

# BRIDGING TRADITIONS AND TECHNOLOGY: DIGITAL TRANSFORMATION IN INDONESIAN ISLAMIC BOARDING SCHOOLS (GONTOR AND LIRBOYO)

Nurwahidin<sup>1</sup>  
Mohammad Izdiyan Mutaqin<sup>2</sup>  
S Salahudin Suyurno<sup>3</sup>

<sup>1</sup> Middle Eastern and Islamic Studies Program, School of Strategic and Global Studies, University of Indonesia, Jakarta, Indonesia, (E-mail: nurwahidin@ui.ac.id)

<sup>2</sup> Middle Eastern and Islamic Studies Program, School of Strategic and Global Studies, University of Indonesia, Jakarta, Indonesia, (E-mail: moh.izdiyan@ui.ac.id)

<sup>3</sup> Academy of Contemporary Islamic Studies, Universiti Teknologi MARA, Kampus Shah Alam, Selangor, Malaysia (E-mail: ssalahud@uitm.edu.my)

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**Abstract:** *Simultaneously with the emergence of the COVID-19 pandemic, educational institutions in the form of Islamic boarding schools led by Kiai (Moslem Scholar) continued to carry out the learning process with various adaptations and adjustments. This research was conducted to reveal the digital transformation that has occurred in Islamic boarding schools, as well as the changes made by these schools to adapt to changes in the digital era while continuing to carry out the important duties of Islamic boarding schools in Indonesian society, namely, to maintain the spirituality and morality of society. The challenges and vision of the institutions in dealing with digital transformation are also studied. This research is qualitative; the data were obtained through interviews and observations at several institutions, namely Pondok Modern Darussalam Gontor, and Pondok Pesantren Lirboyo. This research reveals that Islamic boarding schools and have made various efforts to carry out digital transformation while continuing to carry out several restrictions to prevent misuse of digital technology for things that are contrary to Islamic teachings.*

**Keywords:** *Kiai, Islamic Boarding School, Digital Transformation*

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## Introduction

In recent years, there has been a marked acceleration in the digitalization process in the world of education. Various studies on the influence of COVID-19 on education have also been carried out in various parts of the world. Digitalization and COVID-19 seem to be two things that are interconnected. During the spread of COVID-19 throughout the world, educational institutions must also adapt to the imposition of social restrictions by minimizing physical contact between students and teachers. This encourages educational institutions to accelerate the digitalization process so that the learning process can continue even though there is no direct

face-to-face contact between teachers and students. Making digital materials was also carried out, and digital education administration processes were developed to make it easier for students to get service even without having to come directly to the school or university. Meanwhile, distance learning using video conferencing applications is being implemented in many places, especially using Zoom and Google Meet. Some students benefit from the distance learning process, but there are many complaints from teachers and students about the deficiencies in the distance learning process and deficiencies in the digitalization process, both of which require a lot of improvement processes (le Grange, 2021).

Many things have been revealed by researchers in the last decade. One study revealed that there are obstacles and difficulties that make several universities experience difficulties in digital transformation (Aditya et al., 2021). Aditya highlighted the lack of commitment as the main obstacle to digital transformation within higher education. Nonetheless, the digitalization process is unavoidable as the world begins to enter the era of "society 5.0" (Sá et al., 2022).

The Era of Society 5.0 is a development from previous eras. In the 1.0 era, people depended on hunting. In the 2.0 era, people began to change and began to depend on agriculture, plantations, and animal husbandry for their lives. In the 3.0 era, society began to industrialize, creating large quantities of finished products and creating machines to mass-produce goods and speed up production processes. Furthermore, humans began to enter the "4.0" era. In this era, human economic activities no longer rely on mass production and commodities but are starting to turn to information. There was a massive exchange of information along with the expansion of the internet network. The world is becoming smaller as a result of globalization. In this era, information becomes a new currency; information is the new money. In the 5.0 era, the focus began to shift from information to humans themselves as a focus of economic activity. Humans began to focus on the survival and longevity of humanity. Era 5.0 has five important elements: inclusiveness, sustainability, a human-centered approach, innovative thinking, and continuously improving governance. In relation to education, digitization and digital transformation are very important to ensure efficiency and improve educational governance. This is also in line with the 17 targets of the 2030 SDGs, one of which is quality education (Sá et al., 2022).

