



DIGITAL INNOVATION IN PESANTREN EDUCATION: PREDICTION TO WELCOME GLOBAL ISLAM AWAKENING

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Abstract

This paper aimed to discuss the creativity and innovation of Islamic boarding schools in the digital era. The research method of this study was literature, by looking for related literature contained in books, articles, and websites both national and international publications. The results of this study indicate that pesantren that only survive on the old learning system, without relying on technological sophistication, will be left behind by communities that have implemented a technological system. It is hoped that this discussion is useful for other Islamic educational institutions, it is necessary to carry out various creativity and innovations through technology so that pesantren are more alive not only in the real world but in cyberspace. For similar research, it can be used as comparison material with field studies between traditional and modern Islamic boarding schools throughout Indonesia.

Keywords: Digital Innovation, Pesantren Creativity, Prediction of Islamic Revival, And Scientific Study.

Abstrak

Artikel ini bertujuan untuk membahas tentang kreativitas dan inovasi pondok pesantren di era digital. Metode penelitian dari kajian ini adalah literatur, dengan mencari literatur yang terkait baik yang terdapat pada buku maupun jurnal nasional maupun internasional. Hasil penelitian ini menunjukkan bahwa pesantren yang hanya bertahan pada sistem pembelajaran yang lama, tanpa mengandalkan kecanggihan teknologi maka akan ketinggalan oleh pesantren yang sudah menerapkan sistem teknologi. Diharapkan untuk lembaga pendidikan Islam lainnya, perlu untuk melakukan berbagai kreativitas dan inovasi melalui teknologi agar pesantren lebih terkenal yang bukan hanya di dunia nyata tetapi di dunia maya. Untuk penelitian yang serupa, dapat dijadikan bahan perbandingan dengan kajian lapangan antara pondok pesantren tradisional dan modern yang ada di seluruh Indonesia.

Kata Kunci: Inovasi Digital, Kreativitas Pesantren, Prediksi Kebangkitan Islam Dan Kajian Ilmiah.

INTRODUCTION

The Covid-19 pandemic has sped up the progressive change of training as almost 1.5 billion understudies are away from their homerooms. Be that as it may, online instruction is not the primary way advanced innovation changes the learning and education experience.¹ We investigate what computerized change means for training with critical advances and patterns. How might progressive change affect instruction? Progressive change in training implies digitizing cycles and items to upgrade all interested parties' education and growth opportunities. Progressive change in instruction centers around Accessibility: Digital innovation permits understudies (e.g., understudies, representatives) to learn assets more effectively and less expensive than conventional training. Individuals from one side of the planet to the other, of any age, with various financial situations, with admittance to classes and assets through the web are innovations; for example, text-to-discourse eliminates obstructions for understudies with incapacities.²

Expanded commitment and interactive learning are other explanations we apply innovative digital in instruction—miniature examples, recordings, intelligent tests, and games. Each of them is a different learning design that is changing training.³ For instance, intuitive language education applications like Duolingo guarantee to arrive at a more significant number of US students inspired by unknown dialects than the educational system. Custom fitted learning: Computer innovation and Artificial Intelligent empower instructive strategies like versatile realization where every student is permitted to learn what suits them. For what reason is a computerized change in instruction significant at this point? School terminations and distance training are probably the most significant impacts of COVID-19, showing the significance and earnestness of joining advanced innovation into instruction. Indeed, even before the pandemic, the instruction business was computerized. The picture underneath from research by HolonIQ shows that worldwide, EdTech investment financing has expanded from \$500 million to \$7 billion, somewhere in the range of 2010 and 2019. The impacts of the pandemic are additionally astonishing as speculation almost significantly increases by 2021.⁴

Indonesian education innovation in the digital age is not an innovation. The quick advancement of the computerized world requests many Particularly amidst Indonesia's situation as the country with the most significant number of web clients in ASEAN with an

¹ Preeti Tarkar, "Impact of COVID-19 pandemic on education system," *International Journal of Advanced Science and Technology* 29, no. 9 (2020): 3812–14. Purniadi Putra et al., "The Students Learning from Home Experiences during Covid-19 School Closures Policy In Indonesia," *Jurnal Iqra': Kajian Ilmu Pendidikan* 5, no. 2 (5 September 2020): 30–42, <https://doi.org/10.25217/ji.v5i2.1019>. Aslan Aslan et al., "TEACHER'S LEADERSHIP TEACHING STRATEGY SUPPORTING STUDENT LEARNING DURING THE COVID-19 DISRUPTION," *Nidbomul Haq: Jurnal Manajemen Pendidikan Islam* 5, no. 3 (21 November 2020): 321–33, <https://doi.org/10.31538/ndh.v5i3.984>.

² Shazia Rashid dan Sunishtha Singh Yadav, "Impact of Covid-19 pandemic on higher education and research," *Indian Journal of Human Development* 14, no. 2 (2020): 340–43.

