



THE DIGITAL MADRASAH AS AN IDEA OF IT-BASED ISLAMIC EDUCATION

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Abstract

In this article, the author will review the opportunities for madrasah as Islamic educational institutions in facing modernization, as well as what learning methods are appropriate to use in learning. The term "digital madrasa" can become a bridge for a madrasah to be ready to face the era of globalization. This study uses a library research method, namely research conducted using library research, which can be in the form of books, notes, or reports of previous research results. The results of the study showed that a digital madrasah is a madrasah that organizes education management using digital applications. The application of ICT is not only in the realm of learning but also in the realm of madrasah governance, evaluation, and educational environments that are aware of the use of technology. Learning to use e-learning has become a must if you want to create a digital-based school. Synchronous approach, asynchronous blended learning is an approach that can be chosen in digital learning

Keywords: Digital Madrasah, E-Learning, IT-Based, Islamic Education

Abstrak

Dalam artikel ini, penulis akan mengulas peluang madrasah sebagai lembaga pendidikan Islam dalam menghadapi modernisasi, serta metode pembelajaran apa saja yang tepat digunakan dalam pembelajaran. Istilah madrasah digital mampu menjadi jembatan bagi madrasah untuk siap menghadapi era globalisasi. Penelitian ini menggunakan metode penelitian perpustakaan, yaitu penelitian yang dilakukan dengan menggunakan penelitian perpustakaan yang dapat berupa buku, catatan atau laporan hasil penelitian sebelumnya. Hasil dari penelitian menunjukkan Madrasah digital adalah madrasah yang menyelenggarakan pengelolaan pendidikan menggunakan aplikasi digital. Penerapan TIK bukan hanya pada ranah pembelajaran namun juga pada ranah tata kelola madrasah, evaluasi dan lingkungan pendidikan yang sadar akan penggunaan teknologi. Pembelajaran menggunakan e-learning menjadi keharusan jika mau menerakan sekolah berbasis digital. Pendekatan sinkronus, asinkronus blended learning adalah pendekatan yang bisa dipilih dalam pembelajaran digital.

Keywords: Globalisasi, Madrasah Digital, E-Learning, Berbasis IT, Pendidikan Islam

INTRODUCTION

As one of the strongholds of fostering Muslims, madrasah is expected to be increasingly encouraged to develop into Islamic community development institutions that are worthy of consideration with the need to focus on optimization, efficiency, and effectiveness of coaches to produce quality products and grow a strong cadre of cadres without neglecting the characteristics of Islamic educational institutions.¹

The role of technology is very important and cannot be separated from the development of Islamic education. For example, in teaching and learning activities, learning media must be utilized by educators so that students can understand better and feel interested in the material being explained. The explanation of nature and its contents or the process of human creation would be better if they used audiovisual media in particular. Therefore, students who have diverse skills will be more easily overcome by educators.²

Digital learning technology has grown and developed rapidly and has been expanded all over the world. It has also been used by several countries, institutions, and experts for various purposes, including education and learning. Efforts are being made to develop software (application programs that can help with quality recall or learning.³ The software that has been developed will allow instruction developers to work with content specialists to package e-learning materials (digital learning materials) packaged and integrated them into a network so that they can be accessed through digital learning, and then socialize the availability of this learning program to the general public, especially students.⁴

The digital learning perspective is quite promising to be an alternative to the education system because of the development of technology and information and communication technology which strongly supports the creation of digital learning facilities. The development of information and communication technology will facilitate people to access educational programs distributed through the Internet. Digital learning is an alternative education that has an insufficient future because it has more benefits for society.⁵

One of the many initiatives that can be implemented in adult education and training is through the e-learning system. This is a learning system that is expected to respond to global challenges because it is through e-learning-based learning that space and time constraints can be overcome. Quoting from Stacey, the factors that drive the growth of e-learning are, First, The economy is based on a knowledge-based economy that puts the payout on intellectual

¹ Maesaroh Lubis, "Peluang pemanfaatan pembelajaran berorientasi teknologi informasi di lingkup madrasah (mempersiapkan madrasah berwawasan global)," *Tadris: Jurnal Keguruan Dan Ilmu Tarbiyah* 1, no. 2 (2016): 147–53.