Meanwhile, in the digital transformation process, it is deemed necessary for the world of education to adapt to the DESI (Digital Economy Society Index), which focuses on four important elements: 1) The human resource dimension, both the ability of technology users and specialists in their fields who can develop and continue the digitalization process, 2). The connectivity dimensions. This connectivity is related to an adequate internet network to support the digitization process. 3). Digital technology integration This is required to assess the degree to which the owned technologies are integrated and linked to one another. 4). digital public service. This is related to the digitization of services and data openness, which makes it easier for every citizen in the community (Fleaca et al., 2022).

This index gives us an idea that educational institutions must start thinking about increasing digital literacy and digital skills for their graduates (Yu, 2022). On the other hand, digital infrastructure as well as digital learning resources and digital applications must also be used and developed to support the improvement process in the dimensions of connectivity, technology integration, and digital public services. Several educational institutions, particularly in European and developed countries, have begun to undergo digital transformation. Meanwhile, Pesantren is still striving to survive in the middle of this fast-changing world.

Islamic boarding schools or pesantren are spread in almost all parts of Indonesia with a very large number. The number of Islamic boarding schools in Indonesia is not only stable but also growing and increasing from time to time. In 1977 there were 4,195 Islamic boarding schools in Indonesia with a total of 677,394 students. In 1985 that number increased to 6,239 Islamic boarding schools with a total of 1,084,801 students. In 2001 it grew again to 11,312 Islamic boarding schools with a total of 2,737,805 students. Then in 2005 the number increased again to 14,798 Islamic boarding schools with a total of 3,464,334 students. In 2016 this number increased again to 28,194 Islamic boarding schools with a total of 4,290,626 students (Mochtar, 2019). This of course breaks Clifford's prediction that decades from now he predicts that Islamic boarding schools will be displaced by modernity and that the role of Islamic boarding schools will be increasingly marginalized in political life in Indonesia (William & Geertz, 1961). The interesting fact is that in 1999-2001 Indonesia had a President who was a Kyai and a graduate of Islamic Boarding Schools, namely KH. Abdurrahman Wahid (Bachtiar et al., 2021). and currently Indonesia is led by the Vice President who is also a Kyai who has Pesantren, namely KH. Ma'ruf Amin (Razy et al., 2020).

The discussion about digital transformation in Islamic boarding schools will of course lead us to a study that leads to the study of sociology. The development of Islamic boarding schools as a unique religious community has attracted the attention of many researchers, such as Ronald Lukens Bull who sees Islamic boarding schools as a community that combines tradition and modernity. Bull said Islamic boarding schools were an attempt by the Classical Islamic Community in Indonesia to combine Islamic traditions with modernization and globalization. Islamic boarding schools are like a civilization and culture that is maintained that lasts from generation to generation, which has gone through various adaptations. In the process, according to Bull, Islamic Boarding Schools and Kyai do not only imagine a tradition but create traditions (inventing) and reinventing them (reinventing) together with the changes and developments of the times (Lukens-Bull, 2001).

The challenges of the times have made Islamic boarding schools not only adopt cultures from outside but create new cultures that are different from those outside their community. A continuous effort to maintain tradition in the midst of seemingly endless waves of change. So this research aims to reveal things that have not been disclosed about how Islamic boarding schools adapt in the digital era. This research wants to answer the question of how do Islamic boarding schools maintain their existence in the midst of the current wave of digitalization and the Covid-19 pandemic? Do Islamic Boarding Schools also carry out digital transformation as is done by Educational Institutions outside Islamic Boarding Schools, and What is the digital transformation that is taking place at Islamic Boarding Schools? We will try to answer these questions in the following sections of this article.

