ideologies and perspectives. Through social media and other digital platforms, various groups can freely spread their religious views to a broad audience. This situation poses a threat when santri are exposed to exclusive, intolerant, or even radical interpretations of religion. Consequently, pesantren have a strategic role in strengthening religious moderation by instilling the values of *tawasuth* (moderation), *tasamuh* (tolerance), *tawazun* (balance), and *i'tidal* (justice). Through the reinforcement of these values, pesantren can become a leading force in maintaining social harmony and strengthening national unity amid Indonesia's diverse society (Kementerian Agama Republik Indonesia, 2019).

In addition to educational and ideological issues, pesantren also face challenges related to institutional strengthening and economic self-reliance. Digital transformation has altered economic activities, making them increasingly dependent on technology. Nevertheless, many pesantren still face limitations in

technological infrastructure, human resource competencies, and managerial capacity. As a result, the process of digitalization within pesantren has not yet been implemented optimally. In fact, digital technology can be utilized to develop productive economic ventures such as e-commerce businesses, digital marketing, creative industries, and entrepreneurial programs for santri. Strengthening the economic independence of pesantren is therefore essential to supporting sustainable education and community empowerment (Mastuhu, 1994).

Overall, the challenges faced by Islamic boarding schools in the digital era encompass technological, social, cultural, educational, ideological, and economic dimensions. The complexity of these challenges requires strategic, well-planned, and sustainable measures to enable pesantren to capitalize on available opportunities while mitigating the risks associated with technological advancement. In this way, pesantren can continue to maintain their existence as adaptive, innovative, and relevant Islamic educational institutions capable of meeting the needs of modern society (Qomar, 2005).

#### **b. Digital Transformation in the Pesantren Educational System**

Digital transformation within the pesantren educational environment is a process of reform that involves the utilization of information and communication technology to support various aspects of educational administration. This process is not merely related to the use of digital devices as learning tools but also encompasses changes in mindset, organizational culture, management systems, institutional governance, and the relationships between educators and learners. In the context of modern society, digital transformation has become an unavoidable necessity, as the advancement of the Fourth Industrial Revolution (Industry 4.0) and Society 5.0 has positioned technology as an inseparable part of human life.

As Islamic educational institutions with a long historical tradition in Indonesia, pesantren possess unique characteristics that distinguish them from other educational institutions. These distinctive features can be seen in the close relationship between *kiai* and *santri*, the tradition of studying classical Islamic texts (*kitab*

*kuning*), and the formation of character through a residential educational system. Nevertheless, social changes and technological developments require pesantren to adapt in order to remain capable of addressing contemporary societal needs without abandoning the Islamic identity and values that constitute their foundation. As emphasized by Azyumardi Azra, the modernization of Islamic education should be directed toward integrating Islamic intellectual traditions with scientific and technological advancements in order to produce generations who excel academically while maintaining strong moral character.

The implementation of digital transformation in pesantren can be realized through the development of various technology-based learning systems. The utilization of virtual classrooms, digital libraries, Learning Management Systems (LMS), and interactive learning media provides opportunities to enhance the effectiveness and efficiency of educational processes. The presence of technology also enables santri to gain broader access to sources of knowledge, ranging from classical Islamic literature to modern academic references available online. Consequently, learning processes no longer depend solely on conventional sources but can be strengthened through various credible and easily accessible digital resources.

In addition to influencing learning activities, digitalization also affects the management and governance systems of pesantren. Various administrative activities that were previously conducted manually can be integrated into more effective and efficient digital systems. Student data management, financial administration, academic systems, and communication between pesantren administrators and parents can all be managed more quickly and accurately through information technology. According to Mujamil Qomar, the modernization of pesantren must include reforms in institutional management to improve the quality of educational services and strengthen institutional competitiveness amid increasingly dynamic social developments.

The utilization of digital technology also creates broader opportunities for pesantren to establish collaborative networks with educational institutions, government agencies, community organizations, and international institutions. Through digital

platforms, pesantren can participate in academic activities such as seminars, training programs, conferences, and scientific discussion forums that contribute to the improvement of human resource quality. Therefore, digitalization functions not only as a learning instrument but also as a means of sustainable institutional capacity development.

Despite its numerous benefits, the process of digital transformation in pesantren faces several challenges. One of the primary obstacles is the limited technological infrastructure, particularly in pesantren located in rural or remote areas. Inadequate internet access, insufficient technological equipment, and limited financial support often hinder the optimal implementation of digitalization programs. Furthermore, disparities in digital competencies among educators continue to limit the effective integration of technology into teaching and learning activities.