² Lubis.

³ Samsul Susilawati, "Prospects of Digital Literature and Its Implications on Increasing Learning Outcomes During The Covid-19 Pandemic," *Nidhomul Haq : Jurnal Manajemen Pendidikan Islam* 6, no. 3 (13 November 2021): 526–36, <https://doi.org/10.31538/ndh.v6i3.1776>.

⁴ Arman Paramansyah, *Manajemen Pendidikan Dalam Menghadapi Era Digital* (Medan: Almuqstith Pustaka, 2021).

⁵ Muhammad Anas Ma'arif, Muhammad Mujtaba Mitra Zuana, dan Akhmad Sirojuddin, "Improving Islamic Self-Motivation for Professional Development (Study in Islamic Boarding Schools)," dalam *Supporting Modern Teaching in Islamic Schools* (Routledge, 2022); Qomaruzzaman Azam Zami dan Bagong Suyanto, "Digital Divide for Teacher During Pandemic Covid-19," *Al-Mada: Jurnal Agama, Sosial, Dan Budaya* 4, no. 2 (30 Juli 2021): 213–24, <https://doi.org/10.31538/almada.v4i2.1235>.

capital. Second, the Increased success of reliable companies in the performance of high-quality employees. Third, Competition in employee capabilities, especially in high technology, is fierce.⁶

Therefore, improving Islamic educational institutions must focus on organizational systems, strategies, and work methods to meet the demands of modern society. It is necessary that the madrasah can offer a modern understanding of Islam to respond to the development of human life. This contextualization is nothing more than an attempt to find the meeting point between the nature of Islam and the Spirit of Time. This is where Islam's universality comes into play. It can show modern ideas and institutions, and it can teach people how to be modern.⁷

Students are stimulated to explore science. Students can use facilities that can be used by experts to learn through e-learning, including electronic books, e-libraries, contact with experts, e-mail, drawer lists, newsgroups, and others. On the other hand, the development of science and technology increasingly encourages renewal efforts in the use of technological results in the learning process. When teachers work in schools, they must be able to use any media that they can get from the school, and the media may be up to date with the changes and needs of the time.⁸

In addition, educators are also required to be able to develop skills in making learning media that will be used in the media that is not yet available. For this reason, educators must have sufficient knowledge and understanding of learning media. Although the initial goal of learning is good, if it is not supported by the right media, this good goal is very difficult to achieve properly. A media in learning will affect whether or not a piece of information is complete and on target, and will affect the final result of the learning process.

In this paper, the author will review the opportunities for madrasah as Islamic educational institutions facing modernization, as well as what learning methods are appropriate to use in learning? The term "digital madrasa" can become a bridge for a madrasah to be ready to face the era of globalization.

METHOD

This study uses a library research method, namely research conducted using library research which can be in the form of books, notes, or reports of previous research results.⁹ According to M. Iqbal Hasan, literature research is a technique of collecting data, not for research, but through library research. The documents used can be in the form of diaries, personal letters, reports, minutes of meetings, special instructions on social work, and other

⁶ Elizabeth T Welsh dkk., "E-learning: emerging uses, empirical results and future directions," *international Journal of Training and Development* 7, no. 4 (2003): 245–58.

⁷ Lubis, "Peluang pemanfaatan pembelajaran berorientasi teknologi informasi di lingkup madrasah (mempersiapkan madrasah berwawasan global)."

⁸ Vinza Hedi Satria dan Darlis Herumurti, "Role-Playing Game as Learning Media To Support Online Learning," *Journal of Education Technology* 5, no. 4 (26 November 2021): 579–87, <https://doi.org/10.23887/jet.v5i4.39718>; Shivangi Dhawan, "Online Learning: A Panacea in the Time of COVID-19 Crisis," *Journal of Educational Technology Systems* 49, no. 1 (1 September 2020): 5–22, <https://doi.org/10.1177/0047239520934018>.