### **Literature Review**

Digital transformation refers to the integration of digital technologies into various aspects of society, including education (Oliveira & De Souza, 2021). In recent years, there has been a growing trend of Islamic boarding schools in Indonesia adopting digital technologies to enhance their educational programs and better prepare their students for the challenges of the digital age (Müller et al., 2018).

One of the most significant ways in which digital transformation is impacting Islamic boarding schools is by online learning platforms. These platforms allow students to access educational materials and interact with their teachers and peers from anywhere with an internet connection.

They also provide teachers with tools to create interactive and engaging learning experiences, such as videos, quizzes, and simulations (Dursun et al., 2007)

Another area where digital technologies are making an impact is in the administration of Islamic boarding schools. Many institutions are now using software and applications to manage their finances, track student attendance and performance, and communicate with parents and other stakeholders (Elaskari et al., 2021).

In addition to these practical applications, digital transformation is also influencing the curriculum of Islamic boarding schools. Many schools are now offering courses and programs that focus on digital skills, such as coding, web design, and social media marketing. This is in response to the growing demand for these skills in the job market and the need to prepare students for a future that is increasingly reliant on digital technologies (Abidin, 2020).

One example of an Islamic boarding school that has embraced digital transformation is the Al-Irsyad Satya Islamic Boarding School in Jakarta (Wastu, 2015). The school has implemented an online learning platform that allows students to access course materials, complete assignments, and interact with teachers and peers from their homes. The platform also includes a feature that allows parents to monitor their children's progress and communicate with teachers. Another example is the Al-Furqan Islamic Boarding School in East Java (Wahid, 2015), which has established a partnership with a local IT company to provide students with training in computer programming and coding. The school also offers a course in digital entrepreneurship, which teaches students how to start and run an online business.

While digital transformation has many benefits, it is not without its challenges. One of the main challenges is ensuring that all students have access to digital technologies and the internet. This can be particularly difficult for students from low-income families or those living in remote areas (Powell et al., 2010). Additionally, there is a concern that too much focus on digital technologies could detract from the traditional Islamic values and teachings that are at the core of Islamic boarding schools.

### **Digital Transformation in Gontor Islamic Boarding School**

In recent years, digital transformation has become a buzzword for many organizations, including educational institutions. One such institution that has embraced digital transformation is Gontor Islamic Boarding School in Indonesia. In this article, we will explore how Gontor Islamic Boarding School has implemented digital transformation and the benefits it has brought to the institution. Gontor Islamic Boarding School is a traditional Islamic boarding school that was established in 1926 in East Java, Indonesia. The school provides education in various fields such as Islamic studies, social sciences, and natural sciences. With over 20,000 students, Gontor is one of the largest Islamic boarding schools in Indonesia. The school has a rich history of producing successful graduates who have gone on to make significant contributions to society (Susilo, 2016).

Despite its long-standing reputation, Gontor Islamic Boarding School recognized the need to embrace digital transformation to stay relevant in today's digital age. In 2017, the school launched a digital transformation initiative to improve the quality of education and enhance the overall learning experience for its students. The first step in the digital transformation process was to upgrade the school's IT infrastructure. This involved improving the network infrastructure, installing new software and hardware, and providing internet access to all

teachers. But for students, Gontor limited the use of the internet in internet cafés. In this internet café, called Darussalam Computer Center, students can use the internet, but they are only allowed to open websites that are useful and related to their studies. And they are forbidden to open social media sites such as Facebook, Instagram, or Youtube. Students are also forbidden from bringing smartphones or any other electronic devices. For those who bring such devices, they will be given some kinds of punishment. This kind of restriction is done to prevent the bad effects of the internet, which sometimes bring bad content to students, such as pornography, violence, hoax, etc.