³ Jaziar Radianti et al., "A systematic review of immersive virtual reality applications for higher education: Design elements, lessons learned, and research agenda," *Computers & Education* 147 (2020): 103778. Purniadi Putra et al., "The Relevancy on Education Release Revolution 4.0 in Islamic Basic Education Perspective in Indonesia (An Analysis Study of Paulo Freire's Thought)," *Test Engineering & Management* 83 (2020): 10256–63.

⁴ Eunjung Oh dan Thomas C. Reeves, "Generational differences and the integration of technology in learning, instruction, and performance," dalam *Handbook of research on educational communications and technology* (Springer, 2014), 819–28.

aggregate of 93.4 million or equivalent to 36% of the complete populace in 2015, and even marketers expressed that in 2018, web clients in Indonesia will arrive at 123 million, this number beat Japan and made Indonesia remembered for the World Top 5. Already, instructive development was completed by making the National Examination framework done utilizing paper sheets, however utilizing an internet-based framework. With this internet-based framework, the state could save a financial plan of IDR 13.6 billion in light of online UN preliminaries in 2015. Through the powerful utilization of Information and Communication Technology, Telkom Indonesia has made a few developments in the universe of Indonesian training.⁵

Islamic all-inclusive schools are one of the points of support supporting training in Indonesia. As one of the most seasoned instructive foundations in this cutting-edge period, Islamic life experience schools move from a customary framework to an advanced school system. Islamic live-in schools' job is not just an instructive establishment but also has a social capacity in the encompassing local area.⁶ There are Islamic live-in schools where poor people augmented innovation in this period of Technology 4.0. One of these snags was capable by the Al Khalili Islamic Boarding School in Bandung. To amplify the job of data innovation in this pesantren, a few exercises and projects are proposed, to be specific the formation of a pesantren data framework, character improvement preparing, and inside plan, scene and pesantren plan to upgrade the utilization of room and increment the excellence of the pesantren. The strategy utilized is through preparing, coaching, and aiding the inside plan of the pesantren. With this movement, it is trusted that it can work on the capacity of pesantren as an instructive and social establishment and work on the capacity of pesantren understudies to contend in this worldwide time.⁷

In a pesantren like this, modern civilization products such as radio, television, mobile phones, and computers are strictly prohibited. The pesantren argue that they do all that to maintain the increasingly vulgar pressure of globalization.⁸ These products can make students lazy to recite the Koran; it is difficult to memorize and often violate the rules of the pesantren. This is not comforting for the santri in their constant reading, so the material taught by the Kiai is challenging to learn and understand. In addition, according to Mukodi, Kuntoro, & Sutrisno,⁹ the manners of behavior, uploading, the center's attitude to the ustadz, administrators, and Kiai began to erode. A different attitude is shown by Islamic boarding

⁵ Nadia Fairuza Azzahra, "Addressing distance learning barriers in Indonesia amid the Covid-19 pandemic," 2020.

⁶ Rashedul Hasan, "Factors affecting the Guardians Satisfaction & Clientele of English Medium and English Version school and college of Dhaka city area in Bangladesh," 2019.

⁷ Ahmad Fauzi et al., "E-Learning in Pesantren: Learning Transformation based on the Value of Pesantren," dalam *Journal of Physics: Conference Series*, vol. 1114 (IOP Publishing, 2018), 012062. Amat Suroso dkk., "Challenges and Opportunities towards an Islamic Cultured Generation: Socio-Cultural Analysis," *Linguistics and Culture Review* 5, no. 1 (28 Juni 2021): 180–94, <https://doi.org/10.37028/lingcure.v5n1.1203>.

⁸ Hisanori Kato, "Islamic Capitalism: The Muslim Approach to Economic Activities in Indonesia," *Comparative Civilizations Review* 71, no. 71 (2014): 9. Hifza et al., "The Strategic Foundation for Competitive Excellent Development in Integrated Islamic Primary Schools in Indonesia," *International Journal of Advanced Science and Technology* 29, no. 12s (4 Juni 2020): 1747–53. Sardjana Orba Manullang, Mardani Mardani, dan Aslan Aslan, "The Effectiveness of Al-Quran Memorization Methods for Millennials Santri During Covid-19 in Indonesia," *Nazhruna: Jurnal Pendidikan Islam* 4, no. 2 (2021): 195–207.

⁹ Mukodi Mukodi, Sodik A. Kuntoro, dan Sutrisno Sutrisno, "Adaptasi Dan Respon Pondok Tremas Terhadap Arus Globalisasi," *Jurnal Pembangunan Pendidikan: Fondasi dan Aplikasi* 3, no. 2 (2015): 184–97.

schools that are already based on modern and combine traditional learning systems with a more formal curriculum. Even the modern boarding school assumes that technological progress is a historical necessity that cannot be denied.¹⁰