⁹ M. Iqbal Hasan, "Pokok-pokok materi metodologi penelitian & aplikasinya / M. Iqbal Hasan ; Editor: M.S. Khadafi dan Lolita" (Bogor: Ghalia Indonesia, 2002).

documents.¹⁰ Therefore, all documents can be used as long as they are related to the topic to be studied.

The data collection technique used by the author is a documentation method. The documentation method is a method of collecting data in the original form of written data, which is in the form of archived or collected writing. Sources of written data in the form of official documents, books, magazines, archives, or documents and personal photos. In this study, the authors collect data from the origins of written data, such as books, magazines, or other archives.¹¹ The descriptive method is the steps taken in an objective study of the reality contained in the research question. Or, the meaning can be expanded, namely how to describe all things related to the subject for tracking and systematization.

RESULTS AND DISCUSSION

Information & Communication Technology (ICT) in Learning

A computer program called Information and Communication Technology (ICT) is used to get and send information. It makes sense, manipulates, and moves information. ICT is a broad umbrella term that includes the entire technical team for processing and transmitting the information. If you look based on the word "technology," The word technology comes from the Greek, technology or technique, which means experience which means knowledge.¹² In a narrow sense, technology is something that refers to objects that are used to facilitate human activities, such as machines, senses, or hardware, which the two are very difficult to separate.

In the context of learning, the quote from SiaHaan Safirah, emphasizes the use of personal computers, but ICT is by no means limited to the use of sophisticated (sophisticated) electronic devices, such as the use of personal computers and the Internet, but also includes conventional senses, for example, printed materials, audiotapes, overhead (out) or projector transparencies based on sound slides, radio & television

ICT in learning can be divided into 2 roles, namely: (1) being a learning media for learning, for example, PowerPoint slides and flash animation; (2) As a vehicle for independent learning or electronic learning, for example, students get assignments to read or search the Internet, send answers to assignments, and even try and create learning materials. Through electronic learning, learning is no longer limited by space and time. Learning can be done at any time and anywhere. It encourages students to analyze and create knowledge, as well as to explore, process, and apply information to create their writings, information, and knowledge.

The media used in the e-learning process are; 1) Radio and television. In this system, students are required to attend educational broadcasts via radio broadcasts or TV viewers. This system in Indonesia is used by open universities in delivering their subject matter, namely through the RRI and TVRI networks. 2) Media in audio and video. This system uses audio and video media as learning media equipped with cassettes, CDs, or VCDs containing learning materials. The CD/VCD contains material related to subjects or courses to be conveyed to

¹⁰ M. Iqbal Hasan.

¹¹ Suharsimi Arikunto, *Prosedur penelitian suatu pendekatan praktik* (Jakarta: Rineka cipta, 2013).

¹² Ismail Darimi, "Teknologi informasi dan komunikasi sebagai media pembelajaran pendidikan agama islam efektif," *Jurnal Pendidikan Teknologi Informasi* 1, no. 2 (2017): 111–21.

students or students. 3) Web-based or internet-based learning. This system is very advanced, both in educational and corporate terms. In this system, delivery and access of teaching materials are carried out via electronic media using a web server for delivery of materials, a web browser for accessing materials, and TCP/IP (Transmission Control Protocol/Internet Protocol) and HTTP (HyperText Transfer Protocol) as protocols for communication. Included in this group are virtual classes, virtual universities, cyber classes, and cyber universities. Of the three types of e-learning above, which are increasingly being developed by companies and the world of education is e-learning with a web-based system or the use of the internet in learning.¹³

Furthermore, there are several types of classes in digital-based learning including; virtual classes, generally a form of real-time lectures as a web-based learning solution. This allows direct teaching and students can follow it wherever they are as long as they have internet access. Activities are planned, and technology such as teleconferencing, the internet, or videoconferencing is used.¹⁴