Gontor Islamic Boarding School has also leveraged digital technology to improve the overall management of the school. The school now uses a digital system to manage student records, attendance, and finances. This has made it easier for the school to track student progress and financial transactions. The system also provides real-time data, which helps the school to make data-driven decisions. The benefits of digital transformation at Gontor Islamic Boarding School have been significant. The school has seen an improvement in student engagement, performance, and satisfaction. Students are now more motivated to learn and are taking a more active role in their education. Teachers are also benefiting from the use of digital technology, as it has made it easier for them to create and manage their courses.

In conclusion, Gontor Islamic Boarding School has successfully implemented digital transformation to enhance the quality of education and improve the overall learning experience for its students. The school's digital transformation initiative has not only improved the educational experience but also the overall management of the school. Gontor also protects students from harmful content by imposing restrictions to ensure that they use the internet in a positive manner. With its continued commitment to digital transformation, Gontor Islamic Boarding School is well-positioned to continue its legacy of producing successful graduates who make a significant impact on society.

### **Lirboyo Islamic Boarding School**

Over the last decade, the world has seen an incredible rise in digital technology, and many industries have had to adapt to keep up with the fast-paced changes. The same is true for educational institutions, including religious schools such as Lirboyo Islamic Boarding School.

Located in East Java, Indonesia, Lirboyo is one of the oldest and most renowned Islamic boarding schools in the country. It was founded in 1910 and has since become a center of Islamic education and thought for thousands of students from across the archipelago and beyond (Arifin, 2018). In recent years, Lirboyo has embraced the digital age by integrating technology into its curriculum, administration, and communication strategies. This digital transformation has brought many benefits and challenges, as outlined below. Here are some Benefits of Digital Transformation in Lirboyo.

Generally, Lirboyo is divided into two main campuses: the Central and the Units. The central Lirboyo is the main campus, which is using the curriculum that has been used by Islamic boarding schools for many years (Rahman, 2020). The old curriculum is believed to be suitable for students to form their intellectual capability so they can become respected and strong Islamic figures for society. There are 12 levels in this curriculum: three years of Ibtida'I (beginner), three years of Tanawiy (intermediate), three years of Aliyah (advanced), and three years of Ma'had Aly (university). Many students in Lirboyo are committed to completing nine years of

study there so that they can complete the Aliyah level. Following that, some of them continue their studies at Ma'had Aly or other Islamic universities.

The Central Lirboyo doesn't use digital technology or electronic devices. Such devices are prohibited in the entire old campus or Central Lirboyo. Although there are some internet cafes, the use of the internet is limited. And the personal use of electronic devices is forbidden. Such a rule is made to prevent students from losing focus in study and from forgetting their lessons. Most students study by translating old Islamic books from Arabic into Java. *Sorogan* and *bandungan* are the study models. The teachers are reading the books and mentioning the meanings of the words, while students are writing the meanings on their books. Almost all activities require students to wear *peci* (an Islamic Indonesian cap) and *sarung* (Indonesian prayer clothing). Some students do their studying in class, while others come to the teachers' or *Kiai's* house. *Kiai* is the headmaster of the Islamic Boarding School as well as the Islamic Scholar.

While the Units, a side campus of Lirboyo, consists of several schools that are more modernized and use government curriculum. They come to classes with tables and chairs. They use modern books, learning lessons in Indonesian. They use computers in some lessons, and their campus also has a computer laboratory. They study computers as well as other contemporary subjects. But they also spend their time reading the holy Qur'an and studying Arabic, the formal language of the Islamic religion. On this side of the Lirboyo Boarding Schools, digital transformation is done by the headmasters. They use computers, smartphones, and digital applications. But the use of smartphones by students is also limited to keep their focus on studying. And here are some benefits of digital transformation in Lirboyo:

#### **Improved Access to Knowledge**

One of the most significant benefits of digital technology is that it provides students and teachers with access to vast amounts of information from all over the world. Lirboyo has taken advantage of this by digitizing its library and creating an online portal that contains a vast collection of books, journals, and other materials. This has made it easier for students and teachers to conduct research and access the latest information, even from remote areas.

