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# The Role of Digital Technology in Optimizing Education at Pesantren Muhammadiyah Boarding School Yogyakarta

### Hamka Al-hakim<sup>1\*</sup>, Dartim<sup>2</sup>, Hamdan Chehdimae<sup>3</sup>

<sup>12</sup>Universitas Muhammadiyah Surakarta

<sup>3</sup>Academy Islamic Studies University Malaya

\*Correspondence: Hamka Al-hakim Email: g0002141@student.ums.ac.id

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#### **Abstract:**

This study aims to find out how the application and utilization of digital technology in the pesantren Muhammadiyah Boarding School Yogyakarta located in Bokoharjo, Sleman, DIY. The study used qualitative methods with a phenomenological approach. Data collection was conducted by interviewing the head of the Islamic boarding school caregiver as well as educators at Muhammadiyah Boarding School Yogyakarta. Data analysis is presented descriptively. The results showed that the Muhammadiyah Boarding School yogyakrta has completed the digitization of learning in keeping up with the times in order to remain dynamic, and continue to exist. SBM Islamic boarding schools have strong policies and commitments in efforts to develop and utilize digitalization., Islamic boarding school caregivers believe that although pesantren are synonymous with religious nuances and the Quran, human resources in it must be aware and literate of technological developments. This effort is supported by adequate facilities in the classroom, each of which has a projector as one of the learning media. This study concluded that although the implementation of digital technology has not been fully implemented at

Muhammadiyah Boarding School Yogyakarta, several parties have felt the benefits, including caregivers, educators and guardians, which are more practical and time-saving. The pesantren also continues to strive so that the digitization system can help on all fronts, on the other hand, the pesantren in planning and implementation must be carefully prepared so that everything runs optimally.

Keywords: Digital Technology, Pesantren, Caragivers, Educators

#### Introduction

In recent years, the development of science and technology (IPTEK) has spread and influenced very rapidly, especially in the world of education, including education in boarding schools. The emergence of boarding schools is not new, the good smell of pesantren has also been widely known in Indonesia. It is evident from the perception that pesantren are able to form students who have charismatic character and also produce clerical cadres for the Ummah. The pesantren education system is the oldest education in Indonesia, the transformation of pesantren has also been tested from ancient times to the present. Digital technology has an important role in aspects of human life, including in pesantren education. Digital technology is a technology that no longer uses human power, and has characteristics that can be manipulated, and is networked or internet, the role of digitalization in the learning process such as the Quizzizz method, learning videos and digital library applications is proven to be able to improve the quality of learning.(Bartolomeus & Yohanes, 2022) The results of previous research stated that a digital system has been applied to several pesantren that aims to facilitate web-based academic operations in order to improve the standard of pesantren and the standard of living of the community. (Susanto, 2014). In responding to the challenges of globalization, students must be equipped with various skills that are in accordance with the demands, developments and innovations of an increasingly developing era, all with the aim of being able to contribute to the general public and social welfare, besides that pesantren are also dealing with technological advances in the Middle of the Industrial Revolution 4.0 and Global Society 5.0. (Kesuma, 2017)

Pesantren take at least two constructive steps that can be implemented. First, pesantren must be able to adapt to the times without losing their characteristics as pesantren and be able to fill the digital space well and wisely. Both pesantren will also undergo reconstruction in facing the era of Society 5.5, especially in terms of curriculum, in other words pesantren must develop competence in language skills, leadership, IT literacy, writing skills, problem solving and critical thinking. (Oktaria et al., 2022). In reality, the difficulty experienced by pesantren today is to improve the quality of teaching quality in overcoming contemporary problems. On the other hand, the difficulties faced by pesantren lack of support from the community, if pesantren by maintaining conventional learning methods without integrating science are certainly less able to compete in this growing digital era, then pesantren are feared to be unable to compete and answer every obstacle in the flow of science and technology (IPTEK). The results of searching various websites show that digitalization has been applied to various Islamic boarding schools in Indonesia starting from the process of accepting new students, academic and non-academic learning processes, hopefully it will improve the quality of education and pesantren. This article aims to find out how the role of digital technology in optimizing education in the pesantren Muhammadiyah Boarding School Yogyakarta.