The other type is a virtual university, including virtual classes supported by voice, video, and internet technology. This system in addition to developing learning methods is also an administrative system. A student can select the course he wants to attend via the internet. Interaction between students and teachers as well as other administrative problems is done through the internet. The virtual university emphasizes a comprehensive instructional management system for efficiency and product achievement that covers all aspects of the university, such as business, program, and technical. So, in practice, there is a relationship between academic administration systems, academic information systems, and libraries. Through a virtual university, students receive teaching materials, ask questions, analyze, solve problems, and complete projects in the way they choose. In this case, e-mail is an important means of communication.¹⁵

The last type is cyber and university classes. This term is used in the cyber world and is likely to be used in the cyber world and is likely to be used as a business term. Its characteristics are not much different from virtual classrooms and virtual universities.¹⁶

Meanwhile, the benefits of using ICT to support the implementation of learning are: (1) increasing the quality of learning; (2) expanding access to education and learning; (3) helping visualize abstract inspirations; (4) facilitating understanding of the material being studied; (5) showing learning materials as more interesting; and (6) allowing the relationship between learning and the material being studied.¹⁷

Quoted by Hamzah B. One and Nina Lamatengo. He revealed that the similarities in education in Indonesia in the future are as follows: First, the development of open education using long-distance learning mode (distance learning). Then, to organize open education and

¹³ Paramansyah, *Manajemen Pendidikan Dalam Menghadapi Era Digital*.

¹⁴ Roy Martin Simamora, "The Challenges of online learning during the COVID-19 pandemic: An essay analysis of performing arts education students," *Studies in Learning and Teaching* 1, no. 2 (2020): 86–103.

¹⁵ Ayesha Perveen, "Synchronous and asynchronous e-language learning: A case study of virtual university of Pakistan," *Open Praxis* 8, no. 1 (2016): 21–39.

¹⁶ Rena M Palloff dan Keith Pratt, *Lessons from the virtual classroom: The realities of online teaching* (John Wiley & Sons, 2013).

¹⁷ Fakhurrizi M Amin dan Hanna Sundari, "EFL students' preferences on digital platforms during emergency remote teaching: Video Conference, LMS, or Messenger Application?," *Studies in English Language and Education* 7, no. 2 (2020): 362–78.

distance education, it must be included as the main strategy; Second, shared resources between educational/training forums on library networks and other educational instruments (teachers, laboratories) turn out to be a source of news instead of just one bookstore; third, the use of interactive news technology devices, such as multimedia CD-ROMs in education, gradually marries television and video.¹⁸

Digital Madrasah and Digital Literacy in Schools

The digital madrasah developed are madrasah that organizes education management using digital applications; organize ICT learning in the form of subjects, local content, or extracurricular; implement ICT-based learning strategies, resources, and media as well as implement digital applications in the assessment system (the madrasa concept can be called "Smart Madrasah"). In this concept, digital devices are not a goal but a tool to support effectiveness and efficiency. As a brain source, policymaker, person who gives a human touch, and person who runs a digital device, humans become the most important thing.¹⁹

The Vision of the Industrial Revolution 4.0 Education is education to teach the younger generation the skills needed in the future including as formulated by Aoun data literacy (digital), namely the ability to read, analyze, and use information (big data) in the world; technological literacy, namely understanding how machines work, technology applications (coding artificial intelligence, machine learning, engineering principles, biotech); human literacy, namely humanism, communication, design; and lifelong learning.²⁰ Of course, it must be supplemented with aspects of religiosity and local culture in the Indonesian context. To support this vision, the madrasah has the task of providing education with four main characteristics, namely digital literacy, character education, lifelong education, and complete learning. The four characters interact with each other to form an educational character that has the opportunity to empower the millennial community to be able to play a role in an era that will be very different in the next 20 years. Education with this character does not prioritize teaching materials as a result of learning but focuses on developing character and applicable problem-solving skills to solve problems and prevent continuous invasion. The concept of education must be chosen because humans must be able to outperform the current generation of machines' artificial intelligence thinking abilities and wisely develop and use machines for the benefit of the people of the planet Earth and the universe.²¹