#### **Enhanced Communication and Collaboration**

Digital technology has also made it easier for people to communicate and collaborate with each other, regardless of distance or time zones. Lirboyo has leveraged this by creating an online platform that allows students, teachers, and alumni to connect and share ideas. This has facilitated greater collaboration among students and teachers, as well as improved communication between the school and its stakeholders.

#### **Streamlined Administration**

Another significant benefit of digital technology is that it has made administrative tasks more efficient and less time-consuming. Lirboyo has adopted digital tools for managing student records, tracking attendance, and processing payments. This has reduced the workload on administrators, allowing them to focus on more important tasks, such as curriculum development and student support.

#### **Challenges of Digital Transformation in Lirboyo**

Despite the many benefits of digital technology, the process of digital transformation can also pose several challenges, including:

### **Resistance to Change**

One of the biggest challenges of digital transformation is resistance to change. Some students and teachers may be hesitant to embrace new technology, preferring to stick to traditional methods of teaching and learning. This can slow down the implementation process and create frustration for those who are eager to use new tools.

### **Infrastructure and Resource Limitations**

Another challenge of digital transformation is the need for adequate infrastructure and resources. Lirboyo has had to invest in new hardware and software, as well as upgrade its internet connectivity to support the use of digital tools. This requires significant financial and human resources, which can be a challenge for many educational institutions, especially those in developing countries.

### **Cybersecurity Risks**

Finally, the use of digital technology can pose cybersecurity risks, such as hacking and data breaches (Cherdantseva et al., 2016). Lirboyo has had to invest in security measures to protect sensitive information and prevent unauthorized access to its systems. This requires ongoing vigilance and maintenance, as well as educating students and teachers about safe online practices.

In conclusion, the digital transformation of Lirboyo Islamic Boarding School has brought many benefits and challenges. By leveraging digital technology, Lirboyo has improved access to knowledge, enhanced communication, and collaboration, and streamlined its administration. However, the process of digital transformation also poses challenges such as resistance to change, infrastructure and resource limitations, and cybersecurity risks. Ultimately, Lirboyo's success in adapting to the digital age will depend on its ability to navigate these challenges while continuing to uphold its core values of Islamic education and tradition.

### **Maintaining spirituality and morality in society**

Islamic boarding schools, also known as pesantren, have a long history in Indonesia (Royani, 2018). These institutions have been a cornerstone of Islamic education for centuries, providing students with both religious and secular knowledge. Over the years, these schools have undergone significant changes, and one of the most significant changes is their adoption of digital technology.

Digital transformation is the integration of digital technology into all areas of a business or institution. In the context of Islamic boarding schools in Indonesia, digital transformation refers to the incorporation of digital technology into the teaching and learning process, as well as the management and administration of the school. This includes the use of online platforms, such as e-learning systems and student information systems, to enhance the learning experience and streamline administrative processes (Purwantoro et al., 2021).

The adoption of digital technology has enabled Islamic boarding schools in Indonesia to expand their reach and provide education to more students. Using online learning platforms, students from remote areas can access education from these institutions, regardless of their location (Hiranrithikorn, 2019). This has helped to bridge the gap between urban and rural areas in terms of access to education. It has also allowed students who may not have had the opportunity to attend an Islamic boarding school in person to still benefit from the teachings and values imparted by these institutions.

Furthermore, digital technology has also enabled Islamic boarding schools to modernize their teaching methods while still maintaining their traditional values and teachings (Aliyah, 2018). With the use of multimedia and interactive learning materials, students can engage with the content in a more immersive way. This not only makes learning more fun and engaging, but also helps students to retain the knowledge better.

Despite the many benefits of digital transformation, Islamic boarding schools in Indonesia have also faced challenges in maintaining spirituality and morality in society. There are concerns that the adoption of digital technology may lead to a decline in traditional values and morals, as students are exposed to a wide range of information and influences through the internet (Pew Research Center, 2015).