## **Research Method**

The research method uses qualitative methods that produce analysis without using statistics. Then in collecting data using a phenomenological approach through observation at the Muhammadiyah Boarding School Yogyakarta boarding school and interviews with informants who are caregivers of Islamic boarding schools as well as educators at SBM. Where the author will visit the place and conduct an interview process and direct observation at the location. This data collection will be carried out in December 2023, data analysis begins with a review of the results of data available from resource persons and then compiled in data units described in the form of research descriptions and discussions. And besides that, it is also supported by literature studies from related articles as data reinforcement.

### **Result and Discussion**

Pondok Pesantren Muhammadiyah Boarding School Yogyakarta (MBS) was established in 2008, which originated from the idea of a young Muhammadiyah ustadz Muhammad Nashirul Ahsan. The location of this pesantren is precisely in the village of Marangan, Bokoharjo, Prambanan, Sleman Regency, Yogyakarta. The location of this pesantren is approximately 5 km from Prambanan temple. The number of students has now reached 2000 active students including male and female students. The Muhammadiyah Boarding School Yogyakarta Islamic boarding school is now led by Ustadz Fajar Sadiq as the director of the pesantren, Muhammadiyah Boarding Yogyakarta School consists of

several caregiver boards commonly called Kema'hadan and also teaching staff who focus on classroom learning. The results of an interview with informants at Islamic boarding schools conducted on December 19 with ustadz Fendik Ibnusyakiran as a caregiver and educator at Muhammadiyah Boarding School Yogyakarta that SBM has implemented a digitization system in the realm of trials in various lines, the informant explained that one of them is *open learning* mediawhich began to be used in early 2020 during the Covid-19, MBS also used Google Classroom as a learning medium during learning carried out remotely (online), all students and teaching staff communicated from their respective homes during the Covid-19 pandemic. Ustadz Fendik explained that when students were sent back to the cottage after the pandemic subsided, open learning media and Google Classroom were dismissed because they were not optimal.

# 1. implementation of the new system

SBM Islamic boarding schools are aware that in the future they must be able to compete not only in the religious and scientific fields, the times are growing and humans are required to be able to master and utilize the development of digital technology, this is where the pesantren's efforts in advancing its human resources by utilizing digital technology. With the initiative and willingness to develop digitalization in pesantren, MBS created a system called SIAP (Pesantren Application Information System), in his interview Untadz Fendik explained the SIAP system as one of the digitalization trials in pesantren, this system began to be applied to several student needs, one of which is the santri online wallet (TNT Santri) which uses a card, so when shopping at mat'am (food stalls) there is no need to pay using money, but simply attaching the student's TNT card to the space provided by pressing the card password for the transaction process, of course this is more practical and reduces the risk of money theft

# 2. Multifunctional SIAP system

In its planning, the head of the pesantren collaborates with the board of caregivers of the boarding school to be able to successfully implement the digitization system at the MBS boarding school. Including maximizing this SIAP system so that it can be implemented in various aspects such as student administration, exactly 2 days before the interview begins, December 17, 2023 MBS returns his son's students to their respective homes because it is vacation time, in the process, everything related to permission to return home is served through the SIAP system through the device belong to pesantren in accordance with the applicable student licensing SOP. In addition, matters related to student data in the dormitory are also monitored by Islamic boarding school caregivers through the SIAP system, caregivers can find out who are the room members and their choaches. Within the scope of learning in MBS Islamic boarding schools, SIAP is also a system that has been implemented around 40%, indeed not everything can be digital, so far what has been applied is to teacher and student attendance, and also the academic achievement of SBM students. Here there is no need for manual attendance using paper but everything is recorded and recapitulated in the system, for teachers who are late for attendance from a predetermined time when school will be subject to sanctions, namely salary deductions by accumulating teacher delay in a month.