Digital literacy is the ability to collect, sort, process, present, and use digital data. These competencies include communication skills, critical thinking, collaboration, and creativity. Character education is the cultivation of spiritual, personality, and social attitudes in playing their functions as religious people, as citizens, as professionals, and as citizens of the world who

¹⁸ Haris Budiman, "Peran teknologi informasi dan komunikasi dalam pendidikan," *Al-Tadzkiyyah: Jurnal Pendidikan Islam* 8, no. 1 (2017): 31–43.

¹⁹ Tim Peneliti Pendidikan Agama dan Keagamaan Jakarta, "Panduan Penyelenggaraan Madrasah Digital" (Jakarta: Badan Litbang dan Diklat Balai Penelitian dan Pengembangan Agama, 2019).

²⁰ Omid Ghorbanzadeh dkk., "Evaluation of Different Machine Learning Methods and Deep-Learning Convolutional Neural Networks for Landslide Detection," *Remote Sensing* 11, no. 2 (Januari 2019): 196, <https://doi.org/10.3390/rs11020196>; Dyah Putri Fadillah dan Istikomah Istikomah, "The Strategy Of School Literacy Culture In Elementary School," *Nazhruna: Jurnal Pendidikan Islam* 4, no. 3 (19 Oktober 2021): 503–17, <https://doi.org/10.31538/nzh.v4i3.1614>.

²¹ Tim Peneliti Pendidikan Agama dan Keagamaan Jakarta, "Panduan Penyelenggaraan Madrasah Digital."

respect each other, culture, and nature in everyday life. Lifelong learning is a true learning attitude in which a person is continuously motivated to learn independently and voluntarily to understand something and solve the problems they face without being bound by time, place, or situation. In this character, there is an attitude of always being curious, diligent, and diligent. Complete learning (mastery learning) is the learning characteristic of a teaching and learning system approach that requires or requires all students to master the entirety of each unit of learning material both individually and in groups as evidenced by mastery of competencies in terms of attitudes, knowledge or skills.²² To provide education with this character, it must be supported by teaching materials, learning strategies, management and administration governance, facilities, infrastructure, and costs, as well as human resources (HR), managed using ICT. These parts must help the madrasah industry 4.0 achieve its vision and character.²³

Looking at this era, all aspects of life cannot be separated from the name of information and communication technology (ICT), especially in the world of education. The current data management system has been facilitated by the presence of ICT. Through the online system, data on data submission from elementary school students is easy to charge and can be received directly by the Minister of Education and Culture quickly. Not only does it stop there, but it is now also required that teachers use ICT in the learning process. This is explained in Permendikbud number 37 of 2018 Article 2 paragraph 1 which reads "Informatics content at Elementary Schools/Madrasah Ibtidaiyah (SD/MI) can be used as a learning tool and/or studied through extracurricular and/or local content".²⁴

In 2020, the Ministry of Religion in collaboration with XL Axata Company made the activity entitled "The Digital Academy of Madrasah". In Madrasah Aliyah students in Indonesia are maintained intensively and disconnected through digital platforms in the x-laboratory at the x-laboratory CAMP IoT (Internet of Things) by XL Axiata. From the elections that have been carried out by 20 teams from several countries, Aliyah Madrasah from various regions of Indonesia. Digital Madrasah Management follows the procedures set out in Permendiknas No. 19/2007 on the Quiet Management Standards by the primary and secondary education units.²⁵

The Digital madrasah is managed by the National Education Standards (SNP) which consists of eight components, namely: (1) graduate competence, (2) content, (3) process, (4) management, (5) facilities and infrastructure, (6) educators and education personnel, (7) financing, and assessment (8). These components are integrated into the education system.²⁶

So, digital madrasah governance includes; first, Personnel and student information systems, including a. DBMS educator or teacher b. DBMS for education staff c. DBMS students and alumni d. Information systems for professional or career development of educators and education personnel e. Office administration information system f. Madrasah accounting information system g. Student accounting information system (payment of madrasa fees, etc.) h. Information systems for teachers and educational staff who are present or absent. i.