Another challenge concerns the negative impacts that may arise from the uncontrolled use of digital technology. Open access to information may increase the risk of exposure to hoaxes, inappropriate content that conflicts with Islamic educational values, social media addiction, and the spread of religious ideologies that tend toward extremism and contradict the principles of religious moderation. Therefore, digital transformation must be accompanied by strengthened digital literacy and character education to ensure that santri can utilize technology intelligently, critically, and responsibly.

From the perspective of Islamic education, digitalization is not intended to replace the traditional educational system that has long developed within pesantren. Instead, technology should be positioned as a tool to enhance educational quality and expand access to diverse sources of knowledge. The traditions of studying classical Islamic texts, moral development, and the close relationship between *kiai* and *santri* must remain the core elements preserved within pesantren education. Therefore, technological adoption should be implemented selectively and proportionally according to the needs and characteristics of each pesantren.

The principle of *al-mubafaẓhab 'ala al-qadim al-shalih wa al-akhdzu bi al-jadid al-aslah* (preserving valuable traditions while adopting beneficial innovations) serves as a highly relevant philosophical foundation for this process. This principle emphasizes the importance of maintaining traditions that have proven beneficial while embracing innovations that bring greater benefits and public welfare. In the context of pesantren education, digital transformation should be directed toward strengthening educational, religious propagation (*da'wah*), and community empowerment functions without undermining the Islamic identity that distinguishes pesantren.

Therefore, digital transformation represents a strategic step toward enhancing the quality and competitiveness of pesantren education in the modern era. The success of this process requires adequate infrastructure, improved digital competencies among educators, strengthened digital literacy among santri, and the commitment of all stakeholders to developing pesantren that are adaptive, innovative, and firmly grounded in Islamic values. Through a balanced approach that combines the preservation of tradition with the acceptance of innovation, pesantren are expected to maintain their existence as outstanding and relevant Islamic educational institutions in the face of digital-era challenges.

### **c. Strengthening Digital Literacy for Students and Educators**

The rapid advancement of information and communication technology has brought significant changes in the way people access, process, and disseminate information. In the field of education, this phenomenon has accelerated digital transformation, creating both opportunities and challenges. Consequently, individuals are required to possess adequate digital literacy skills to navigate the complexities of contemporary society. Digital literacy is not merely the ability to operate technological devices; it also encompasses the capacity to access, understand, analyze, evaluate, and utilize digital information critically, ethically, and responsibly. Therefore, strengthening digital literacy has become an essential component in the development of contemporary Islamic boarding schools (*pondok pesantren*) in the digital era.

For *santri* (Islamic boarding school students), digital literacy serves a strategic function in supporting learning processes and broadening intellectual horizons. Through digital technology, students can access a wide range of knowledge resources, including classical Islamic texts in digital formats, academic journals, electronic books, and various online learning platforms. The increasing availability of information enables students to gain broader insights than those offered by conventional learning methods alone. However, this accessibility also presents challenges, such as the proliferation of unverified information, fake news, hate speech, and content that contradicts religious and ethical values. Consequently, critical thinking and selective judgment have become indispensable aspects of digital literacy development within *pesantren* environments (Gilster, 1997).

In addition to supporting academic achievement, digital literacy contributes significantly to the development of students' character and adaptability in a rapidly changing world. Today's generation lives in an environment where interaction with digital technology occurs almost continuously. Under these circumstances, *pesantren* play an important role in guiding students to use technology productively, creatively, and responsibly. Educational programs addressing digital ethics, cybersecurity, personal data protection, and the social implications of technology use should become integral components of *pesantren* education. In this way, students can evolve not only into consumers of information but also into responsible producers of knowledge and content that benefit society.

The success of digital transformation within *pesantren* is also highly dependent upon the capacity of educators. Teachers, *ustaz*, and educational administrators are required to possess sufficient digital competencies to effectively integrate technology into teaching and learning activities. These competencies include the ability to utilize online learning platforms, develop digital teaching materials, employ interactive educational media, and conduct technology-based assessments. According to Abuddin Nata (2020), technological advancements necessitate continuous innovation in teaching methodologies so that educators can effectively respond to the needs of learners in the digital age (Nata, 2020).