As long as it does not destroy the Islamic faith and teachings, Islamic boarding schools are the main pillars of the Islamic education tradition and media for da'wah in Indonesia at this moment; pesantren are required to carry the burden of their history, especially as a legacy of Indonesian Islamic traditions whose duty is to preserve the values of Islam that exist in the archipelago.¹¹ Therefore, regardless of its form, every Islamic boarding school education institution must reflect Islam as its ideal and essential value. Even a very sophisticated and modern Islamic boarding school should not lose its existence as an Indonesian-style Islamic educational institution. Thus, innovations and changes in Islamic boarding schools do not cause the disappearance of Islamic Education's ideals and noble ideals in Indonesia. The task of pesantren in the modern era is to maintain its existence and function as an educational institution for religious knowledge.¹²

On the other hand, technological advances can make it easier to get information, help promote Islamic boarding schools to the broader community and increase networks.¹³ Not only that with technological advancements, but Islamic boarding schools can also spread positive content or da'wah to the broader community. As indicated by Cummings & O'Neil,¹⁴ the job of online instructive data frameworks is expected to work with the course of scholarly and special exercises at Islamic Boarding Schools. For this situation, as specialists in local area improvement, Islamic all-inclusive schools are supposed to set up a few ideas for creating understudy assets, both for working on the nature of the Islamic life experience school and for working on the nature of local area life.

Literature review on digital technology in education, especially in Islamic boarding schools, is essential because this study is a theoretical study that collects several data and evidence of scientific studies that will inform which theory is relevant after being tested through research that has been reported in various books and articles as well as references.¹⁵ In other sources, all of which are trying to describe and define how important artificial Intelligent digital technology innovation is both in education circles in general and in the context of pesantren education. All of that is aimed at getting various inputs and

¹⁰ Saeful Anam et al., "The Moral Education and Internalization of Humanitarian Values in" Pesantren", *Online Submission* 7, no. 4 (2019): 815–34. Aslan, "Peran Pola Asuh Orangtua di Era Digital," *Jurnal Studia Insania* 7, no. 1 (2019): 20–34, <http://dx.doi.org/10.18592/jsi.v7i1.2269>.

¹¹ Abdul Halik, "Paradigm of Islamic Education in the Future: The Integration of Islamic Boarding School and Favorite School," *Information Management and Business Review* 8, no. 4 (2016): 24–32. Prasetyono Hendriarto et al., "Understanding the Implications of Research Skills Development Framework for Indonesian Academic Outcomes Improvement," *Jurnal Iqra': Kajian Ilmu Pendidikan* 6, no. 2 (15 Juli 2021): 51–60, <https://doi.org/10.25217/ji.v6i2.1405>.

¹² Adib Rifqi Setiawan, "Islamic Education in Southeast Asia," *EdArXiv*. DOI: <https://doi.org/10.35542/osf.io/dnjqv>, 2020.

¹³ Philip N. Howard, *The digital origins of dictatorship and democracy: Information technology and political Islam* (Oxford University Press, 2010).

¹⁴ Clare Cummings dan Tam O'Neil, "Do digital information and communications technologies increase the voice and influence of women and girls," *A rapid review of the evidence*. Overseas Development Institute, 2015.

¹⁵ Yusuf Hanafi et al., "The new identity of Indonesian Islamic boarding schools in the 'new normal': the education leadership response to COVID-19," *Helixyon* 7, no. 3 (2021): e06549.

understandings, which will undoubtedly make it easier for researchers and practitioners to make literacy a way to carry out tasks in the field and provide awareness which is very important in producing the latest ideas, which will undoubtedly enrich the treasures—thinking in the context of digital technology learning among Islamic boarding schools.¹⁶

The writers here need to express our views on how the world of digital technology applications can have an impact on the field, namely in educational institutions, schools, and Islamic boarding schools where when teaching takes place, there will require many technological applications that can present the latest vehicles in Islamic boarding school education with exposure to ideas.¹⁷ The existing applications are also the result of innovation combined with technology and daily learning about Islam. From here, we see the need for studies of literature literacy to gain a new understanding of how to open the horizons of thinking for practitioners and researchers who will later provide ways of learning and produce different results from the perspective of teachers and technology applications where learning turns out to be using technology¹⁸ will produce very different outputs that are transformative and solute and attach great importance to solutions through creativity and innovation that is combined with technology that can be applied in various educational institutions, especially Islamic boarding schools in Indonesia.¹⁹

METHOD

This method section will explain how the stages of carrying out a literature review to obtain scientific evidence of how digital innovation in Islamic boarding schools is carried out to welcome the rise of Islam globally. Many parties assume that one of the setbacks of Islamic education in Islamic boarding schools is that they do not adopt technology to achieve student learning acceleration.²⁰ For this purpose, we obtained several publications in the form of scientific papers, books, and websites that actively voiced the importance of adopting digital technology to strengthen the system and evaluation of learning at the education level, both general education and Islamic boarding schools.²¹ Moreover, this is one of the breakthroughs in how pesantren education is no longer seen as a criticism of religion limited to traditional learning. After collecting the necessary data, we then designed this study is a descriptive qualitative form, how to examine the data with a phenomenological approach, which includes looking at large amounts of data to take the relevant understanding and essence to answer the study problems.²²

¹⁶ Ismail Suardi Wekke dan Sanusi Hamid, "Technology on language teaching and learning: a research on Indonesian pesantren," *Procedia-Social and Behavioral Sciences* 83 (2013): 585–89.