²² Renee Hobbs, *Create to learn: Introduction to digital literacy* (John Wiley & Sons, 2017).

²³ Ayu Umi Prihatin dan Yogyakarta Indonesia, "PROBLEMS OF ISLAMIC PRIMARY AND SECONDARY EDUCATION IN ERA 4.0 IN INDONESIA," *Nazhruna: Jurnal Pendidikan Islam* 5, no. 1 (2022): 123–38, <https://doi.org/10.31538/nzh.v5i1.1909>.

²⁴ Tim Peneliti Pendidikan Agama dan Keagamaan Jakarta, "Panduan Penyelenggaraan Madrasah Digital."

²⁵ Tim Peneliti Pendidikan Agama dan Keagamaan Jakarta.

²⁶ Tim Peneliti Pendidikan Agama dan Keagamaan Jakarta.

Attendance information systems or student attendance (fingerprint data recording and face-to-face hours) j. Committee information (structure, duties, functions, and programs).

Second, the academic information system, including a. The madrasa profile information system includes madrasa identity, history, vision, mission, facilities, human resources, curriculum, programs, and achievements. b. Curriculum information includes competency levels, subjects, extracurriculars, Minimum Completeness Criteria (KKM), annual programs, semester programs, educational schedules, and calendars. c. Subject and class information systems include class type, number of groups, student and homeroom data, and subject teachers. d. PPDB database information system daily test scores, assignments, portfolios, extra-curricular projects, midterm exams (UTS), final semester exams (UAS), and report card scores are all kept in a student academic information system. f. The extracurricular information system includes information on types (mandatory and optional), schedule, participants or students, attendance, and data for coaches or trainers. g. Graduation management system for students.

Third, the e-learning system includes the following aspects: a. Curriculum b. Content (digital or multimedia-based) consists of learning materials or resources, assignments or worksheets, discussions or chats, and tests or exams c. Learning design d. Learning activities e. Technology. *Fourth*, library information system (e-library), including a. Library material procurement system b. Library material processing system c. Member management system d. Circulation system e. Search system.²⁷

To apply the concept of digital madrasah, each madrasa does not create a new organizational structure and management system that is different from the regulations above but adds a digital component to each section. By these regulations, the management of digital madrasah includes the elements of program planning, implementation of work plans, monitoring, and evaluation processes, and madrasah leadership and management information systems. The foundation for these management elements is a vision of digital technology, a digital technology-minded mindset, digital devices, and curriculum materials that teach digital literacy, as well as digital devices and curriculum materials.²⁸

The teaching materials in digital learning include digital literacy and teaching materials. First, digital literacy material in attitudes, knowledge, and skills is integrated (infused) into the subject. Second, teaching materials at digital madrasah follow Content Standards translated into Core Competencies (KI), Basic Competencies (KD), and topics but insert attitudes, knowledge, and digital literacy into them in an integrated manner according to the level of the education unit and class. UNESCO stipulates four levels of teaching materials that must be presented for primary and secondary education as follows: First, Discovering ICT tools Teaching materials are related to the introduction of ICT and its functions. At this level, students are introduced to ICT tools and their functions, the use of simple tasks in ICT, and an understanding of the safety of their service. Second, Learning how to use ICT tools. Teaching materials are related

²⁷ Tim Peneliti Pendidikan Agama dan Keagamaan Jakarta.