Efforts to improve digital literacy among educators can be undertaken through sustainable professional development programs. Training in educational technology, workshops on digital learning media development, and mentoring in the use of learning applications are among the initiatives that can enhance educators' digital competencies. Through such programs, educators are expected to utilize technology effectively as a means of improving educational quality and expanding access to knowledge resources.

Furthermore, digital literacy is closely related to the promotion of religious moderation within pesantren. The expansion of digital media has created vast opportunities for the dissemination of diverse religious perspectives and interpretations. However, not all religious information available online originates from credible and accountable sources. Without adequate digital literacy skills, students may become vulnerable to religious content that promotes intolerance, radicalism, or extremism. Therefore, digital literacy initiatives should be directed toward enhancing students' ability to understand, analyze, and evaluate religious information objectively and moderately. The Ministry of Religious Affairs of the Republic of Indonesia has emphasized that digital literacy is an important instrument in strengthening religious moderation and preventing the spread of extremist ideologies in digital spaces.

The strengthening of digital literacy can also foster a more dynamic academic culture within pesantren. Through information technology, students and educators can access scientific references, participate in online seminars and training programs, engage in academic discussion forums, and produce high-quality scholarly works. This demonstrates that digital technology can serve as an effective medium for increasing intellectual productivity and expanding academic networks among pesantren communities.

Nevertheless, the implementation of digital literacy programs within pesantren continues to face several obstacles. Limited technological infrastructure, unequal internet access, insufficient digital devices, and the relatively low technological competencies of some educators remain significant challenges. Therefore, collaboration among government institutions,

educational organizations, local communities, and other stakeholders is necessary to support the development of digital infrastructure and the enhancement of human resource quality within pesantren environments.

In conclusion, strengthening digital literacy for both students and educators is a strategic necessity in the development of contemporary pesantren. By equipping students and teachers with the competencies required to navigate digital environments critically, ethically, and responsibly, pesantren can maximize the benefits of technological advancement while minimizing its potential risks. Such efforts will enable pesantren to maintain their relevance as Islamic educational institutions that are adaptive, innovative, and capable of preparing future generations to face the challenges of the digital age while remaining firmly grounded in Islamic values.

#### **d. Integration of Islamic Curriculum and Modern Scientific Knowledge**

The integration of Islamic curriculum and modern scientific knowledge is one of the most important strategies in the development of contemporary Islamic boarding schools (*pondok pesantren*) in the digital era. This integration aims to eliminate the dichotomy between religious sciences and secular sciences that continues to exist in some Islamic educational systems. Fundamentally, Islam views all forms of knowledge as part of humanity's endeavor to understand the signs of Allah's greatness manifested throughout life and the universe. Therefore, religious knowledge and modern science should not be regarded as opposing domains; rather, they should be harmoniously integrated within educational systems to produce individuals who excel intellectually, spiritually, and socially.

In the context of pesantren, curriculum integration has become increasingly urgent due to rapid societal changes and growing public expectations regarding the quality of graduates. Pesantren are no longer expected solely to produce graduates who possess expertise in Islamic sciences such as *fiqh* (Islamic jurisprudence), *tafsir* (Qur'anic exegesis), *hadith* (Prophetic traditions), *aqidah* (Islamic creed), and *tasawuf* (Islamic spirituality).

They are also expected to cultivate individuals who are competent in science, technology, economics, communication, and various other disciplines. Through such integration, pesantren graduates can actively contribute to diverse sectors of society while maintaining their Islamic identity (Azra, 2012).

The concept of knowledge integration has strong foundations within the Islamic intellectual tradition. During the golden age of Islamic civilization, Muslim scholars did not strictly separate religious and worldly sciences. Renowned figures such as Al-Ghazali, Ibn Sina, and Ibn Khaldun developed various branches of knowledge that combined Islamic values with scientific inquiry. Their intellectual legacy demonstrates that Islam embraces a comprehensive and inclusive perspective toward scientific and technological advancement. This historical experience provides a strong justification for contemporary efforts to integrate Islamic and modern knowledge within pesantren education (Al-Attas, 2011).

The implementation of curriculum integration in pesantren can be realized through the development of learning materials that connect Islamic teachings with modern disciplines. For example, science education can be linked to Qur'anic verses that discuss natural phenomena, while economics courses can incorporate the principles of Islamic economics and finance. Such an approach enables students to understand that modern scientific knowledge is not contrary to Islamic teachings but can serve as a means of strengthening faith and promoting the welfare of society.