To address these concerns, Islamic boarding schools have implemented measures to ensure that students are still able to maintain their spirituality and morality. For example, many schools have incorporated religious teachings and guidance into their online learning platforms, with the aim of strengthening students' faith and encouraging them to lead a moral and ethical life (Ansori, 2021). Schools have also increased their efforts to monitor and filter online content, to ensure that students are not exposed to inappropriate or harmful material.

In addition, Islamic boarding schools have continued to emphasize the importance of personal interaction and face-to-face communication in building strong relationships and maintaining a sense of community. While digital technology has enabled schools to expand their reach and provide education to more students, schools have also recognized the importance of in-person interaction in fostering a sense of belonging and a strong moral and ethical foundation (Muttaqin, 2022).

In conclusion, the adoption of digital technology has had a significant impact on Islamic boarding schools in Indonesia. It has enabled schools to expand their reach and provide education to more students, while also modernizing their teaching methods. However, it is important that these institutions continue to prioritize the maintenance of spirituality and morality in society, and take measures to ensure that the use of digital technology does not compromise these values. By striking a balance between tradition and innovation, Islamic boarding schools in Indonesia can continue to play a vital role in shaping the education and values of future generations (Muhammad, 2018).

### **Challenges faced by the institutions in dealing with digital transformation**

Islamic boarding schools, or pesantren, have long been an integral part of Indonesian society, serving as centers of religious education and cultural preservation. However, in recent years, these institutions have faced numerous challenges in adapting to the rapid pace of digital transformation that is transforming Indonesian society (Aminah & Saksono, 2021)

One of the main challenges facing pesantren is the limited access to digital technology in many areas of Indonesia (Hadi, 2018). While urban areas have seen rapid growth in internet connectivity and digital infrastructure, many rural areas where pesantren are located still lack access to basic digital resources. This can make it difficult for pesantren to take advantage of new educational tools and technologies, which can limit their ability to compete with other educational institutions.



Another challenge is the resistance to change among traditional pesantren leaders and teachers. Many of these individuals have been trained in traditional methods of teaching and may be hesitant to embrace new technologies and approaches. This can make it difficult for pesantren to innovate and adapt to changing educational needs, as well as to attract and retain students who are looking for more modern educational experiences.

In addition to these internal challenges, pesantren also face external pressure from government and societal forces. Indonesian authorities have increasingly emphasized the importance of digital education and have launched various initiatives to promote the use of technology in schools. This has led to a perception among some in Indonesian society that pesantren are outdated and out of touch, which can make it difficult for these institutions to maintain their cultural and religious relevance in a rapidly changing society (Gazali, 2018).

Despite these challenges, some pesantren have been successful in adapting to digital transformation. Many have developed online courses and digital learning platforms, which can provide greater access to educational resources and reach a wider audience (Munawara et al., 2020). Others have embraced social media and other digital communication channels to promote their message and connect with students and their families.

To address the challenges faced by pesantren in adapting to digital transformation, there are several steps that can be taken. First, it is important to invest in digital infrastructure in rural areas, including high-speed internet connectivity and digital devices such as laptops and tablets. This can help to bridge the digital divide between urban and rural areas and ensure that pesantren have the resources they need to provide a modern education. Second, it is important to provide training and support to pesantren teachers and leaders, to help them develop the skills and knowledge they need to use digital tools and technologies effectively. This can include training in digital literacy, online teaching techniques, and other digital skills that are essential for modern education.

Finally, it is important to promote the cultural and religious relevance of pesantren in a changing society. This can be achieved through greater collaboration between pesantren and other educational institutions, as well as through public outreach and communication efforts that highlight the unique value of Islamic education and its role in shaping the character of Indonesian society.