²⁸ Adam Yordan dan Eni Fariyatul Fahyuni, "Child-Friendly IRE Learning Through Digital Storytelling in the COVID-19 Pandemic," *Nazhruna: Jurnal Pendidikan Islam* 4, no. 3 (30 Oktober 2021): 590–605, <https://doi.org/10.31538/nzh.v4i3.1682>; Ismail Suardi Wekke dan Sanusi Hamid, "Technology on Language Teaching and Learning: A Research on Indonesian Pesantren," *Procedia - Social and Behavioral Sciences*, 2nd World Conference on Educational Technology Research, 83 (4 Juli 2013): 585–89, <https://doi.org/10.1016/j.sbspro.2013.06.111>.

to using ICT as a learning resource and completing learning tasks using ICT. Specific applications so that learning takes place effectively and efficiently, Understanding how and when to use ICT tools. Teaching materials are related to how and when ICT is used to support completing tasks in learning. At this stage, students can use ICT and understand the strategies for using it more optimally and using more complex applications 21. Fourth, Specializing in the use of ICT tools Materials related to specific knowledge and skills to develop ICT such as programming.²⁹

IT-Based Islamic Education

Teaching and learning activities are the main processes (core processes) of a madrasa. Therefore, e-learning as an electronic (digital)-based teaching and learning method is an important factor in digital madrasas. Rapid technological developments continue to make the education system in Indonesia better and more advanced following other countries. The education system continues to develop from using only conventional systems to switching to an all-digital system. Initially, the teaching and learning process only took place in the classroom, but now the teaching and learning process is not bound by space and time.³⁰

E-learning is an educational system or concept that utilizes information technology in the teaching and learning process. E-Learning is also defined as distance learning that uses computer technology, computer networks, and the internet. E-learning must be designed to be able to provide added value for students both in achieving basic competencies as well as other skills and achievements. Every material for learning that can be provided through e-learning is not only in the form of knowledge but also skills development which is indicated by interactive multimedia features.³¹

Synchronous learning occurs at the same time between teachers and students either face-to-face directly in the same place (live synchronous), using lecture methods, presentations, group discussions, practice, and others, or can occur virtually (virtually synchronous) through conferences. video or audio), text-based conferences (chat or chat room), and the like.³²

Planning in this synchronous-based Islamic education during the pandemic has become commonplace. The method taken can choose virtual education by referring to a learning activity that occurs in a learning environment where teachers and students are separated by distance and/or time. The teacher provides learning materials through the use of several methods such as LMS applications, multimedia materials, internet use, or video conferencing. Students receive these learning materials and communicate with their teachers using the same technology. For example, delivering material with lectures using live synchronous is more in

²⁹ Khotim Maslikah, Utami Widiati, dan Anik Nunuk Wulyani, "Perceptions of EFL Teachers, EFL Students, and Parents About Extensive Listening Materials for Online Learning," dalam *International Seminar on Language, Education, and Culture (IsoLEC 2021)* (Atlantis Press, 2021), 172–75.

³⁰ Tim Peneliti Pendidikan Agama dan Keagamaan Jakarta, "Panduan Penyelenggaraan Madrasah Digital."

³¹ Rusydiyah Evi Fatimatur, "Innovation in the Development of Character Education in Senior High Dalam Pengembangan Pendidikan Karakter di" 10, no. 1 (2020): 35–42, <https://doi.org/10.21070/pedagogia.v10vi1i.4>.

³² J.E. Nieuwoudt, "Investigating Synchronous and Asynchronous Class Attendance as Predictors of Academic Success in Online Education," *Australasian Journal of Educational Technology* 36, no. 3 (2020): 15–25, <https://doi.org/10.14742/AJET.5137>.

demand by educators who used to be conventional.³³ Like explaining how to read the Qur'an fluently and in good *makburoj*. Students need to pay attention so that they can copy and be tested by the teacher one by one, so they can learn from each other.