Moreover, interdisciplinary learning approaches can be introduced to encourage students to examine contemporary issues from both religious and scientific perspectives. Topics such as environmental sustainability, biotechnology, digital ethics, artificial intelligence, and economic development can be explored through an integrated framework that combines Islamic ethical values with scientific reasoning. This approach helps students develop comprehensive perspectives and equips them to address complex challenges in contemporary society.

The integration of curriculum also contributes to the development of essential twenty-first-century competencies. In

addition to mastering religious sciences, students are encouraged to develop critical thinking, problem-solving abilities, creativity, collaboration, and communication skills. These competencies are increasingly important in a globalized and technology-driven world. Through an integrated curriculum, pesantren can prepare graduates who are not only knowledgeable in Islamic teachings but also capable of competing and contributing effectively in various professional and academic fields.

Despite its importance, the implementation of curriculum integration continues to face several challenges. One major obstacle is the limited availability of human resources who possess expertise in both Islamic sciences and modern academic disciplines. Additionally, some educational stakeholders still perceive religious and secular sciences as separate domains. Such perspectives may hinder efforts to develop truly integrative curricula. Consequently, institutional commitment, professional development for educators, and the design of adaptive and contextual curricula are essential for ensuring the successful implementation of knowledge integration.

From the perspective of Islamic education, curriculum integration represents an effort to achieve holistic educational objectives. These objectives include the formation of individuals who are faithful, knowledgeable, morally upright, and capable of contributing positively to society. Curriculum integration is also consistent with the principle of *al-mubafazhah 'ala al-qadim al-shalih wa al-akhdzu bi al-jadid al-aslah*—preserving beneficial traditions while embracing innovations that bring greater benefit. Through this approach, pesantren can maintain their Islamic identity while simultaneously responding to the demands of scientific and technological advancement.

Furthermore, curriculum integration can strengthen the role of pesantren as centers of intellectual and social transformation. By combining Islamic values with modern scientific perspectives, pesantren can contribute to the development of solutions for contemporary societal issues, including poverty, environmental degradation, social inequality, and ethical challenges arising from technological progress. Such contributions reinforce the relevance of pesantren as institutions

that not only preserve religious traditions but also actively participate in the advancement of civilization.

Therefore, the integration of Islamic curriculum and modern scientific knowledge should become a strategic priority in the development of contemporary pesantren. Through systematic and sustainable integration efforts, pesantren can produce a generation of Muslims characterized by spiritual depth, broad scientific knowledge, professional competence, and readiness to face the challenges of the digital era and globalization. Ultimately, this integration will strengthen the role of pesantren as dynamic Islamic educational institutions capable of preserving tradition while embracing innovation for the benefit of society.

#### 4. CONCLUSION

The development of digital technology has brought about extensive transformations in various aspects of life, including the implementation of Islamic education within Islamic boarding schools (*pondok pesantren*). As Islamic educational institutions with a long history and a significant role in shaping the character and morality of society, pesantren are currently facing increasingly complex challenges. These challenges include the rapid flow of information through digital media, changes in communication patterns and social interactions, intensified global competition, the spread of diverse religious ideologies in cyberspace, and the growing demand for human resources capable of adapting to technological advancements. This situation requires pesantren to continuously undertake reforms and adjustments while preserving the Islamic values and traditions that constitute their distinctive identity.

Based on the findings of this study, the development of pesantren in the contemporary era can be pursued through several strategic measures, including the implementation of digitalization in learning processes and institutional management, the enhancement of digital literacy competencies among students and educators, the integration of Islamic sciences with modern science and technology, the strengthening of religious moderation in digital spaces, the development of technology-based economic self-reliance, and the promotion of research and innovation cultures. These strategies are expected not only to improve the quality of pesantren education but

also to strengthen the capacity of graduates to compete effectively in an increasingly dynamic global society.

Therefore, the success of pesantren in responding to the challenges of the digital era largely depends on their ability to balance the preservation of Islamic traditions with the adoption of modern innovations. The principle of *al-mubafazhah 'ala al-qadim al-shalih wa al-akhdzu bi al-jadid al-ashlah* (preserving valuable traditions while adopting beneficial innovations) remains highly relevant as a philosophical foundation for this transformation process. By embracing an adaptive, creative, and welfare-oriented approach, pesantren are expected to maintain their role as centers of Islamic education, character formation, and civilizational development that are responsive to contemporary demands and capable of contributing to national progress in the digital age.

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