¹⁷ Luís Francisco Mendes Gabriel Pedro, Cláudia Marina Mónica de Oliveira Barbosa, dan Carlos Manuel das Neves Santos, "A critical review of mobile learning integration in formal educational contexts," *International Journal of Educational Technology in Higher Education* 15, no. 1 (2018): 1–15.

¹⁸ Maud Chassignol dkk., "Artificial Intelligence trends in education: a narrative overview," *Procedia Computer Science* 136 (2018): 16–24.

¹⁹ Ahmad Khorirur Rijal Fahmi et al., "Curriculum and Learning Innovation COVID-19 Pandemic Situation at Surya Buana Modern Islamic Boarding School Malang, Indonesia," dalam *1st International Conference on Information Technology and Education (ICITE 2020)* (Atlantis Press, 2020), 381–85.

²⁰ Andrew Booth et al., "Systematic approaches to a successful literature review," 2021.

²¹ Chris Hart, "Doing a literature review: Releasing the research imagination," 2018.

²² Albine Moser dan Irene Korstjens, "Series: Practical guidance to qualitative research. Part 3: Sampling, data collection and analysis," *European journal of general practice* 24, no. 1 (2018): 9–18.

The sources of literature that we have physically included are several international and national journals that actively voice the importance of digital reform among Islamic boarding schools to improve and revive Islamic education in the future. We thoroughly search the data electronically in a Google search using keywords such as fashion, education in *pesantren* to welcome global Islam awakening in the future.²³ The review process involves coding data, evaluating sharply, interpreting in-depth, and making decisions on the essence of answers that answer the study questions with high validity. Furthermore, we summarize this report in a descriptive qualitative design by following the guidelines presented in the previous literature review, especially in digital technology literacy and learning in Islamic boarding schools. Thus, the implementation and exposure to the procedures for carrying out the study start from formulating data search problems to the final report.²⁴

RESULTS AND DISCUSSION

Digital-based educational innovation

E-learning programs have turned into a hotly debated issue in instruction, including Islamic training, for example, in Islamic live-in schools.²⁵ Alongside the improvement of mechanical refinement, learning techniques additionally experience an impact in their application which is one method for working on the nature of learning. This advanced-based learning upholds mixed learning frameworks created by numerous advanced education establishments, particularly in created nations; E-learning is a supporting instrument for data and correspondence innovation-based discovering that can introduce text, pictures still and moving), activity, and sound—visuals through learning recordings.²⁶ There is a straightforwardness in discovering that consolidates different methods of conveyance, showing models, and learning styles, presenting an assortment of media choices for discourse between the facilitator and the individual being educated. Consequently, Blended learning is simultaneously a mix of direct instructing and web-based education. This advanced-based learning media expects to keep development in schooling running. Through this e-Learning studio, we can improve all utilization as a learning mechanism and prepare speakers further to develop computerized-based learning media in the Islamic instruction climate. The justification for utilizing computerized instruction is that advanced-based learning media reacts to the effect of the Covid-19 pandemic in educating and learning exercises using organizations.²⁷

²³ Edoardo Aromataris dan Dagmara Riitano, "Constructing a search strategy and searching for evidence," *American Journal of Nursing* 114, no. 5 (2014): 49–56.

²⁴ Hsiang-Yee Lo, Gi-Zen Liu, dan Tzone-I. Wang, "Learning how to write effectively for academic journals: A case study investigating the design and development of a genre-based writing tutorial system," *Computers & Education* 78 (2014): 250–67.

²⁵ H. Wanga, Fredrick Ngumbuke, dan J. O. Oroma, "Challenges of e-learning in developing countries: The Ugandan experience," *Retrieved* 12, no. 12 (2012): 2015.

²⁶ Avid Leonardo Sari dan Eko Lianto Rihardi Irwandi, "Comprehensive Application of E-Learning Based on Islamic Principles and Ethics," *Journal of Positive School Psychology* 6, no. 3 (2022): 3343–50.

²⁷ Niyi Jacob Ogunode, Ahaotu Godwin Ndubuisi, dan Ayisa Cyprian Terfa, "Impact of the Covid-19 Pandemic on Nigerian educational institutions," *Electronic Research Journal of Engineering, Computer and Applied Sciences* 3 (2021): 10–20. SUDARMO et al., "The Identification of Online Strategy Learning Results While Students Learn from Home During the Disruption of the COVID-19 Pandemic in Indonesia," *Journal of Contemporary Issues in Business and Government* 27, no. 2 (8 Maret 2021): 1950–56, <https://doi.org/10.47750/cibg.2021.27.02.205>.