Asynchronous learning does not occur at the same time in different places. Asynchronous learning can be done independently (self-paced asynchronous) or collaboratively. Independent learning students learn learning objects in the form of text, audio, video, animation, and simulations available on the LMS or outside the LMS. While collaborative learning (collaborative asynchronous) through discussion forums, mailing lists, e-mail, project assignments, and others.³⁴

Learning in Islam can be taken as an example of a teacher giving instructions to students to watch videos on YouTube about the history of the prophet, material about the history of Islamic culture, or students see how to perform ablution videos on *fiqh* material so that students can feel and see directly the video independently.³⁵

This method is a combination of the two methods above, this phase is quite effective when a company is still adapting to the implementation of the e-learning system. This method also allows for a combination with traditional class methods, the composition depends on the results of the analysis.³⁶ For example, training, which was originally 3–4 days in duration, can be streamlined to only 1-2 days because it is combined with e-learning.

Madrasahs are advised to choose a blended learning model that combines synchronous with face-to-face learning, independent learning (learning with various sources or print media (offline) that have been provided), an independent online learning with a variety of media choices (text, images, sound, video) that can be accessed by teachers and students from the internet. The teacher's role in blended learning model learning is as a facilitator and mediator who manages these elements.³⁷

Another recommended model is the flipped classroom. In this model, students are asked to access information through networked technology outside the classroom and then discuss practice, or deepen understanding facilitated by the teacher in class. The face-to-face interaction in this learning approach is assisted by independent learning through digital.

³³ Muhammad Nurul Mubin, "Pembelajaran Daring Pendidikan Agama Islam di Masa Pandemi Covid-19 di Sekolah Menengah Sederajat," *EUTAGOGIA: Journal of Islamic Education* 1, no. 1 (2021): 16–31.

³⁴ Mehmet Gazan, "Synchronous and Asynchronous Online Learning: Perceptions of Students at a State University in Turkey," *FIRE: Futuristic Implementations of Research in Education* 1, no. 2 (2020): 96–107.

³⁵ Siti Na'ilul Hidayah dan Ashif Az-zafi, "The Role Of The Religious Laboratory In Improving Students' Understanding Of Fiqh Lessons," *Tafkir: Interdisciplinary Journal of Islamic Education* 2, no. 2 (25 Juli 2021): 157–74, <https://doi.org/10.31538/tijie.v2i2.53>; Zaenudin Zaenudin, "Meningkatkan Hasil Belajar Siswa Pada Mata Pelajaran Fiqh Melalui Penerapan Strategi Bingo," *Edukasia: Jurnal Penelitian Pendidikan Islam* 10, no. 2 (2015), <https://doi.org/10.21043/edukasia.v10i2.796>.

³⁶ Rasheed Abubakar Rasheed, Amirrudin Kamsin, dan Nor Aniza Abdullah, "Challenges in the Online Component of Blended Learning: A Systematic Review," *Computers and Education* 144, no. March 2019 (2020): 103701, <https://doi.org/10.1016/j.compedu.2019.103701>.

³⁷ Uwes Anis Chaeruman, "Merancang Model Blended Learning Designing Blended Learning Model," *Jurnal Teknodik* 17, no. 4 (2019): 053, <https://doi.org/10.32550/teknodik.v17i4.577>.

CONCLUSION

A digital madrasah is a madrasah that organizes the management of education using digital applications; organizes ICT learning in the form of subjects, local content, or extracurriculars; implements ICT-based learning strategies, resources, and media; and implements digital applications in the assessment system (the madrasah concept can be called Smart madrasah). With this concept, madrasah policymakers must think about how system development applications and information technology-based learning models are carried out. In addition, the improvement of the quality of human resources, namely educators, must be immediately thought of. Education personnel is encouraged to have knowledge of digital literacy and skills regarding the use of hardware and applications to complete management and administrative tasks effectively and efficiently. The type of hardware and applications used is adapted to the development of the technology. Digital-based Islamic education is certainly closely related to information technology, which must be mastered by all educational implementers. Learning in Islamic education can use the asynchronous learning approach, asynchronous learning, or blended learning. Another suggested model is the "flipped classroom" or "reverse classroom." Mastery of technology and learning media is very important for teachers because the teacher will be a central figure and be an important facilitator in the learning process.

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