In conclusion, pesantren face numerous challenges in adapting to digital transformation, including limited access to technology, resistance to change, and external pressure from government and societal forces. However, by investing in digital infrastructure, providing training and support, and promoting the cultural and religious relevance of pesantren, it is possible to help these institutions thrive in a rapidly changing world. By doing so, pesantren can continue to play a vital role in shaping the character and values of Indonesian society for generations to come.

### **Vision of the Institutions for The Future**

Islamic boarding schools, or pesantren, have been an integral part of Indonesia's education system for centuries. These schools not only provide religious education but also emphasize character building and self-discipline (Pujawati, 2016). As the world continues to undergo digital transformation, it is important to consider how pesantren can adapt to meet the changing needs of their students.

One area where pesantren can focus on is incorporating digital technologies into their teaching methods. While many pesantren already use digital tools such as online learning platforms, there is much more that can be done. For example, pesantren can incorporate augmented reality and virtual reality technologies into their lessons to create more immersive learning experiences (Majid et al., 2021). They can also use gamification techniques to make learning more engaging and interactive.

Another important aspect of digital transformation is the use of data analytics (Eliana & Rahmatya, 2019). By collecting and analyzing data about their students' learning behaviors, pesantren can identify areas where students may be struggling and tailor their teaching methods to better meet their needs. This can help improve the quality of education and ultimately lead to better outcomes for students.

In addition to incorporating digital technologies into their teaching methods, pesantren can also use technology to improve their administrative processes. For example, they can use digital tools to manage student records, communicate with parents, and facilitate online payments. This can help reduce administrative burdens and free up more time for teachers to focus on teaching and student development.

One challenge that pesantren may face in implementing digital transformation is ensuring that all students have access to the necessary technology. While Indonesia has made significant progress in expanding access to digital technologies, there are still many areas where internet access is limited or unreliable. Pesantren may need to work with government and private sector partners to address these infrastructure challenges and ensure that all students have access to the tools they need.

Another challenge is ensuring that pesantren can maintain their core values and mission while embracing digital transformation. It is important that digital technologies are used in a way that complements and supports the traditional pesantren curriculum, rather than replacing it. Pesantren should also ensure that they are able to maintain their emphasis on character building and self-discipline in the face of increasing digital distractions.

In conclusion, digital transformation presents both opportunities and challenges for Islamic boarding schools in Indonesia. By embracing digital technologies, pesantren can improve the quality of education they provide and better prepare their students for the future. However, it is important that pesantren approach digital transformation in a thoughtful and strategic way, considering the unique values and mission of these institutions. With the right approach, pesantren can successfully navigate the digital age while staying true to their roots.

### **Conclusion**

The research on the digital transformation of Islamic boarding schools in Indonesia provides valuable insights into the efforts made by these institutions to adapt to the digital era while maintaining their core values and mission. Despite the challenges posed by the COVID-19 pandemic, the Islamic boarding schools have continued to provide education while also emphasizing the importance of spirituality and morality. The study highlights the need for Islamic boarding schools to balance the benefits of digital technology with the potential risks of misuse. The institutions have implemented various measures to ensure that digital tools are used in accordance with Islamic teachings, such as filtering content and monitoring student activities. Moreover, the research highlights the importance of digital literacy and skills for students to thrive in the modern world. Islamic boarding schools and universities have

recognized this need and are working to provide students with the necessary digital skills and knowledge to succeed in their future careers.

Overall, this research emphasizes the importance of adapting to the digital era while staying true to core values and principles. The study serves as a valuable resource for other educational institutions that are also navigating the challenges and opportunities of digital transformation. Future research can delve deeper into the specific adaptations and adjustments made by Islamic boarding schools and universities in Indonesia to carry out digital transformation while upholding Islamic teachings. The research can also explore the effectiveness of these measures in maintaining the spirituality and morality of society, as well as the challenges faced in implementing these changes. Additionally, comparative studies between Islamic boarding schools and conventional schools can be conducted to understand the unique aspects of Islamic education in the digital era.

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