Digitalization is a need that anybody cannot avoid, so instructive madrasa establishments should likewise know about beginning the course of direction to advanced stages.²⁸ With the goal that advanced madrasas become customary and the requests of the times, which the Ministry of Religion has been very much aware of to execute. Likewise, the Ministry of Religion pre-arranged a spending plan for Madrasa Affirmation Assistance of up to IDR 399.9 billion, executed through the Madrasah Education Quality Reform Program for the Realization of Educational Promises. This financial plan is reserved for 2,666 madrasas in different areas. As indicated by the one who is naturally called Dhani, the help was given to madrasas that had carried out the Self-Evaluation framework. Electronic-Based Madrasah Work Plan and Budget was prepared in 2020 and began to be executed the year before. Help is given as money with an accentuation on usage, which should be founded on the dire requirements of the madrasa, which is planned given the consequences of the Educational Digital Technology as indicated by the specialized rules determined.²⁹

Government Supports madrasah learning

This is because the Ministry of Religion's spending plans is limited, so it has carried out a digital technology learning framework as a stage of restructuring and e-planning madrasas so that the responsibility for helping to detail can be ensured so that madrasa education can continue to develop like other general education.³⁰ Before the pandemic, Isom Yusqi made sense that the madrasa digitization program had been completed starting around 2019 or before the pandemic. Various projects have been done, including overhauling the specialized rules for an unwinding of the utilization of school operational assistance reserves with the goal that they can be utilized to help web-based learning frameworks. Another work is to assist with acquiring servers and Computer Based-Test, Computer Networks for all levels, be it Madrasah Aliyah, Tsanawiyah, or Ibtidaiyyah. The monetary arrangement for this help is not a lot, even mainly confined. In 2021 alone, for example, the amount for recipients of this help is 200 madrasah aliyah, 250 madrasah tsanawiyah, and 100 madrasah ibtidaiyyah. Starting around 2019, the public authority has also assisted the headway of state madrasahs through public financial support saves. One of the motivations behind this help is to assist with executing progressed classes.³¹

Until this year, state madrasah advancement help through SBSN is as yet continuous. During the pandemic, the Ministry of Religion has even sped up the digitization of madrasas through various projects, including the madrasa computerized book program where understudies can peruse and download books for nothing through the <https://madrasah2.kemenag.go.id/buku/page>. There is additionally an e-learning madrasa, in a joint effort with (Google for Education), giving google study hall, google meet, and others, and

²⁸ Sudarmo Sudarmo et al., "The Future of Instruction Media in Indonesian Education: Systematic Review," *AL-ISHLAH: Jurnal Pendidikan* 13, no. 2 (31 Agustus 2021): 1302–11, <https://doi.org/10.35445/alishlah.v13i2.542>.

²⁹ Elena V. Soboleva et al., "Professional Self-Determination Support for Students in the Digital Educational Space," *European Journal of Contemporary Education* 9, no. 3 (2020): 603–20.

³⁰ Rythia Afkar dkk., "Revealing How Indonesia's Subnational Governments Spend Their Money on Education," 2020.

³¹ Nursaptini Nursaptini et al., "School operational assistance and challenges of communities' participation at madrasah tsanawiyah in central lombok," dalam *Proceedings of the 1st Annual Conference on Education and Social Sciences (ACCESS 2019)*, vol. 465, 2020, 279–82.

giving limitless stockpiling to educators and madrasa understudies.³² Then, at that point, the Affordable Quota Assistance program, as modest web amounts for instructors, understudies, and madrasah representatives. They work together with four suppliers (Telkomsel, XL Axiata, Indosat Ooredoo, and Tri). Then, at that point, free admittance to the Dragonlearn.org Learning Platform, the internet-based new student selection for all madrasas nationally, to the inception of the Achievement Independent Madrasah Movement to raise gifts for utilized Smart Phones reasonable for use for understudies who do not have learning gadgets.³³

Development Furthermore, with an end goal to grow the digitalization of madrasas, various gatherings were involved, including giving appreciation through the Digital Madrasa Innovation Award. This work has been completed in a few regions, including East Java and West Java, including Infradigital Edu-tech new businesses with the regional government. The Madrasa Innovation Award additionally plans to speed up and adjust the digitalization of madrasas, remembering for West Java. This program will run in 15 urban communities/rules in West Java in 2022 and 12 urban areas/rules in West Java in 2023. Acting Head of the West Java Ministry of Religion Regional Office, Yusuf Umar, made sense that the Ministry of Religion has seven needed projects. One of them is computerized change. The public authority truly needs madrasas not to oblige it, albeit, in the execution of these exercises, many are not as per the underlying objectives of computerized madrasas, yet he trusts that the nature of the program will keep the program on being improved until it meets the common objectives³⁴

Innovation in the madrasah learning community

Along with the quick speed increase of advanced innovation, worldwide society is encountering fundamental changes in practically all areas of life. Digitalization has additionally entered the universe of schooling.³⁵ This should be visible; understudies can get to the topic through the web. Instructors can likewise effectively convey their showing materials on the web. Study hall learning is by all accounts rearranged to concentrate on bunches gathered in virtual entertainment gatherings. More powerful talks are additionally brought out through virtual classes. This is a consistent outcome of the advancement of computerized innovation, where there is a shift from exercises that were initially done in reality to the computerized world. Then, at that point, what might be said about all-inclusive schools? Confronting such fast changes, the consistency of pesantren in setting job as an instructive and strict organization can stay aware of improvements is presently again confronted with difficulties in the advanced period. From a long-chronicled venture, the presence of pesantren is no question ready to adjust to the elements of progress, in any event, turning into a train that manages the conservation of strict, moral, and social qualities.³⁶