# 3. Adventages and disadvantages of digitalization in MBS

All applications of the trial system certainly have advantages and disadvantages, hopefully

from the existing shortcomings can be used as evaluation material, and from the existing advantages can be used as development to be even better in the future. Ustadz Fendik explained that in its application, we found more advantages and advantages of implementing a digitalization system in Islamic boarding schools. So far, we caregivers and teachers feel more practical and time-saving in all lines served by the system. And as an electronic user as a teacher, the ustadz fendik feels more modern. In this case, students and educators as a whole will be involved in the digital world.

From the efforts of pesantren to implement digitalization in various lines, of course, there are several shortcomings that occur, one of which is the influence of "addiction", because modern-based technology always provides many conveniences to its users, and if not used wisely it will affect addiction. From the concerns of the pesantren in monitoring students and cottage caregivers when many lines are served by digital systems, the pesantren leadership made a countermeasures plan as a solution to the dangers of using digital media in SBM boarding schools. The first is to urge all teaching staff and caregivers to utilize digitalization in pesantren only at certain hours needed and in accordance with existing needs to avoid all forms of abuse. Then Ustadz Fendik also explained that pesantren have *stakeholders* consisting of Internal and External parties, Internal includes cottage leaders, cottage caregivers and educators, while External includes Wali santri and also Muhammadiyah Institutions. From here must be built a good cooperation between external and internal parties in an effort to monitor the implementation of digitalization in the pesantren Muhammadiyah Boarding School Yogyakarta. It is hoped that in addition to establishing good communication, Islamic boarding schools can also work hand in hand in monitoring their students during the implementation and development of digitalization at SBM.

The interview data above is from the head of the kema'hadan section of the pesantren Muhammadiyah Boarding School Yogyakarta which is a school where in their daily activities are also colored by the use of digital media, although students are prohibited from using personal cellphones in daily life, educators often use digital media to support the learning process in the classroom. The results of this study are in line with previous research that showed the use of technology and information in Islamic boarding schools in Malang City (Anwas, 2015) This is assisted by projector facilities in every class at SBM. In order to aim to create a conducive and integrated school climate in learning(Wuryandani et al., 2016).

### Conclusion

Pesantren Muhammadiyah Boarding School yogyakrta has implemented digitalization of learning in keeping up with the times in order to remain dynamic, and continue to exist. SBM Islamic Boarding School has a strong policy and commitment in the process of developing and utilizing digitalization. Pesantren caregivers believe that although pesantren are synonymous with religious nuances and the Quran, human resources in it must be aware and literate of technological developments. The benefits of this digitalization have been felt by several parties including caregivers and guardians, where SBM guardians can monitor their children remotely, databases about students are available and can be monitored by parents remotely. This Islamic boarding school, which was established 15 years ago, shows that the development of digitalization from time to time is increasing in its implementation. And all plans are always carefully prepared by the lodge leader. MBS also plans new things for 2024, Ustadz Fendik explained that the new

students will have facilities using TAB, specifically for classroom learning, so in the initial tuition fee, the cost of purchasing TAB has been included, this is still in the maturation and planning stage, previously the caregivers and educators had conducted comparative studies to pesantren that also implemented a system in line with this, namely Pesantren Al-amanah Muhammadiyah in Tasikmalaya, but unfortunately the implementation of the learning system using TAB at the Al-amanah boarding school failed due to immature and deep-rooted planning. However, all of that can be used as an evaluation and learning for MBS who will implement the use of TAB in learning in 2024 so as not to experience the same thing, namely failure. Pesantren as one of the places of today's civilization for its students, in the use of digital technology must be able to wisely place portions and time. On the other hand, pesantren cannot leave the pattern of local wisdom in upholding Islamic values.

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