³² Muhammad Alwi, M. Ilham, dan Muhammad Fakhri Amir, "Islamic Philanthropy: The Idea of Economic Empowerment of the Ummah of KH Ma'ruf Amin," *FITRAH: Jurnal Kajian Ilmu-ilmu Keislaman* 7, no. 1 (2021): 133–54.

³³ Sudarmo et al., "The Future of Instruction Media in Indonesian Education."

³⁴ Sudarmo et al.

³⁵ Klaus Schwab, *The fourth industrial revolution* (Currency, 2017).

³⁶ Fachruddin Majeri Mangunjaya dan Jeanne Elizabeth McKay, "Reviving an Islamic approach for environmental conservation in Indonesia," *Worldviews: Global Religions, Culture, and Ecology* 16, no. 3 (2012): 286–305.

The versatile person of pesantren cannot be isolated from its way of life as the most established instructive organization in Indonesia. This can be demonstrated that the computerized yellow book can be handily downloaded through innovative applications. A significant number of the yellow books examined in Islamic life experience schools can now be gotten to through brilliant applications. Indeed, even the computerized change of Islamic live-in schools has infiltrated into the domain of learning the yellow book online by a *kai*, which can be paid attention to by understudies any place they are, whether understudies who live across regions or nations through web-based Quran learning programs advanced innovation, worldwide society is presently encountering very fundamental pesantren response.³⁷

This implies that all are instructing and learning exercises and everyday exercises, including rigorous ones, are necessary for the pesantren schooling process. It faces the computerized current that keeps on streaming by bringing such fast changes.³⁸ Pesantren instructive foundations should answer with an open demeanor by setting up the entirety of their hardware so they are not handily broken down in the standard and simultaneously do not be guaranteed to close themselves to the elements of life. In basic terms, it very well may be deciphered that the upkeep of an old-fashioned custom should be possible by reinforcing past practices, so it indeed turns into a sincere conviction. The execution of this open demeanor is indeed not counter-useful to the longstanding scholastic practice. This implies that the pesantren do not leave the educational practice. For what reason should this pesantren's educational practice be saved? Since the logical practice of pesantren with various instruments gives an alternate vibe to customs outside the pesantren.³⁹

Pesantren's learning approach in the digital era

The solid logical custom in pesantren gives arrangements to understudies later in the wake of being announced equipped for dominating the Yellow book, then, at that point, getting a certificate from a *kyai*.⁴⁰ Pesantren's educational practice that has been worked for many years ought to be saved. Since it is a type of an incremental learning process, which can address the profile of progressive pesantren graduates, have mature characters, and are profoundly fit for social designing. Indeed, even with schooling, scholastic customs should be created in a superior bearing while still given the principle system. So the coherent outcome is that the digitalization of the yellow book as needed might arise to be viewed as a fantastic chance to hone the learning of old-style books. In front of the celebration of santri day on October 22, the most noteworthy appreciation and appreciation should be stuck to Islamic all-inclusive schools that have added to the safeguarding of Islamic qualities in Indonesia. We trust that pesantren's presence will also reinforce its way of life as a foundation fit for being versatile and groundbreaking to the

³⁷ Muhammad Hasyim Ibnu Abbas dkk., "Increasing Internet Marketing Skills of Pesantren Anwarul Huda Students with Search Engine Optimization Tools," *International Journal Of Community Service (IJCS)* 2, no. 1 (2022): 88–93.

³⁸ Arif Zamhari dan Ismi Rahmayanti, "The Response and Negotiation of Pesantren in Maintaining the Values of Pesantren During the Covid-19 Pandemic: A Case Study of Pondok Pesantren Darussunnah Hadith," *Jurnal Iqra': Kajian Ilmu Pendidikan* 6, no. 1 (2021): 125–39.

³⁹ Nana Herdiana Abdurrahman, "Character education in islamic boarding school-based SMA Amanah," *Jurnal Pendidikan Islam UIN Sunan Gunung Djati* 2, no. 2 (2016): 287–305.

⁴⁰ Kurniawati Hastuti Dewi, *Indonesian women and local politics: Islam, gender and networks in post-Subarto Indonesia*, vol. 14 (NUS Press, 2015).

elements of progress in the advanced time—practically all areas of life. Digitalization has also entered the instruction universe.⁴¹

This should be visible; students can get to the topic utilizing the web. Educators can likewise effectively convey their showing materials on the web. Study hall learning is improved by concentrating on bunches gathered in web-based entertainment gatherings.⁴² More unique talks are additionally brought out through virtual classes. This is a sensible result of the improvement of advanced innovation, where there is a shift from exercises that were initially completed in reality to the computerized world. Then shouldn't something be said about life experience schools? Confronting such fast changes, the consistency of *pesantren* inputting job as an instructive and strict foundation can stay aware of advancements is now again confronted with mechanical time difficulties.⁴³ From a long verifiable excursion, the presence of *pesantren* is no question ready to adjust to the elements of progress, in any event, turning into a train that directs the conservation of strict, moral, and social qualities. The versatile person of *pesantren* cannot be isolated from its way of life as Indonesia's most seasoned instructive foundation. This can be demonstrated that the advanced yellow book can be effectively downloaded through innovation applications.⁴⁴

The fast speed increase computerized innovation, the worldwide co Along with the quick speed increase of advanced innovation, the worldwide co. Along with the fast speed increase of computerized innovation, worldwide society is now encountering essential changes in practically all areas of life.⁴⁵ Digitalization has additionally entered the universe of instruction. This should be visible, and understudies can get to the topic through the web. Instructors can likewise effectively convey their showing materials on the web. Homeroom learning is by all accounts streamlined into the concentration on bunches gathered in virtual entertainment gatherings. More powerful talks are additionally helped out through virtual classes. This is a legitimate result of the advancement of computerized innovation, where there is a shift from exercises that were initially done in reality to the advanced world. Then shouldn't something be said about all-inclusive schools? Confronting such fast changes, the consistency of *pesantren* inputting job as an instructive and strict organization can stay aware of advancements is currently again confronted with difficulties in the computerized time. From a long-recorded venture, the presence of *pesantren* is no question ready to adjust to the elements of progress,

⁴¹ Julia M. Pauschunder, "Value at COVID-19: Digitalized healthcare, luxury consumption and global education," dalam *Proceedings of the ConScienS Conference on Science & Society: Pandemics and their Impact on Society*, 2020, 43–51.

⁴² Charlene Tan, "The reform agenda for madrasah education in Singapore," *Diaspora, Indigenous, and Minority Education* 3, no. 2 (2009): 67–80.

⁴³ Lalu Mathlul Anwar, A. Wahab Jufri, dan Lalu Muhaimi, "Application of Madrasah Based Management in Improving the Quality of Aliyah Madrasah Education," *International Journal of Multicultural and Multireligious Understanding* 6, no. 5 (18 Oktober 2019): 257–69, <https://doi.org/10.18415/ijmmu.v6i5.1086>. Gunawan Widjaja dan Aslan Aslan, "Blended Learning Method in The View of Learning and Teaching Strategy in Geography Study Programs in Higher Education," *Nazhruna: Jurnal Pendidikan Islam* 5, no. 1 (2 Februari 2022): 22–36, <https://doi.org/10.31538/nzh.v5i1.1852>.

⁴⁴ M. Niaz Asadullah, Sajeda Amin, dan Nazmul Chaudhury, "Support for gender stereotypes: does madrasah education matter?," *The Journal of Development Studies* 55, no. 1 (2019): 39–56.

⁴⁵ Erik Brynjolfsson dan Andrew McAfee, *Race against the machine: How the digital revolution is accelerating innovation, driving productivity, and irreversibly transforming employment and the economy* (Brynjolfsson and McAfee, 2011).

in any event, turning into a train that regulates the protection of strict, moral, and social qualities.⁴⁶

Global Islam Awakening

A civilization will look brilliant and victorious when science and technology advance and develop from other countries. However, nowadays, when Capitalism regulates life with a materialistic orientation, a scientist's perspective also shifts from its value. Many people believe that there are only physical things, whereas God, angels, demons, heaven, and hell are myths. As a result, in Western civilization, many scientists have become atheists (do not believe in God) or agnostics (belief in God, but not as taught by religions). Such people will later use the technology they created without caring about the fate of other humans. As a result, intellectuals are created to innovate products so that products can be sold with material targets. Proper knowledge is only for global business and industry.⁴⁷ Islamic civilization does not deny the development of science and technology. The Prophet himself has laid the foundation of the infrastructure for developing science and technology for the Muslims. Many examples were given by the Prophet and then passed on by pious sales, which made Muslims, in a short time, able to surpass science and technology controlled by any nation before.

The following is a robust framework that forms the basis for the triumph of technology and science: First is the formation of scientific reasoning. From the beginning, Islam did not accept opinions without rational arguments, whoever said them.⁴⁸ "Press your argument if you are right" (Surat An Nam: 64). Second, Islam rejects the subjectivity of emotion because whatever the conclusion, it interacts with the laws of nature. "So judge between people with righteousness and do not follow your lust, for it will lead you astray from the path of Allah." (Surat Shad: 26). Third, Islam erodes blind obedience without foundation (blind taqlid), be it to ancestors, leaders, especially to ordinary people.⁴⁹

Moreover, when they said: "Follow what Allah has sent down." They replied: "We are only following what we have found from our ancestors." Even though their forefathers knew nothing and were not guided, will they also follow? (Surat al-Baqarah: 170). Fourth, Islam attaches importance to empirical observations of the heavens and the earth and all that is in them. "On earth, there are signs for those who believe, and (also) in yourself. So do you not pay attention?" (Surah Az Zariyat:20-21).⁵⁰

Learn Arabic and unknown dialects. This is focused on working with da'wah and passing on His message. Then again, it is added to make it more straightforward to gain science and innovation from different nations, then give it to the ummah (Silvia et al., 2019). Admit the trial strategy. At the hour of the Messenger of Allah, there was an instance of date palm uniting which fizzled, and the Prophet inquired: "What occurred?". They answered: "Your Majesty has

⁴⁶ Hamzah B. Uno dan Abd Rahman K. Ma'ruf, "Pengembangan media pembelajaran IPS berbasis website untuk siswa kelas VII Madrasah Tsanawiyah Negeri," *JTP-Jurnal Teknologi Pendidikan* 18, no. 3 (2016): 169–85.

⁴⁷ Radovan Richta, *Civilization at the crossroads: social and human implications of the scientific and technological revolution* (Routledge, 2018).

⁴⁸ Donald E. Stokes, *Pasteur's quadrant: Basic science and technological innovation* (Brookings Institution Press, 2011).

⁴⁹ Hugo Mercier dan Christophe Heintz, "Scientists' argumentative reasoning," *Topoi* 33, no. 2 (2014): 513–24.

⁵⁰ Ron Phillips dan Ronnie Phillips, *The Power of Agreement: God's Secret to Your Successful Relationships with Friends, Family, and at Work* (Charisma Media, 2014).

said such and such." The Messenger of Allah said: "You know better the specialized undertakings of your reality." (HR Muslim). Islam likewise perceives the ability and orders to hold the assessments of specialists and researchers. "... and nobody can give you the specialists' data" (Surat Fatir: 14). Everything has a science, and each science has a specialist.⁵¹ Islam efficiently destroys odd notions, *bid'ah*, and odd notions. As in the ordinary course of the event of a sun-powered overshadow.

The obscuration of the sun and the moon do not happen because of an individual's demise or birth, yet both are indications of Allah's power (Bukhari 2, 152). Science and innovation without Islam might have grown. However, it would not be challenging to abuse it to colonize it.⁵² Muslims who do not dominate science and innovation, and think as though love (Mahwah) is everything, will be handily colonized both intellectually and genuinely. The restoration of moral progress is positively upheld by innovation and science, which are entirely founded on *syara'*, making it a gift and goodness for all nature and life. No one but Islam can direct the ummah to dominate science and innovation accurately and impeccably and will want to liberate the world from all types of imperialism and bondage separated from Allah Azza Wajalla. Construct a splendid and respectable human advancement.⁵³

CONCLUSION

In this final section, the author will describe the conclusion of a series that aims to get scientific white bread, how digital innovation among Islamic boarding schools in the teaching and learning process has become very encouraging, and this is believed to be part of the global Islamic revival. We have done this series to get scientific evidence from technology experts and designers of Islamic education, especially in Islamic boarding schools and Islamic schools in Indonesia. This has shown the dualism of education where today in Indonesia, Islamic boarding schools and schools have become part of the Muslim community, which is increasingly showing itself with a modern face where the adaptation of digital technology is no longer a part of learning in public schools. Let us present the essential points that we have summarized during the presentation of our present results. On the other hand, we raise how digital is part of learning innovation in Islamic boarding schools, and based on these studies; this is progress where Islamic education is no longer seen as far from modern.

Furthermore, we also saw how the government's support, especially in Indonesia, in advancing education in *pesantren* where the government has disbursed special funds and its belief that makes *pesantren* a part of Islamic education and what *madrassa* schools can do.

Furthermore, we also note how innovation in *madrassas* is learning that deserves the place, not only being a separate lesson but also a vital joy where they can access various information technologies to strengthen learning in schools. This is one of the

⁵¹ Mira A. Baz, "Online Islamic Da'wah narratives in the UK: the case of iERA" (PhD Thesis, University of Birmingham, 2017).

⁵² Farzana Hasin et al., "Reversing paralysis technology-remarkable breakthrough for the treatment of incurable paralysis," *International Journal of Human and Technology Interaction (IJHaTI)* 2, no. 1 (2018): 83–96.

⁵³ Arif Rahman, "Islamic Education in The Era of Technological Wave: A Case in Indonesia Today," dalam *Proceeding of International Conference on Islamic Education*, 2016, 127–34.

lessons that are not only discussed like the previous yellow book lesson, but this is part of the digitalization era that has brought universal learning to Islamic boarding schools. Furthermore, we also saw how the rise of Islam internationally; what about the presence of various technologies that are ready to accompany learning in Islamic boarding schools or in technical madrasa schools to print happiness rather than the rise of Islam where Islam is no longer considered an obstacle to technology but is part of advancing civilization because Islam has Being part of a global international not only from the Arab nation will be an asset but also for the international community.

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